



Department of School Education & Literacy
Ministry of Education
Government of India



National Initiative for Proficiency in Reading with Understanding and Numeracy

NIPUN BHARAT

(A National Mission on Foundational Literacy and Numeracy)



GUIDELINES FOR IMPLEMENTATION

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NIPUN BHARAT

GUIDELINES FOR IMPLEMENTATION

@2021



GLOSSARY

Adaptive assessment: Adaptive assessment is defined as any type of assessment that is tailored specifically to each examinee, based on their performance on previous items of the assessment.

Alphabet Knowledge: Alphabet knowledge is the recognition of letters as distinct symbols that have specific names and specific sounds associated with them.

Anecdotal Record: An anecdotal record is a detailed descriptive narrative recorded after a specific behaviour or interaction occurs. Anecdotal records inform teachers as they plan learning experiences, provide information to families, and give insights into identifying possible developmental delays.

Assessment for learning: This is an approach to teaching and learning that creates feedback which is then used to improve students' performance.

Balanced Approach: Where teachers follow what is appropriate for their classroom and where every child learns in a joyful and stress-free manner, by taking the best of multiple approaches.

Competency: Competencies are statements that specify what children will know, be able to do, or be able demonstrate when they have completed or participated in a course or program

Culture: The Oxford Dictionary defines Culture as - the arts and other manifestations of human intellectual achievement regarded collectively

Classification: involves putting together things that have some characteristics in common.

Data Handling: Data refers to information in a raw form that is collected from various sources. Data handling includes collecting, representing, analyzing and interpreting data.

Early literacy: Early Literacy is what children know about reading and writing before they read or write.

Ethnicity: Oxford reference states that – it is a term for the ethnic group to which people belong. Usually, it refers to group identity based on culture, religion, traditions, and customs.

First Generation Learners: It refers to the students who are the first in their entire generation to go to school and receive an education or whose parents have attended the formal education system up till the primary level of schooling.

Formative assessment: Formative assessment refers to a wide variety of methods that teachers use in the classroom to conduct in-process evaluations of student comprehension, learning needs, and academic progress during a lesson, unit, or course.

Foundational Numeracy: The ability to read and write and perform basic operations with numbers.

Fine Motor Skill: is the coordination of small muscle in movements usually involving coordination of hands and fingers with eyes.

Key word approach: In this approach learners learn words by connecting a visualization in



their minds to the sound and meaning of the word. In this way, they are able to recall new words and their meanings by simply bring back the memory of the visualization that they have associated with it.

Gross motor skills: Gross motor skills are the abilities required to control the large muscles of the body for walking, running, sitting, crawling, and other activities.

Holistic development: Development of intellectual, mental, physical, emotional, and social abilities.

Learning outcomes: Learning outcomes are statements that describe the knowledge, skills, and attitudes that students should acquire by the end of a particular assignment, class, course, or program, and help students understand why that knowledge and those skills will be useful to them.

Life Skills: Life skills are defined as a set of abilities, attitudes, and socio-emotional competencies that enable individuals to learn, make informed decisions, and exercise rights to lead a healthy and productive life and subsequently become agents of change.

Literacy: Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society (UNESCO, 2004; 2017).

Measurement: Involves dealing with quantities involving the use of numbers.

Multilingual Class: This is a class where the learners speak a variety of the first language.

Numeracy encompasses the ability to use mathematical understanding and skills to solve problems and develop a critical viewpoint with appropriate reasoning.

Numbers and Number Operations: Cardinal numbers are used to measure and communicate the size of a group of objects. Ordinal numbers are used to describe the position of an object when they are arranged in a specific order. Nominal numbers are used as nouns/labels only, that is to identify or label objects in a group or individually; they do not have an actual value or position.

One-to-one correspondence: involves matching or pairing of objects.

Phonics instruction: focuses on the relationship of the sounds in spoken words and their associated letters and groups of letters as they appear in print.

Phonological Awareness: It is the ability to recognize and work with sounds in spoken language.

Picture Reading/Talk: Children can be shown sceneries of a particular event, place, story like a fair/mela, zoo, circus, etc. Children can then be engaged in conversations involving observations (What is happening in the picture?) reasoning (Why do you think so?), prediction (where do you think the girl is going?). Children can also put the events shown in the picture in a sequence and narrate them.



Problem Solving: Problem-solving is the act of defining a problem; determining the cause of the problem; identifying, prioritizing, selecting an appropriate solution from amongst alternatives; and implementing the solution.

Read Aloud: Read-aloud is a practice where teachers, parents, and caregivers pick up an engaging story from a book and reads it out. Variations in pitch, tone, pace, volume, pauses, eye contact, questions, and comments make for a fluent and enjoyable delivery. Reading aloud engages the creativity and imagination of children along with increasing their attention span and ability to focus.

Pre-Number Concepts: Before children start counting objects or develop an understanding of numbers, they need to be able to classify, order, and set up one-to-one correspondences to some extent. Since these skills are preliminary to the understanding of numbers, they are called as Pre-number concept.

Patterns: A pattern is an arrangement, order, sequence, or repetition.

Phonics approach: Children are taught by introducing letters or aksharas first and gradually building a correlation with their sound.

Rubrics: A rubric is an assessment tool that clearly indicates achievement criteria across all the components of any kind of student work, from oral to written or to visual. It can be used for marking assignments, class participation, personal-social qualities or giving overall grades.

Shared Reading: In shared reading, the teacher holds one big book up and the whole class reads from the same book. The book has large font, illustrations, and simple text so that all children can participate in reading. The teacher reads the text while children join when they recognise a word from illustrations, sight word, or memory. Children start developing the concept of print.

Seriation: involves ordering a set of objects according to some rule.

Shapes and Spatial Understanding: Spatial understanding is the area of mathematics that involves shape, size, space, position, direction, and movement.

Sensory and Perceptual Development: Development of the five senses through visual, auditory, and kinaesthetic experiences.

Spiral learning: Spiral learning means learning a concept gradually and repeatedly, reinforcing concepts over time, rather than trying to master a subject all at once.

Vocabulary: Developing knowledge of a wide range of words and word meanings.

Whole language approach: Children should be immersed in print rich, literate environments, use of authentic children's literature and exposed to lots of opportunities to read and write. Teachers should model how they themselves read and write. Children will be given opportunities to try to express their thinking by experimenting with drawings, scribbling, and invented spelling's.



Acknowledgement

The Department of School Education and Literacy would like to extend its gratitude to the various stakeholders who were involved in the process of developing these comprehensive Guidelines for Implementation of Foundational Literacy and Numeracy Mission, called, National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN BHARAT). First and foremost, this document would not have been possible without the support and guidance of Shri Ramesh Pokhriyal ‘Nishank’, Hon’ble Minister of Education, Government of India and Shri. Sanjay Shamrao Dhotre, Hon’ble Minister of State for Education, Government of India. We express our gratitude for their continuous support and mentorship.

This document has been developed under the active guidance and leadership of Smt. Anita Karwal, Secretary, School Education and Literacy. A Committee under the Chairpersonship of Sh. Maneesh Garg, Joint Secretary was constituted for drafting comprehensive guidelines for the National Mission on Foundational Literacy and Numeracy. The committee has members from the Ministry, NCERT, UNICEF and States of Gujarat, Haryana and Uttar Pradesh. The Department would like to extend its utmost appreciation to the members of the Committee, Sh. Rakesh Gupta, the then Nodal Officer of Saksham Haryana; Sh. Vinod Rao, Secretary Education, Gujarat; Sh. Vijay Kiran Anand, SPD, Uttar Pradesh; Sh. T.S. Joshi, Director GCERT, Gujarat; and Mr. Terry Durnnian, Chief Education, UNICEF for their valuable inputs and prompt response. Special thanks is also due to the core drafting team of D/o School Education & Literacy and NCERT who have worked continuously and tirelessly in drafting, reviewing and editing of the guidelines. Special appreciation is also due to all States & UTs for their valuable and timely suggestions.

D/o School Education & Literacy would also like to take this opportunity to acknowledge the active support and inputs provided by the team of Central Square Foundation and to the representatives of various organizations/institutions who were involved in the consultation process of developing these guidelines, i.e., PRATHAM, Room to Read, and Language and Learning Foundation.

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रमेश पोखरियाल 'निशंक'
Ramesh Pokhriyal 'Nishank'



शिक्षा मंत्री
भारत सरकार
MINISTER OF EDUCATION
GOVERNMENT OF INDIA



MESSAGE

The National Education Policy 2020 has stipulated that attaining foundational literacy and numeracy for all children must become an immediate national mission. Towards this end, the Department of School Education & Literacy has launched a National Mission called "National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)", for ensuring that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, by 2026-27. This Mission has been set up under the aegis of the centrally sponsored scheme of Samagra Shiksha, and will focus on following areas: providing access and retaining children in foundational years of schooling; teacher capacity building; development of high quality and diversified Student and Teacher Resources / Learning Materials; and tracking the progress of each child in achieving learning outcomes.

It is a matter of great pleasure for me that the Department has developed a comprehensive guideline for Implementation of Foundational Literacy and Numeracy Mission. This guideline has been developed through a series of intensive consultations with all stakeholders and adequate care has also been taken to make it flexible and collaborative. It covers key technical aspects of foundational literacy and numeracy as well as the administrative aspects for effectively setting up an implementation mechanism at the National, State, District, Block and School level. Another unique feature is that the overall literacy and numeracy targets to achieve the objectives of the Mission are set in the form of Lakshya or Targets for Foundational Literacy and Numeracy starting from the Balvatika.

NIPUN Bharat is envisaged to support and encourage students, along with their schools, teachers, parents, and communities, in every way possible to help and empower them in achieving foundational skills, which indeed forms the basis of all future learning. I extend my best wishes to all the Stakeholders for participating in this mission and hope for great success in achieving its goals and objectives.

(Ramesh Pokhriyal 'Nishank')



सबको शिक्षा, अच्छी शिक्षा

Room No. 3, 'C' Wing, 3rd Floor, Shastri Bhavan, New Delhi-110 115
Phone : 91-11-23782387, 23782698, Fax : 91-11-23382365
E-mail : minister.hrd@gov.in

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संजय धोत्रे
SANJAY DHOTRE



राज्य मंत्री
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी,
संचार एवं शिक्षा मंत्रालय
भारत सरकार

Minister of State
Electronics & Information Technology,
Communications and Education
Government of India

MESSAGE

Foundational learning is the basis of all future learning for a child. Not achieving basic foundational skills of being able to read with comprehension, writing and doing basic mathematics operations, leaves the child unprepared for the complexities of the curriculum beyond grade 3. The vision of the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) is to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy, so that every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade III. The National Mission, 'NIPUN Bharat' will be implemented by the Department of School Education and Literacy with a five-tier implementation mechanism at the National- State- District- Block- School level in all States and UTs.

NIPUN Bharat will be implemented with the use and strengthening of the existing mainstream structures and will take a holistic approach through the active involvement of all stakeholders. It will also focus on the holistic development of the child. As mentioned in NEP 2020, there are different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, and moral development, art and aesthetic development which are interrelated and interdependent.

Further, in addition to strategic, technical and administrative aspects of Foundational Literacy and Numeracy mission, the comprehensive guidelines prepared by the Department lay down the priorities and actionable agendas for States/UTs to achieve the goal of proficiency in foundational literacy and numeracy by every child by grade 3.

I would like to take this opportunity to extend my best wishes to all the Stakeholders who would be involved in this incredible task to achieve universal acquisition of foundational literacy and numeracy skills at primary level.

(Sanjay Dhotre)



कार्यालय : इलेक्ट्रॉनिक्स निकेतन, 6, सी.जी.ओ. कॉम्प्लेक्स, नई दिल्ली-110003, दूरभाष : 011-24368757-58 फैक्स : 011-24360958

Office : Electronics Niketan , 6, C.G.O. Complex, New Delhi-110003, Tel. : 011-24368757-58, Fax : 011-24360958

E-mail : mos-office@meity.gov.in, Website : www.meity.gov.in



@SanjayDhotreMP
@OfficeofSDHotre



@sanjaydhotrempp



@mp_sanjaydhotre



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अनीता करवल, भा.प्र.से
सचिव

Anita Karwal, IAS
Secretary



स्कूल शिक्षा और साक्षरता विभाग
शिक्षा मंत्रालय

भारत सरकार

Department of School Education & Literacy
Ministry of Education
Government of India

MESSAGE

It is said that a building can only be as tall as the foundation is strong enough. There is enough research and evidence that indicates that early years, up to the age of 7 or so, are the period of high rate of brain development. During this period of critical growth, the number of synapses (connections) between brain cells or neurons doubles. Synapses are where all brain activity occurs, so one can imagine how fast and how much of the learning activity occurs at this stage. This fast, furious and deep phase is what is intended to be systematically tapped through 'NIPUN Bharat'. Every cognitive input at this stage of foundational years, up to age 8, shall pave the way for lifelong and effective learning.

In India, we have children who are first generation learners and who may not have an environment of literacy and numeracy at home. Such children can easily get lost from the system unless their foundations of learning, particularly, Reading Literacy and Mathematics Literacy, are strong. Similarly, there will be children whose mother tongue is different from the medium of education in schools. They too can start falling behind, unless their learning foundations are built with the help of their mother tongue. We also have cases, where the focus is on completion of all chapters in the prescribed textbooks, rather than on developing the skills of reading, writing, comprehension, and basic numeracy in the early years. It is easy to get lost in the maze of syllabus or curriculum and lose sight of the developmental and cognitive goals in the early years.

Through NIPUN Bharat we aim to ensure that teachers focus on developing phonological awareness and sound discrimination, visual perception and visual association that helps children to develop into better readers and writers. Further, for laying the foundation for mathematical learning or abstract thinking, they will focus on play and activity-based approach (including toy-making, art integration, sports integration, storytelling-based learning, ICT integration, group work, role plays, project work in groups, etc.) that are meaningful for every learner. Thus, NIPUN Bharat envisages making the experience of learning at the foundational stage not just Integrated and Inclusive, but also Holistic Enjoyable, and Engaging.

We look forward to partnering states/UTs, schools, teachers, parents, students, and community and governments for achieving the goals of this mission in a timely manner through several innovative and effective interventions by all stakeholders.



(Anita Karwal)

NIPUN BHARAT





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EXECUTIVE SUMMARY

Understanding Foundational Literacy

Veena and Rakesh were incredibly happy with their son, Ujjwal's school. Ujjwal was 6+ years old and studying in 1st standard in a posh and well-known public school in a large city. Veena and Rakesh used to meet the stern class-teacher once every two months during PTM and were given a five-minute briefing on Ujjwal's' progress. By all standards he was doing very well. The school had made Ujjwal such a disciplined, quiet child, who spoke only when spoken to, and considered studies more important than playing with his noisy friends in the neighbourhood. Veena and Rakesh took pride in the fact that the school gave him loads of homework everyday of repeatedly practising writing letters of the alphabet. They were convinced that he would grow up to have the best handwriting in their family.

One fine day, when Ujjwal was in 2nd standard, Veena and Rakesh had to relocate to a smaller town on transfer. In the new town, Ujjwal was admitted to a new school, close to their house, that had very basic facilities, but the teachers appeared very warm and friendly. On the third day in school, the class teacher requested an audience with the parents. She conversed with them for almost an hour and informed them that Ujjwal is not able to keep pace with the class, because he is not able to read. "But he can read and write all letters of the alphabet", said Rakesh. The teacher informed him that at the end of class 1, Ujjwal should have been able to "Read small sentences consisting of at least 4-5 simple words in unknown text, so that in class 2, he is able to read unknown text of 8-10 sentences with simple words with appropriate speed (approximately 30-35 words per minute correctly) and clarity."

The parents were shocked and did not know what to do next. The teacher told them not to worry and informed that she would work separately on Ujjwal to make him catch up with the rest of the class. At the end of three months, Ujjwal managed to catch up, and what surprised the parents much more was that Ujjwal had transformed into a happy, playful kid who loved playing with his friends every day and reading a new story book on his own every week.

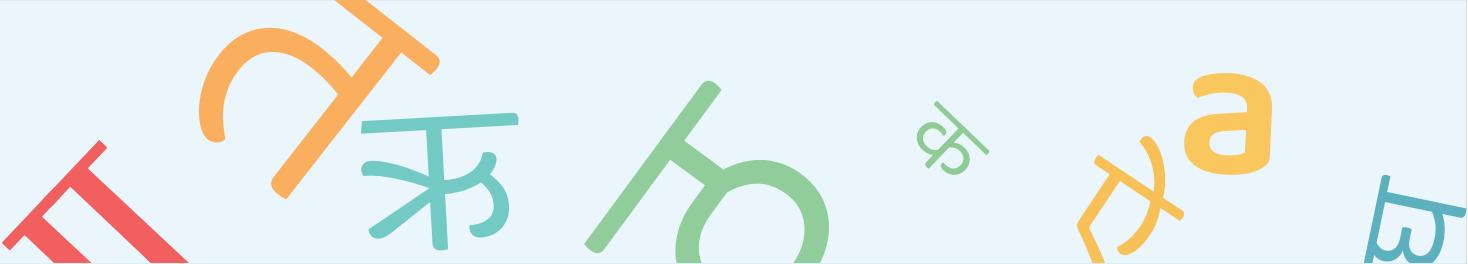
Veena and Rakesh have decided to continue to stay in the small town until Ujjwal completes his school education in this wonderful, joyful school!



The highest priority for the school education system is to achieve universal acquisition of foundational literacy and numeracy skills at primary level by 2026-27. The National Education Policy (NEP) 2020 also highlights that a large proportion of students currently in elementary level, have not achieved foundational literacy and numeracy. The NEP, 2020, further reiterates that it is imperative to address this crisis head on and immediately so that basic learning can be accomplished in schools, and all students may thereby gain the opportunity to obtain an education of quality. Attaining foundational literacy and numeracy for all children must become an immediate national mission. Students, along with their schools, teachers, parents, and communities, must be urgently supported and encouraged in every way possible to help carry out this all-important target and mission, which indeed forms the basis of all future learning.

Recognising the crucial role of Foundational skills in the national development, it was announced under the 'Atma Nirbhar Bharat' campaign that a National Foundational Literacy and Numeracy Mission will be launched, for ensuring that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, by 2026-27. For this purpose, a vibrant curricular framework, engaging learning material (both online and offline), defined and measurable learning outcomes, teacher capacity building, assessment techniques, etc. will be developed to take it forward in a systematic fashion.

In this context, a National Mission on Foundational Literacy and Numeracy called "National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)" is being set up by the Ministry of Education (MoE) on priority. The National Mission lays down priorities and actionable agendas for States/UTs to achieve the goal of proficiency in foundational literacy and numeracy for every child by the end of Grade 3. The Mission will be set up under the aegis of the centrally sponsored scheme of Samagra Shiksha which is an integrated scheme of school education covering from Pre-School to Senior Secondary level. It will focus on children of age group of 3 to 9 years including pre-school to Grade 3. **The children who are in Class 4 and 5 and have not attained the foundational skills will be provided individual teacher guidance and support, peer support and age appropriate and supplementary graded learning materials to acquire the necessary competencies.** The goals and objectives of the mission are required to be achieved by all Govt., Govt. Aided and Private Schools so that universal acquisition of FLN skills can be achieved by 2026-27.



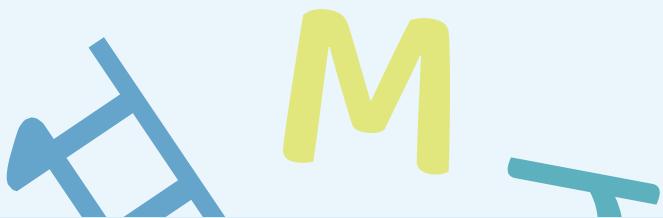
■ Why FLN?

Foundational learning is the basis of all future learning for a child. Not achieving basic foundational skills of being able to read with comprehension, writing and doing basic mathematics operations, leaves the child unprepared for the complexities of the curriculum beyond grade 3. Recognizing the importance of early learning, the National Education Policy 2020 states that “Our highest priority must be to achieve universal foundational literacy and numeracy in primary schools by 2026-27. The rest of this Policy will be largely irrelevant for such a large portion of our students if this most basic learning (i.e., reading, writing, and arithmetic at the foundational level) is not first achieved.” To this end, a National Mission on Foundational Literacy and Numeracy is being set up by the Ministry of Education (MoE) on priority. The Mission will focus on following areas— providing access and retaining children in foundational years of schooling, teacher capacity building, development of high quality and diversified Student and Teacher Resources/Learning Materials, and tracking the progress of each child in achieving learning outcomes of children.

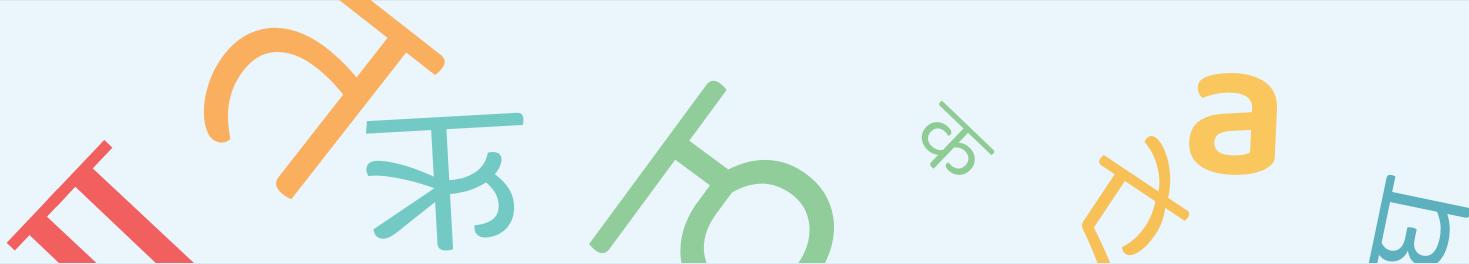
The vision of the Mission is to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy, so that every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade III. The mission will cover the learning needs of children in the age group of 3 to 9 years. Accordingly, learning gaps will be identified along with their probable reasons, and various strategies keeping in view local circumstance and diversity of country will be initiated. Moreover, with the aim to establish strong linkage and smooth transition between pre-school stage and Grade I, ECCE Curricular framework developed by NCERT will be followed by both Anganwadis and Pre-primary schools to ensure smooth transition to grade I. Hence, learning will be Holistic, Integrated, Inclusive, Enjoyable, and Engaging.

The FLN Mission will be implemented by MoE and a five-tier implementation mechanism will be set up at the National- State- District- Block- School level in all States and UTs. To lay emphasis and prioritise, the programme will be implemented in the mission mode. The mainstream structures will primarily be used for implementing the programme. The Department of School Education and Literacy, Ministry of Education will be the implementing agency at the national level and will be headed by a Mission Director. The programme will specifically focus on the targets to be achieved by the mission and States/UTs by preparing long term roadmaps and plan of action.

This comprehensive guideline for Implementation of Foundational Literacy and Numeracy, covers key technical aspects of foundational literacy and numeracy as well as the



administrative aspects for effectively setting up an implementation mechanism at the National, State, District, Block and School level. It has been developed through a series of intensive consultations with implementing partners and experts in the field. Adequate care has also been taken to make it flexible and collaborative. Thus, the National Mission on FLN will be implemented with the use and strengthening of the existing mainstream structures and will take a holistic approach through the active involvement of all stakeholders.



■ What are FLN skills?

Foundational Language and Literacy:

Oral language development in home language; appropriate exposure to the school language including good listening comprehension skills, development of print and phonological awareness and development of emergent reading and writing skills in the pre-school years are crucial for language and literacy development in early primary school years.

The pre-existing knowledge of language helps in building literacy skills in languages. Children who have a strong foundation in their home language can learn English/second language more easily.

The key components in Foundational Language and Literacy are:

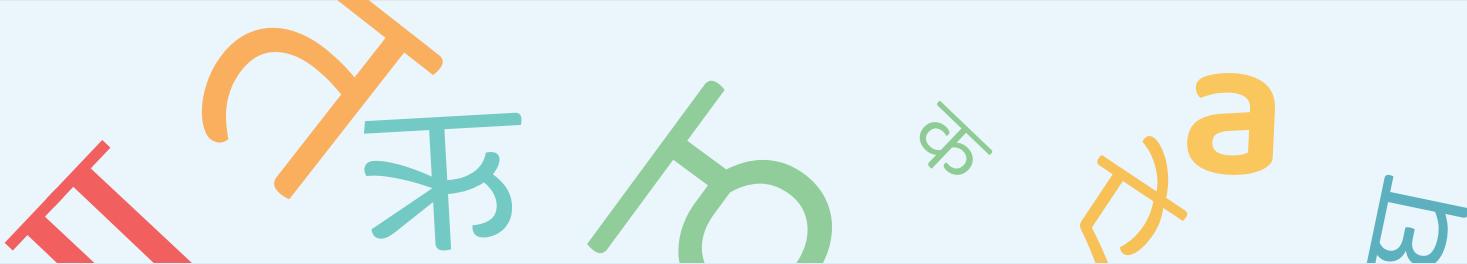
- **Oral Language Development:** The experiences in oral language are important for developing skills of reading and writing.
- **Phonological Awareness:** This domain includes the competencies of word awareness, rhyme awareness, and awareness of sounds within words which should emerge from their meaningful engagement with language.
- **Decoding:** This domain includes competencies of print awareness, akshara knowledge and decoding, and word recognition
- **Vocabulary:** This domain includes the competencies of oral vocabulary, reading/writing vocabulary, and morphological analysis of words.
- **Reading Comprehension:** This domain covers the competencies of understanding texts and retrieving information from them, as well as interpreting texts.
- **Reading Fluency:** Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody), and comprehension that allows children to make meaning from the text
- **Concept about Print:** Children need exposure to different types of print rich environment to develop the skill of comprehension.
- **Writing:** This domain includes the competencies of writing aksharas and words as well as writing for expression.
- **Culture of Reading/Inclination towards Reading:** Involves the motivation to engage with a wide variety of books and other reading materials.



Foundational Numeracy and Mathematics Skills

Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. The development of pre-number and number concepts, knowledge and skills of comparing, seriation, classification and recognizing patterns during pre-school serves as a foundation for mathematics learning in early primary classes. The major aspects and components of early mathematics are:

- Pre-Number Concepts: Count and understand the numeration system
- Numbers and operations on numbers: Learn conventions needed for mastery of Mathematical techniques such as the use of a base ten system to represent numbers
- Measurement: Understand and use standard algorithms to perform operations of addition, subtraction, multiplication and division on numbers up to three digits
- Shapes and Spatial Understanding: Perform simple computations in her/his own way up to three-digit numbers and apply these to their day to life activities in different contexts
- Patterns: Learn vocabulary of relational words to extend his/her understanding of space and spatial objects



■ Academic approaches to improving FLN

Teaching Learning: Focus on Learning of the Child

In India, we have many children who are first generation learners and do not have an environment of literacy and numeracy at home. Teachers therefore need to focus on developing phonological awareness and sound discrimination, and visual perception and visual association that helps children to develop into better readers and writers. Further, the foundation for mathematical learning or abstract thinking gets laid through play and activity-based approach (including toy-making, art integration, sports integration, storytelling-based learning, ICT integration, group work, role plays, project work in groups, etc.) that are meaningful for every learner. Hence, teachers would need to focus on the following:

- Demonstrate equal and appropriate expectations from boys and girls by providing equal attention, respect, and equal learning opportunities.
- Select books, pictures, posters, toys/materials and other activities free of gender bias.
- Not use gender biased statements while talking to the learners or giving instructions in the classrooms.
- Select such stories, rhymes/songs, activities and facilitation aids that depict girls and boys, including some with special needs, in the same roles as men and women in all professions.
- Encourage learners to follow their interest that enables them to develop skills of self-regulation, perseverance on task and good work habits.

Use toy-based pedagogy and experiential learning. Emphasis to be given on self-making of toys with no/low-cost material by children easily available in the surrounding. Toys owned by children can be pooled for communication skills, where each child brings a toy to school and then talks about it or writes about it, etc.

Shifting towards Competency Based Learning:

When children from diverse backgrounds having different learning, needs enter the formal school, all the students are expected to be ready for grade-level content standards to be covered and tested in a time-limited learning system. Competency based learning is focused on student learning outcomes, and is characterized by:

- Children advance to the next level only upon mastering the current level.
- Explicit and measurable learning outcomes are defined which are the pathways for competency acquisition.



- Primarily formative assessment is used, and skills or concepts are assessed in multiple contexts to ensure that both deep understanding and applications are acquired by children.

The NEP 2020 has focused on the holistic development of the child. There are different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, spiritual and moral development, art and aesthetic development which are interrelated and interdependent. All these domains have been subsumed into three major goals:

- Developmental Goal 1: Children Maintain Good Health and Wellbeing
- Developmental Goal 2: Children Become Effective Communicators
- Developmental Goal 3: Children become involved learners and connect with their immediate environment.

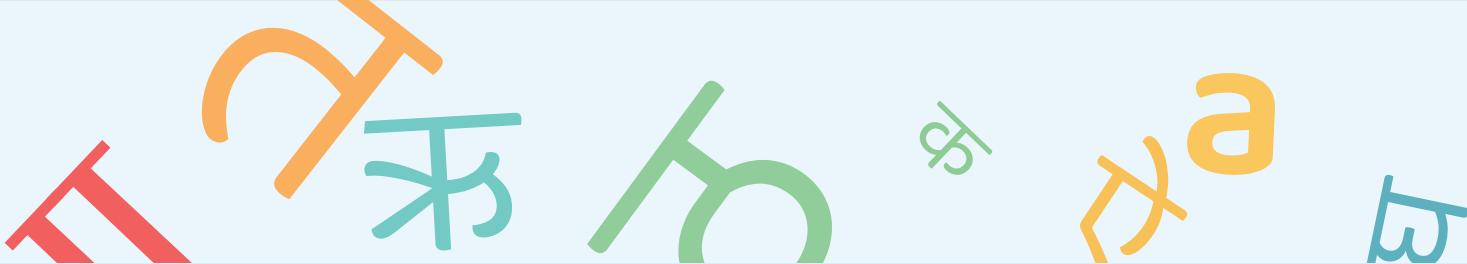
Moreover, key competencies and concepts of each goal have been highlighted and these competencies have been drawn from the documents 'Pre-school Curriculum' and 'Learning Outcomes' developed by the NCERT. Likewise, the perspectives of mathematical thinking, design learning etc. as envisaged in the NEP 2020 has been taken care of.

Learning Assessment

The period of foundational learning is a crucial phase for the development of intellect, ability, physical growth, mental maturity, and values. Primary purpose of assessment is to support and guide each child's learning from FYL-1 to FYL-6 (age group of 3 to 9 years). Learning at the foundational years happen at varying rates and it entirely varies from child to child. It even varies across different developmental areas/subjects and it depends upon how an individual child responds and functions because the learning at this stage is majorly influenced by many social and cultural contexts. Thus, assessment is vital to track children's progress in a continuous and comprehensive manner using multiple techniques of assessment. It aims at early identification of learning gaps at each foundational stage i.e., at FYL-1, FYL-2, FYL-3, FYL-4, FYL-5 and FYL-6 including children with special needs so that there can be possibilities of early intervention through referral to specialists.

A holistic and purposive assessment is therefore vital to track children's progress by using different techniques to help the stakeholders to:

- identify the child's strengths, needs, interests and preferences.
- potentiate child's performance and scaffold it through interventions.
- collaborate to solve issues and areas of concerns.



- contribute to early identification of learning gaps and learning difficulties.

The foundational years of education has three developmental goals that comprises of ‘prime learning areas’ such as physical and motor development, socio-emotional development, language and literacy, cognitive development (mathematical understanding and numeracy as well as understanding the world), spiritual and moral development, art and aesthetic development which are interrelated and interdependent. A holistic and purposive assessment is therefore vital to track children’s progress by using different techniques. Involvement of the parents is also vital to achieve maximum learning and development of competencies in the child. Hence, Assessment during the foundational learning can be broadly categorized into two major areas, namely:

- School Based Assessment (SBA): SBA at the foundational stage should be stress-free and largely through qualitative observation based on performance of the child in a multitude of experiences and activities. Various tools and techniques like anecdotal records, checklist, portfolio, and interactions (through a holistic 360-degree assessment with teacher, peers, family and friends) can be used for assessment. The foundational learning has primary areas of focus, which are intimately intertwined with each other and should be assessed by the teacher through SBA to support the process of development during foundational years. These prime learning areas are subsumed in the three developmental goals of foundational learning.

The tools and techniques for SBA includes: Use of observation; Self-Assessment and Peer Assessment; and Use of Portfolios. Further, Assessment of children on all the essential aspects of their growth and development needs to be compiled in the form of Holistic Progress Card (HPC). The following are some of the attributes of an HPC:

- Provides disaggregated reporting, unlike a single score or letter grade in a subject area.
- Holistic progress reports many unique competencies which are not just academic.
- Multiple learning outcomes are defined to indicate progress of the student in literacy, numeracy and in other areas such as psychomotor skills, environmental awareness, personal hygiene, etc. so as to enable identification of areas of strength and areas of improvement.
- Painting, drawing, clay-work, toy-making, projects and inquiry-based learning, student portfolios, quizzes, group work, role plays, etc., can be used to assess student progress since indicators/learning outcomes are more comprehensive.

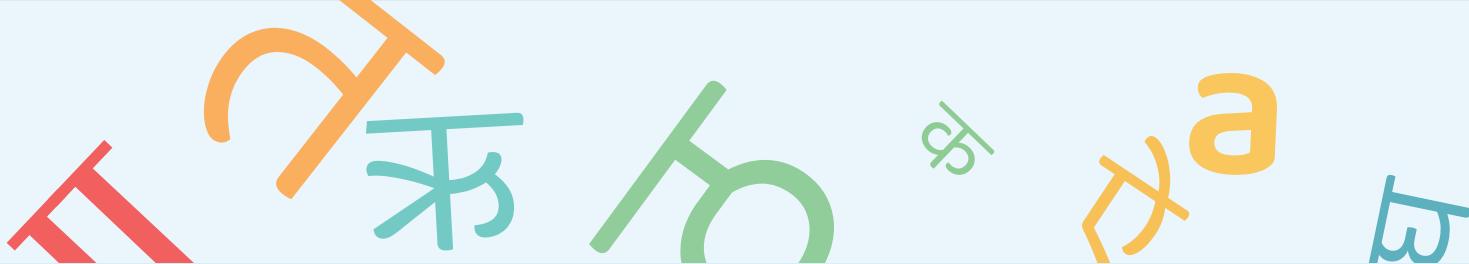


- Informed conversations are held with the teacher, student, and parents for reporting.
- Parent, Peers and self-assessment can be used to report 360-degree progress.
- **Large-scale standardised assessment:** Large scale assessment data at the National or the International level focuses on the 'System' and describes the educational health of the nation, state, or district. Since it involves comparison of the 'systems', the tools and techniques used need to be standardized. The assessment tools commonly used in conducting large scale assessment studies are multiple choice questions (MCQ) and constructed responses are usually avoided to bring in objectivity in the process. These assessments are a mechanism to gauge how well learning is happening in their state, districts, and blocks. These studies are also carried out by defining the 'assessment framework' and with a clear purpose in mind regarding how the assessments study will be used to evaluate the system, to hold it accountable and to define strategies for improving the learning levels. NAS for foundational learning would be conducted in 2021 to understand the system level preparedness and functioning. Further, a study will be undertaken by NCERT which will be the first large scale assessment & benchmarking study for foundational literacy including oral reading fluency across different languages in India. It is envisioned to be positioned as a subsystem study under the main National Achievement Survey (NAS) 2021 to extrapolate and understand the learning levels vis-à-vis the advancement in the grades.

Thus, the teachers at the foundational stage need to observe children as they play, work on their task, perform or interact among themselves, it provides them a wealth of information about the children's interests and learning.

School Readiness/School Preparation Module

School readiness is the foundation for ensuring quality and equity in access to education as well as improving the learning outcomes. A simple definition for school readiness could be that a child who is ready for school has the basic minimum skills and knowledge in a variety of domains that will enable him/her to be successful in school. The National Early Childhood Care and Education (ECCE) Curriculum Framework, developed by the Ministry of Women and Child Development (MWCD), elucidated that "children, schools and families are considered ready when they have gained the competencies and skills required to interface with the other dimensions and support smooth transition of children from home to Early Childhood Care and Education (ECCE) centre and subsequently to primary school".



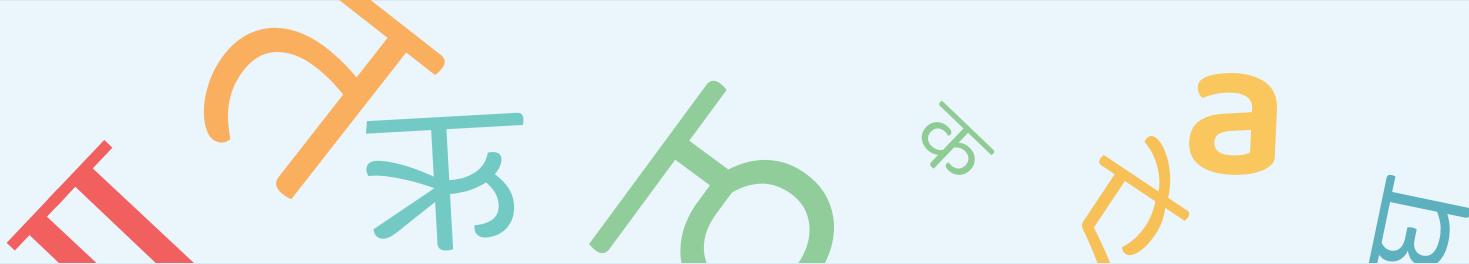
NEP 2020 has recommended the development of '3-month play-based 'school preparation module' for all Grade 1 Students' by the NCERT, as an interim measure to ensure that all children are school ready till universal provisioning of quality preschool education is achieved. A School Preparation Module (SPM) is essentially around 12 weeks of developmentally appropriate instruction at the beginning of Class I designed to bolster a child's pre-literacy, pre-numeracy, cognitive and social skills. It is expected that this module would consist of the activities and workbooks around the learning of alphabets, sounds, words, colours, shapes, and numbers, and involving collaborations with peers and parents. Accordingly, the NCERT has developed 3 Months Play Based 'School Preparation Module' that can be adapted or adopted by States and UTs as per their need. As envisioned in NEP 2020, States/UTs will also prioritise that prior to the age of 5 every child will move to a "Preparatory Class" or "Balvatika" (that is, before Class 1). The learning in these Preparatory Class to be based primarily on play-based learning with a focus on developing cognitive, affective, and psychomotor abilities and early literacy and numeracy



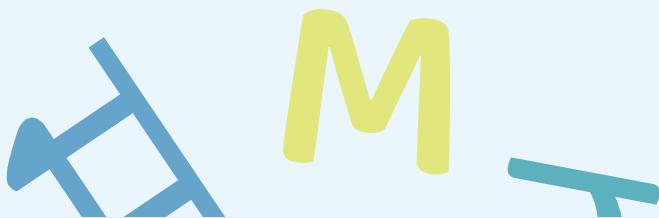
Academic support through SCERTs and DIETs

Under the FLN Mission, the SCERT will be entrusted with the responsibilities of developing extensive teacher training modules and other resources for teachers, including in local language. At the same time, additional learning material for grades 1 to 5, that are engaging, joyful and innovative, would also need to be developed for this purpose. On the other hand, each DIET can develop an Academic Resource Pool specifically for FLN, comprising of teachers, teacher educators, district education planners and faculty from University Department of Education. Henceforth, for strengthening the SCERTs and DIETs for the FLN Mission, the following are some critical enablers, which States and UTs would need to take up on priority:

- Enhanced scope for faculty development opportunities and avenues for professional development, including seminars, advanced and blended courses and fellowships, cross institutional deployment of teachers and collaborative teaching and research.
- Augmenting the capacity of SCERTs and DIETs to enable them to provide academic support so that learning outcomes of students can be improved. Under this structured support can be provided by actively increasing the rigor and consistency of capacity building programmes for SCERT faculty and also by creating opportunities for SCERT to work with international experts.
- Identify National Institutions/Universities for mentoring of SCERT and DIET faculty to develop expertise in FLN.
- Develop a culture of sharing of ideas and experiences through exposure visits for sharing of best practices between and within states.
- Faculty exchange and interaction should be enabled with other Teacher Education and Higher Education Institutions working in the sector.
- Ensure capacity building of faculty so that over time faculty acquires appropriate expertise in subject areas of relevance to teacher professional development and school improvement.
- Explore possibilities of collaboration with reputed National and International Organizations on specific programmes for the FLN Mission.
- Streamline the idea of continuous professional development through identification of training needs, demand based as well as deriving from research into classroom practices and impact of trainings imparted earlier.

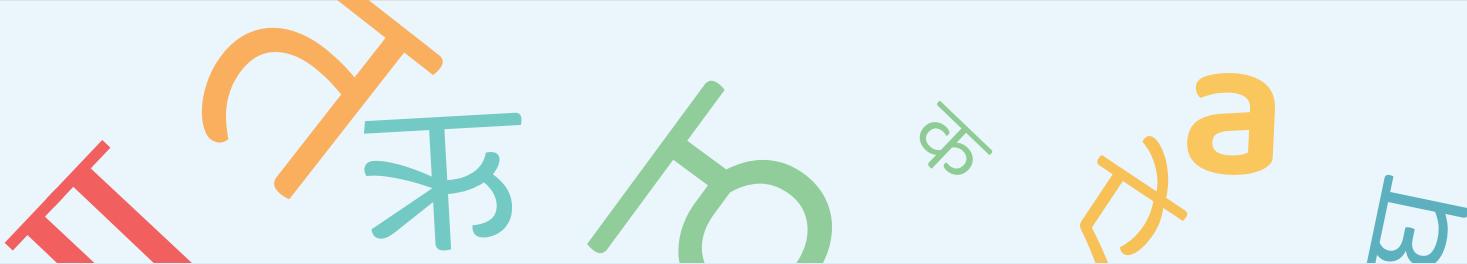


Further, with the renewed focus on Foundational Literacy and Numeracy as a prerequisite to learning, there is an urgent need for establishing alignment of BRCs and CRCs with DIETs and to work under their supervision for monitoring the quality of schools and teaching and designing interventions for direct support to schools. Consequently, the BRCs and CRCs would be the key agency for monitoring and supervision of the progress of activities against the goals of the Foundational Literacy and Numeracy Mission (FLN). Under this, nodal person to be nominated at the BRC level would act as a supportive and vigilant supervisor for all dimensions of activities with respect to FLN. Moreover, schools who feel they have achieved the target/goals may declare themselves as Pocket of Learning Excellence and invite school visit from BRC/CRC and FLN block level nodal person to verify and suggest improvements.



DIKSHA: Repository of Digital Contents

DIKSHA portal shall be integrated with the new Curriculum Framework by the States/UTs, by focusing on teaching-learning e-content in local language/s on FL&N with learner-centric, outcome-centric pedagogy. Access to technology will contribute to equity and will help standardize the learning levels of the nation. States/UTs would be required to make efforts to bring use of technology to every primary school. For learners, high quality content will be prepared and uploaded on DIKSHA for Mathematics and Reading Literacy in English and Hindi by NCERT (based on NCERT curriculum) and in local languages and context by SCERTs along with standardized items at least 500 per subject, per grade to measure each Learning Outcome of each subject of each grade and thereby assessing grade level of proficiency in each of these areas. In addition, various teacher training resources including training modules, supportive materials for the training sessions, like hand-outs, videos, reading resources, teaching-learning materials to demonstrate and use for practising the instructional strategies, teacher handbook, activity booklets etc. will also be made available. The SCERTs will develop the same content in local languages and context. Furthermore, DIKSHA can also be used to house digital lesson plans for teachers. These lesson plans can be easily accessed by teachers via the DIKSHA mobile application. It is important that the lessons be activity based and have examples which are relatable for the children. **A separate vertical on FLN would be developed on DIKSHA which will house all resources and tools to guide the States and UTs.**



Administrative Approaches: National Mission

National Mission: Aspects and Approaches

The National Mission on Foundational Literacy and Numeracy aims to achieve universal foundational literacy and numeracy by end of Grade 3 by 2026-27. It will ensure that all children attain grade level competencies in reading, writing and numeracy. The major objectives based on the recommendations of NEP 2020 are as follows:

- To ensure an inclusive classroom environment by incorporating play, discovery, and activity-based pedagogies, linking it to the daily life situations of the children and formal inclusion of children's home languages.
- To enable children to become motivated, independent and engaged readers and writers with comprehension possessing sustainable reading and writing skills.
- To make children understand the reasoning in the domains of number, measurement and shapes; and enable them to become independent in problem solving by way of numeracy and spatial understanding skills.
- To ensure availability and effective usage of high-quality and culturally responsive teaching learning material in children's familiar/home/mother language(s).
- To focus on continuous capacity building of teachers, head teachers, academic resource persons and education administrators.
- To actively engage with all stakeholders i.e., Teachers, Parents, Students and Community, policy makers for building a strong foundation of lifelong learning.
- To ensure assessment 'as, of and for' learning through portfolios, group and collaborative work, project work, quizzes, role plays, games, oral presentations, short tests, etc.
- To ensure tracking of learning levels of all students.

To lay emphasis and prioritise foundational learning, the programme will be implemented in the mission mode, with the use and strengthening of the existing mainstream structures. The Department of School Education and Literacy, Ministry of Education (MoE) will be the implementing agency at the national level and will be headed by a Mission Director.

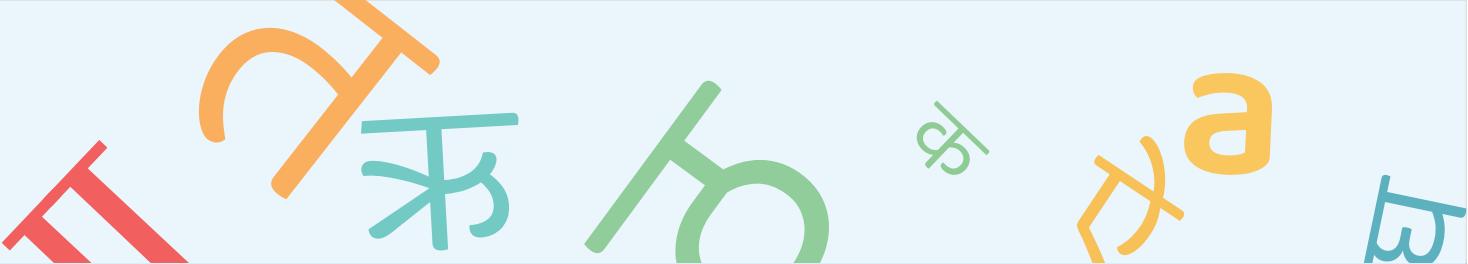
Strategic Planning of the Mission

The Mission at the national level will be responsible for setting national and state-level targets by 2026-27, independently measuring progress against them, providing funding to States



under Samagra Shiksha and providing technical and advisory support to the States and UTs, including creation of public goods and resources. States would be responsible for creating multi-year Action plans to achieve their respective FLN targets and identifying and working with appropriate partners for achieving foundational literacy and numeracy by the end of Grade 3 by 2026-27. The Strategic planning will include the following broad focus areas for the mission:

- **Goal Setting:** The National Mission will declare the overall national targets in achieving learning outcomes, including year wise outcomes to be achieved by 2026-27 by each State and UT. The overall literacy and numeracy targets to achieve the objectives of the Mission are set in the form of Lakshya or Targets for Foundational Literacy and Numeracy starting from the Balvatika. However, the progression of learning outcomes has been prepared from pre-School to Grade 3 (Age 3 to 9)
- **Pedagogical aspects and Curriculum:** The new National Curriculum Framework will aim to strengthen multilingualism, use of innovative pedagogies, variety of teaching learning material, give a way forward for teaching-learning in mother tongue in the foundational years, technology in education and incorporate curriculum and pedagogy rooted in Indian ethos, languages, art and culture, that will prepare learners to address the challenges of 21st century with indigenous knowledge, experience, skills and courage.
- **Capacity Building:** The capacity building will aim to shift focus from a teacher-led process to learner-led activity and experience-based learning process, where the learning of concepts and topics is considered complete only if the learner is able to demonstrate its application to solve problems in real-life situations.
- **Teaching Learning Materials and Classroom Practices:** Aside from core learning material (that is, textbooks aligned to learning outcomes), NCERT, CBSE, KVS and SCERTs to develop highly engaging, joyful and innovative additional learning resources for foundational stage.
- **Learning Assessments:** Assessment of progress and achievements by students, schools and states/UTs will be at the following levels:
 - School Based Assessment
 - Large scale assessment (including NAS, SAS, and Third Party assessment)
- **Stakeholders Engagement and IEC:** For generating greater awareness and to garner support of the community, the following will need to be prepared among others:



- Infographics on need for FLN, Learning Outcomes and targets.
- School to parent communication material, State/UT to teachers/school's communication material, etc.
- Utilise Social Media platforms to create awareness among all stakeholders.
- **Robust IT System:** A robust IT (Information Technology) system embedded with big data analytics will be an integral part of the Mission. The design of the IT system will have three components i.e., At National and State/UT level; At State/UT level going down to school level; and At School Level- IT as a tool for assessment.
- Furthermore, administrative reforms in the form of critical enablers are required to be undertaken by the States/UTs as pre-requisites for achieving the goals envisaged for foundational stage. Specific emphasis will be given on availability of teachers in disadvantaged or Socio-Economically Disadvantaged Groups (SEDG) areas, Special Education Zones (SEZ) and Aspirational Districts. Moreover, performance of State/Districts/Blocks in achieving the goals of this mission will be measured and linked with incentives.

Monitoring and Information Technology Framework

The Mission at the National level, State Level and district level will monitor Mission activities through IT based solutions which shall include field level child wise monitoring. The monitoring framework proposed will essentially be of two types: Annual Monitoring Surveys and Concurrent Monitoring. Further, the priorities for FLN are stated in the goals and these can be achieved by leveraging the existing building blocks such as DIKSHA and UDISE+, which may be enhanced by leveraging open-source tools and solutions for registries and identities while at the same time following the principles and standards set down by NDEAR, as per the following:

- An assessment may be made of existing building blocks that maybe upgraded and leveraged for the sake of FLN.
- The missing building blocks required maybe developed to serve the policy goals while following NDEAR principles.
- The NDEAR institutional framework led by MoE may identify the areas where standards, specifications and policies need to be put in place in order to achieve the above-mentioned policy goals.

The framework and architecture for the FLN Data collection and measurement should enable automatic data collection and collation from multiple sources and at different frequencies



and levels without need for special collection drives, pulling of data from different systems, synchronization, manual uploading etc.

Sustainability of the Mission

Some key insights for the FLN Mission from the sustainable and successful government programmes, such as, Polio eradication and Swachh Bharat Mission, are:

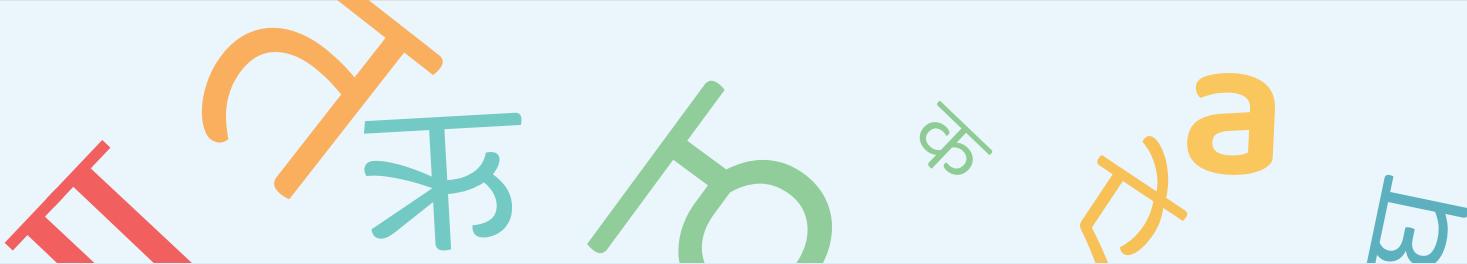
- Leadership engagement is critical. Involvement of Elected Representatives, CMs, Education Secretaries and District Collectors in monitoring activities leads to attention and prioritization. Near constant monitoring and ownership is needed.
- Influencer mapping at the community level is necessary for full outreach, combining national figures with local influencers.
- Outcome tracking and measurement at a very granular level will lead to clarity around vulnerable areas, ability to map distance to goal and innovate to achieve goal.
- Strong focus on salience building around a simple, easily understood goal.
- High frequency, and highly engaged monitoring system at every level, from the Prime Minister, Chief Minister, District Magistrate and “Village Motivator” levels.
- Importance of recognizing the efforts of key stakeholders.

Further, to ensure that the mission goals are realized in a time-bound manner and are sustainable, it would be prudent to identify upfront the key risks and challenges. States will need to be given flexibility and opportunity to adapt and contextualise the broad national FLN Mission framework. The role of the MoE will be crucial in terms of clearly defining the mission goals, holding states accountable to them, and providing them with the necessary tools, technical assistance and funding. To this end, the MoE would also need to consider measures to ensure inter-ministerial coordination and alignment.

Need for Research, Evaluation and Documentation

Research and evaluation studies will be undertaken at national, state, district level and may also be conducted at the block, cluster, and school level in the form of Action Research for providing greater insight into issues and problems faced in implementation of the various aspects of foundational learning at different levels. The priority areas of research at the state level and district level should be decided by the Resource Groups or Research Advisory Committees at those levels.

In this regard, States would need to give priority to developing and implementing, monitoring systems to measure quality related outcomes, such as students learning outcomes, teacher



performance, student and teacher attendance rates by gender and social categories, teaching–learning in classrooms; as also parameters for measuring changes in classroom practices, impact of teacher training, efficacy of textbooks and textual materials, use of children’s languages, quality of academic supervision provided by BRCs/ CRCs/ DIETs etc.

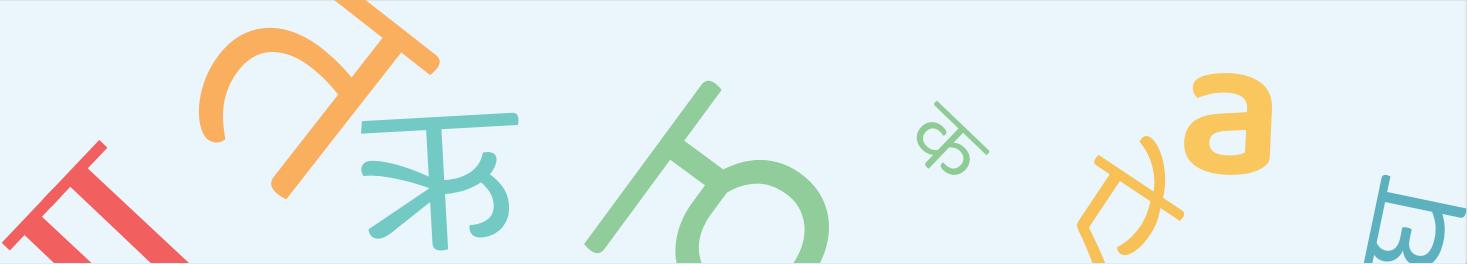
At the national level, apart from PMU, NCERT, NIEPA, and other Universities, research institutions and NGOs should be involved in research projects concerned with foundational learning. In the states, involvement of SCERT, DIETs, universities and State Research institutions should be encouraged in conducting research on issues of relevance to foundational learning. It is important that the findings of research are widely disseminated and used in planning and improvement of various interventions.

Additionally, to capture the diversified initiatives during the implementation of the programme, documentation of various processes and practices must be done by covering various innovative and joyful teaching learning practices being adopted in the classrooms, capacity building of teachers and academic resource persons; role of parents and community members, assessing student learning, awareness campaigns etc. While documenting the successes of the programme, it is also important to record what did not work and why, so that learnings from the experience could be gathered for better understanding.



■ Role of various stakeholders in the Mission

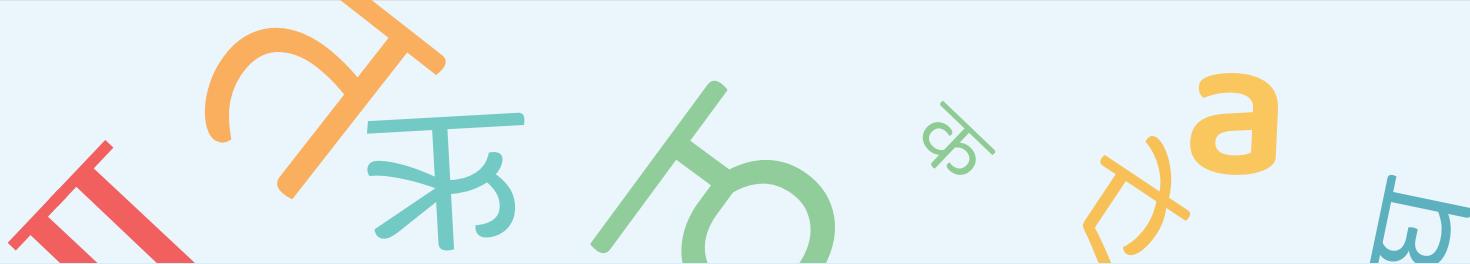
- Department of School Education & Literacy, MoE: The Department will be the implementing agency of the FLN Mission at the national level. It will also provide funding support to the states and UTs under the Samagra Shiksha scheme.
- **States and UTs:** States and UTs have a critical role to play so as to achieve the goal of foundational literacy and numeracy by 2026-27, in mission mode. The following activities would need to be ensured:
 - Creating multi-year Action plans to achieve their respective FLN targets.
 - Work out yearly targets and adapt tools developed at central level for measurement of yearly progress.
 - Contextualise the National Mission by preparing state specific Stage-wise Action Plan based on gaps identified in NAS.
 - Ensure availability of adequate number of Teachers in each school at each grade from pre-primary to grade 3 and extensive capacity building of teachers for implementing FLN in mission mode.
 - Mapping of database of each child enrolled in foundational grades.
 - Mapping of the requirements and ensuring basic facilities.
 - Ensuring delivery of textbooks and uniforms to students before the start of academic session.
 - Identify a pool of mentors to render academic support to teachers.
 - School/public libraries will be made integral part of teaching learning process.
- Training of SMC members, awareness drives for parents and community to make them understand the desired level of learning outcome
- **National Council of Educational Research and Training (NCERT):** The NCERT will play an important role in fulfilling and achieving this national objective of attaining foundational literacy and numeracy through conduct of the following activities:
 - Developing a Curriculum and Pedagogical Framework focusing on FLN with learner-centric pedagogy in collaboration with other experts for foundational stage, as a continuum of the ECE framework.



- Prepare a special capacity building package for foundational stage teachers and develop appropriate Learning Enrichment programme.
- Analyzing gaps through assessments and developing tools and indices to prioritize Foundational Learning.
- Develop a 3-month play based school preparation module for students entering to grade I in order to make sure that all students that are joining school in grade 1 are school-ready.
- **Central Board of Secondary Education (CBSE):** The CBSE will introduce the concept of competency-based education in CBSE affiliated Schools, following the learning outcome metrics for foundational literacy and numeracy, while at the same time monitoring and reporting the same to DoSEL. It will also work together with NCERT to develop codification and metrics for learning outcome for primary level and play a pivotal role in capacity building of ECCE and Primary teachers for Foundational Literacy and Numeracy.
- **Kendriya Vidyalaya Sangathan (KVS):** KVS schools will be developed as model schools for attainment of Foundational Literacy and Numeracy by all students by the end of Grade 3, in mission mode. In order to facilitate this, KVS shall be pioneers in introducing competency-based education at primary level and adoption of learning outcome metrics as developed by the CBSE and NCERT.
- **State Councils of Educational Research and Training (SCERTs):** SCERTs will be entrusted with the responsibilities of designing and development/adaptation of curriculum, instructional designs, capacity building of teachers and academic resource persons, developing locally contextualized teaching learning materials, extensive capacity building of teachers, development of training modules and other resources for teachers in local language. In addition, additional learning material for foundational stage, that is engaging, joyful and innovative, would also need to be developed with special emphasis on local context by involving local experts.
- **District Institutes of Education and Training (DIETs):** DIETs are to be encouraged to emerge as an autonomous institution at the district level with flexibility to function to meet district-specific needs. Under this, each DIET can develop an Academic Resource Pool specifically for FLN, comprising of teachers, teacher educators, district education planners and faculty from University Department of Education.
- **District Education Officers (DEOs) and Block Education Officers (BEOs):** A major role of the DEOs and BEOs under the FLN Mission is ensuring timely distribution of Free Textbooks, Uniforms, Teaching Learning Materials and any other

resources provided to schools by the respective State Government/UT Administration. In addition, DEOs and BEOs would be keeping track of the different training programmes on FLN and ensuring capacity building of primary teachers in their jurisdiction.

- **Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs):** Both BRCs and CRCs would be the key agency for monitoring and supervision of the progress of activities against the goals of the FLN mission at the Block and Cluster level. Consequently, they can design a comprehensive quality improvement plan for FLN.
- **Head Teachers and Teachers:** An important step towards achieving the goal of foundational literacy and numeracy for all children will be extensive capacity building of Teachers. Consequently, Head teachers would need to take the lead as Pedagogy leaders while Teachers would need to be clear about the Outcomes of Learning to be achieved through their classroom transactions in each of their grades/subjects.
- **Non-Government Organizations (NGOs)/Civil Society Organizations (CSOs):** For achieving their respective FLN targets, States and UTs will be encouraged to work with NGOs/CSOs specializing in Foundational Literacy and Numeracy. The following are some areas, where NGOs and other civil society organizations could play a substantial role:
 - Capacity building and development of resources
 - Sustained mobilization and awareness building
 - Facilitate a process of social audit with community involvement
- **School Management Committees (SMCs), Community and Parents:** The active participation of the SMCs, Community and Parents in teaching learning process will inculcate the much-desired element of accountability and sustainability in the entire school education system. Moreover, parents and community role will be vital in ensuring that children attend school regularly and their home environment provides enough opportunities for children to progress in their learning through different activities.
- **Volunteers:** States and UTs shall prepare their own guidelines for engaging peer groups and other local volunteers in contributing towards the goal of achieving Foundational literacy and Numeracy for all grade 3 students by 2026-27.
- **Private Schools:** It has become all the more important that private schools participate in the National Mission's goals and objectives of achieving FLN skills as



considerable number of students are studying in these schools. They are also required to participate in key stage assessments that test basic competencies and application of concepts. Similarly, it would also be crucial to include private schools in communications aimed towards increasing awareness on the importance of foundational learning and its impact on children's learning outcomes.



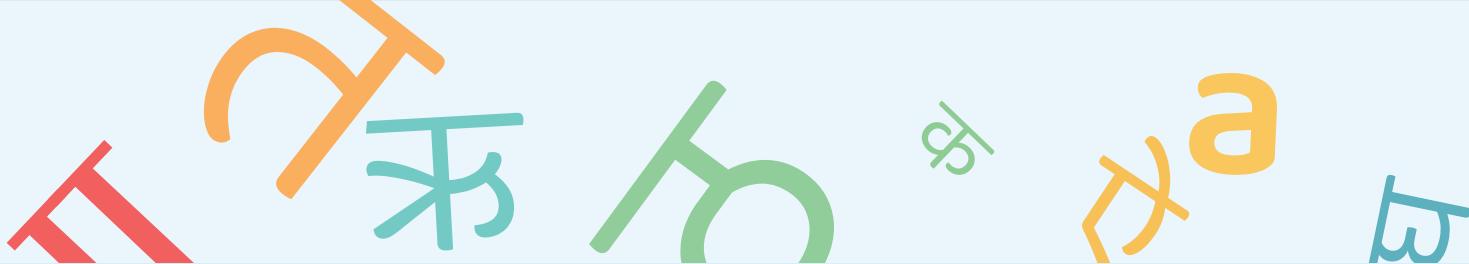
"It takes a village to raise a child"

A successful mission to improve foundational learning of all children in our country cannot be envisaged without an active role played by Teachers, Parents, Community and Local Bodies. The checklists below give suggestive direction for each pivotal stakeholder to play their role in the success of the mission.

Teaching-Learning process: Role of a Teacher

Every Teacher who deals with Foundational Learners must understand that Children learn in variety of ways and have different learning levels in each class, i.e.,

- **Encourage children to talk:** Children learn more when they are encouraged to, talk and discuss in the classroom. In majority classrooms, teachers talk most of the time while children either give choral responses or are passive spectators.
- **Creating an engaging learning environment:** Activities, like choral repetition, copying from blackboard, are repeatedly done in a mechanical way and do not result in learning. Children soon get disinterested or distracted and their 'time-on-task' is low. Most children are not actively engaged for most of the teaching time. Children get distracted if there is no sense of enjoyment or fun in the learning process.
- **Teaching through experiential and real-world based pedagogy:** Children do not take interest in learning if teaching in the classroom is textbook centred and the emphasis is on completing the curriculum and if the teaching-learning is disconnected from the children's context and real-world experiences. Children join school with informal mathematical thinking as they solve simple problems in real life. Therefore, mathematics learning in the classroom must be connected with the child's outside school experiences.
- **Support struggling learners:** Teachers must be able to provide additional support to children who are lagging, and the gap continues to widen.
- **Continuous assessment and identifying learning gaps frequently:** Learning assessment, including examinations, to be largely focused on testing for skills or concept development rather than content. Teaching must integrate continuous assessment.
- **Creating a print-rich environment in classrooms:** There are very few children's reading materials or TLM in most classrooms. Often, there are alphabet and number charts displayed in the classroom or painted on the classroom walls. Thus, children do not get any chance to engage with books or other learning materials. Teachers need to provide print-rich and toy- rich environment in the classroom.

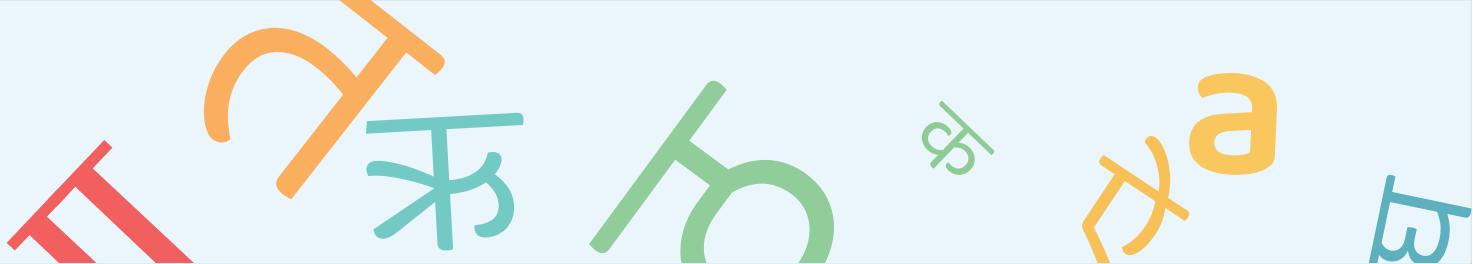


Teacher capacity also plays a central role in the attainment of foundational skills. Currently, few teachers have had the opportunity to be trained in a multilevel, play-based, student-centred style of learning that, according to extensive ECCE research, is so important for students in early grade school, particularly in Grades 1 and 2. In view of the existing challenges in in-service teacher training across the stages of school education, NCERT had designed an innovative integrated programme of teacher training, now, popularly known as NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement). Following the NISHTHA model, a customized FLN package for teachers teaching at foundational stage of education may be designed covering the continuum from pre-school to the early primary grades in an upward continuity, to meet the specific content and pedagogical requirements.

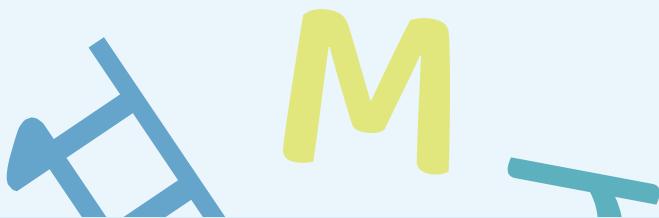


TEACHER ACTIVITY CHECKLIST

Teacher Preparation	<p>Teachers to undergo in-service training to understand better:</p> <ul style="list-style-type: none">a. Understanding the importance of Foundational Learningb. Social-personal Qualities, Environmental Concerns and Valuesc. Addressing Teachers' Beliefs and Attitudes towards learners at the foundation staged. Early Language and Literacye. Early Numeracyf. Pedagogic approaches including Art-integrated learning and Toy and Game based approach.g. Assessment in Early Yearsh. Counselling in Early Yearsi. Promoting role of parents and community in foundational literacy and numeracy.j. Identifying and addressing needs of Children with Special Needs in Early Years
Pre-class preparation	<ul style="list-style-type: none">a. Design own or use the existing material, activities and worksheets, toys etc. for achieving pre-determined early learning outcomes.b. Print rich classroom environment to be created in the form of word walls, story books, posters to assist in development of print awareness and literacy skills.c. Use indigenous/ locally available material which is low cost or no-cost and easily accessible. Make sure children can manipulate the material and have safe accessibility to the material and other resources.d. Variety of activity areas like reading area, creative area, etc. need to be designed by teachers to encourage free play, social-emotional development skill etc.e. Display of material should be at the eye level of the children.f. Assess prior knowledge/literacy of children.
In classroom	<p>Teachers design classroom transactions keeping in mind:</p> <ul style="list-style-type: none">a. The mother tongue is to be used as medium of instruction.b. Use multilingualism in the classroom as a resource.c. More focus on joyful and experiential learning through art, stories, poetry, rhymes, games, toys, songs, or activity-based in-Home Language/Mother tongue focusing on rich local traditions. (Integrating art, sport, ICT, storytelling, toys, games, puzzles, etc.).d. Classroom transactions based on Lesson Plans integrating real-life situations keeping in view inter/multi-disciplinary learning for the student to be able to attain competency in each area.e. Several activity-based teaching learning exercises to be undertaken in the classroom focusing on major aspects including – pre-literacy skills



	<p>(e.g., letter recognition and correlation to letter sounds), pre-numeracy skills (e.g., number counting and comparison), cognitive skills (e.g., pattern recognition, classification etc.) and Other key skills like social skills etc.</p> <p>f. Sensitivity towards gender, disabilities, differential learning levels in the classroom, etc.</p> <p>Assessments:</p> <ol style="list-style-type: none">a. Use School Based Assessments (SBA) to track students' growth.b. One of the important techniques of assessment during foundational learning is through 'Observation'. It involves observing children on a continuous basis to understand their level of abilities, interests and learning styles.c. Based upon the observations teacher need to plan for each learning area specifically how each child is learning literacy and numeracy concepts/skills.d. Test at least 10 items at two proficiency levels to measure each Learning outcome of each subject for each grade for each child. Use backward and forward linkages of LOs to establish student proficiency.e. Maintaining portfolios for documenting each child's work samples/data.
Outside classroom	<ol style="list-style-type: none">a. Using assessment data, identifying struggling learners and develop specific support strategies during school visits and review meetings.b. Conduct frequent PTMs at school level and home visits by teachers to ensure engagement and involvement of parents in the education of their child.c. Personalized and easily understandable report cards to be shared with parents at fixed frequency to make them aware of the child's progress.d. Training of SMC members, awareness drive for parents and community to make them understand the desired level of learning outcomes grade-wise/subject-wise and monitor the progress of students accordingly.e. Organise truncated remedial period in Mohalla classes for previous grade learning loss.f. Organizing and Participating in Academic review meetings for Academic support, planning and follow ups-once in a month.g. Monthly meetings at cluster/block level to learn a new strategy, plan lessons, and address classroom issues, like analysis of student assessment results may be conducted.h. Conferences and seminars to learn from a variety of expertise from around the state or country may be conducted.

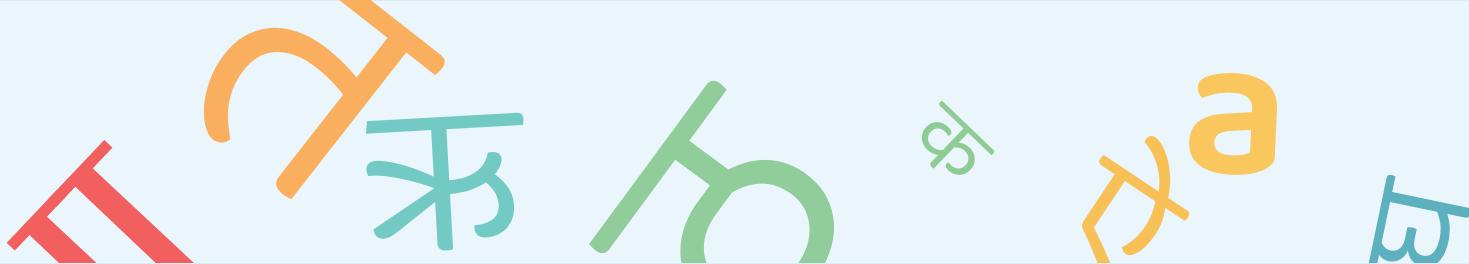


Parental and Community Engagement

Community participation would be a central and overarching factor in planning, implementation and monitoring the interventions of FLN mission. The National Mission on FLN would work towards enhancing participation of the community, parents, teachers and children. To facilitate such a massive mobilisation and solicit active participation, state and district FLN PMUs/offices would need to join hands with experienced and active civil society organisations.

The FLN mission can emphasize by promoting a sense of ownership at all levels such that households and the communities can be empowered to act as an extension to school-based education. To sustain this engagement, a variety of events can be planned at regular frequency with participation from every stakeholder in the ecosystem including, government and private schools, local elected bodies, village, parents and the child.

Further, to focus on better learning outcomes, communities and parents should be made aware of the learning levels of children. This can be a step towards initiating a healthy interaction between parents and teachers about learning levels of children. To this end, one community awareness mela for all school going children can be organised annually during the National FLN week or any other date as decided by the State. Moreover, to enable all parents to provide home based learning support to children, technology based and in person models can be deployed. Every household can be provided with easy to do fun based activities and workbooks. To ensure regular engagement, automated reminders and instructions through pre-recorded calls and videos can also be sent to parents. Additionally, community level support by the SMCs/SDMCs can be provided to parents regularly.



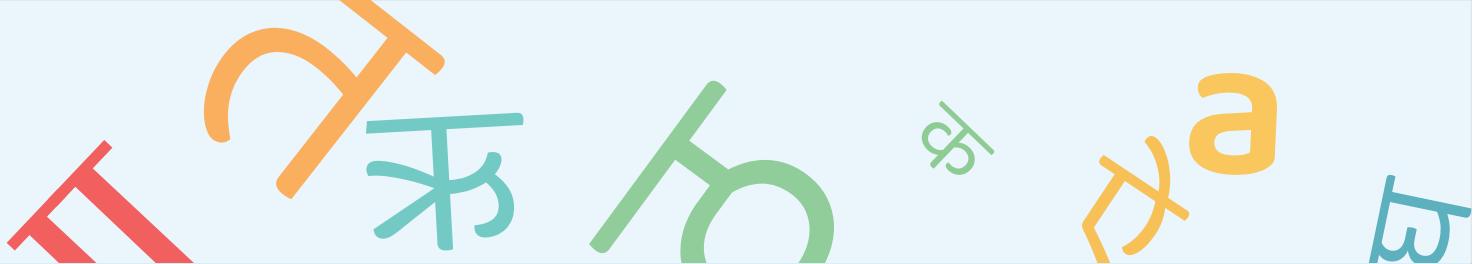
PARENT ACTIVITY CHECKLIST

Engagement with School	<ol style="list-style-type: none">Ensure enrolling their children in school in age-appropriate class.Regularly refer to SMS or WhatsApp messages going from school/teacher for any Home activity, content, or to-do activity with children at homeAttend PTMs frequently at school level and interact with teachers to understand personalized and easily understandable report cards to learn of the child's progress.Consult with school management committee, community members and local authority for formulating school development plans from the perspective of FLN.Engage on dedicated WhatsApp groups for each grade per school, created by the teacher, on which digital content is shared in addition to regular updates about school activities and progress. Apps like Diksha to be leveraged for providing content.
At Home Learning	<ol style="list-style-type: none">To undertake reading books, playing games, singing together, reciting rhymes together, narrating stories with voice modulations, and conversing with children.Provide a print-rich environment at home and refer to a list of activities they can do with their children regularly. Make children read labels on packages, words in newspapers, words on currency, calendars, etc.Download DIKSHA on parent's cell phone, wherever possible, and guide children through the relevant e-content.Borrow simple story books (from school library) or take worksheets (from repository in school) to use at home with children.Share and discuss the 'tracking progress' report of their children at the monthly parent group meetings. This may induce healthy competition to be a pro-active parent, and nudge parents to share learnings at the community level.

COMMUNITY ACTIVITY CHECKLIST

Community level activities for FLN awareness and improvement	<ol style="list-style-type: none">SMC/School Heads/Teachers and Local Bodies to help organise and participate in FLN activities for all schools in the village. Parents to organise and participate in the events. For e.g.<ul style="list-style-type: none">• School readiness melas/Gunotsav/Pravashotsav for children and their mothers: supported by teacher & anganwadi sevika/sahayika.• Function/programme where children's progress can be showcased via activities they do, performances, projects etc.• Reading activity at a public place like Chaupal.• Regular activities that can be done in the community (libraries, wall writing, display of children's work, Chaupal reading demonstrations)
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- Math or quiz competitions - physically or virtually to be done periodically for individuals or for groups.
- Set up a public space for "wall magazine" or where children's work can be displayed. Someone from the community can be picked to be the "editor" (it can even be a group of older children)
- Organize children's library in the community. It can also be an activity centre - where people in the village take turns to do activities with children during the weekend or holidays.
- Organize children in small groups in the Mohalla and do an hour of activity with them daily.
- b. Award and recognize parents who are torchbearers of home learning and share best practices adopted by such parents.
- c. Involve Volunteers from NYKS, NSS and NCC in the village to undertake various tasks from running awareness campaigns, organising events and home visits to ensure at home learning of students. They will also help coordinate door-to-door outreach sessions with mothers/parents/ SHGs etc.
- d. Setting up a helpline at a community centre with the help of local body and forming a team of volunteers to help students without access to digital resources are among a few measures listed in the guidelines.
- e. Training of SMC members, awareness drives for parents and community to make them understand the desired level of learning outcome achievement grade-wise/subject-wise and monitor the progress of students accordingly.
- f. Disseminate Infographics/posters/presentations explaining each Learning Outcomes from Pre-School to grade III; communicating to all stakeholders (student, teacher, parent, community) in a simple manner will help them participate better in this mission.
- g. The SMCs and community will ensure all school children undergo regular health check-ups and the nutrition and health of children are addressed through provision of healthy meals.



LOCAL BODIES ACTIVITY CHECKLIST

Planning/ Preparatory Activities	<ol style="list-style-type: none">a. Meetings of Zila Parishads, Panchayat Samitis, Gram Panchayats and Gram Sabhas to understand FLN and related activities.b. Village Education Committees and School Management Committees in Gram Panchayats may undertake detailed discussions on the different provisions of the Policy specially those concerning the village schools and the role of the Panchayats and community in the following aspects:<ul style="list-style-type: none">• Undertake Baseline analysis as prescribed by the State to identify struggling learners and status school/class wise.• Ensuring 100% enrolment of all children in the Panchayat in schools at appropriate levels.• Ensuring ZERO drop out and NO out of school children.• Ensuring all children in foundational years achieve basic minimum proficiency in Literacy and Numeracy.• Connecting volunteer parents to schools to help the school achieve the FLN goals.
Community Engagement	<ol style="list-style-type: none">a. Foster linkages with frontline workers such as Women's Group & SHG members, Anganwadi Workers, and community mobilizers.b. Create learning sites and train SHGs and Women forums on community engagement.c. Appoint master trainers to train communities on FLN TLM dissemination, monitoring, and parent engagement.d. Undertake IEC activities and behaviour change campaigns at the grass-root level as per the instructions from the State Mission to obtain active participation of Parents, Teachers, SMCs, NGOs and CSOs.
Monitoring	<ol style="list-style-type: none">a. Undertake physical verification of schools to ensure safe learning environment.b. Monitor the uploading of assessment data and documentation of best practices, TLMs, etc.c. Hold quarterly meetings with stakeholders to monitor progress.

PART A

ACADEMIC ASPECTS



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Chapter 1

INTRODUCTION





HIGHLIGHTS

This chapter discusses the Context of the National Mission on Foundational Learning depicting the present international and national scenarios.

Learning Essentials

Learning to read involves “tricking” the brain into perceiving groups of letters as coherent words. To achieve this and to link the letters with sounds, explicit practice is needed. The more complex the spelling of a language, the more practice is needed. Though many bright children can learn to recognize whole words, most learn reading more efficiently by starting with small units of one or two letters.

To understand a sentence, the mind must read it fast enough to capture it within the time limit of the working memory. This means that children must read at least 45–60 words per minute to understand a passage. Fluency is required for analysis of texts. When the spelling rules are simple and instruction is sufficient, most children learn reading in their own language in 4–6 months.

Reading in languages with complex spelling patterns, like English, Portuguese, Tamil, or Urdu takes longer to learn. If the neural circuits used in reading are functional, even poor and malnourished children should learn to decode and read fluently (though they may have difficulties in comprehension). Since many do not get extra practice at home, they may require more teaching hours to become fluent. When large numbers of students are unable to read in grades 2 or higher, the likely reason is limited or inappropriate instruction rather than poverty and malnutrition.

1.1 The Context

a. The inflection point:

India has significantly progressed to achieve universal access up to elementary level with one of the largest schooling systems in the world with almost 250 million school-going children and 9.4 million teachers¹. However, studies have shown that ensuring that students are in school does not naturally lead to an increase in their learning. There is a strong national concern today regarding the poor learning levels of children at various stages of school education. Research has shown conclusively that once students fall behind on foundational literacy and numeracy, they tend to maintain flat learning curves for years, perpetually unable

¹ The Sarva Shiksha Abhiyan (Education for All) was launched in 2000 as a central government programme and aimed to universalise elementary education in a time bound manner. It recognized the importance of ensuring the availability of infrastructure in providing access to education. This was subsumed under Samagra Shiksha in 2018-19.

² UDISE+ 2018-19

to catch up. This is because until grade 3, children are expected to ‘learn to read’ and acquire basic skills. After grade 3 children are expected to be able to ‘read to learn’.

If this does not happen, the learning gap continues to widen from that point, as the texts in the language textbooks and mathematical concepts become more complex and abstract in later grades. The damage is even greater for children who are forced to study in a language that they do not speak or understand. Children studying through an unfamiliar language face a ‘double learning disadvantage’ since they must try and learn a new language and at the same time try and learn difficult concepts given in the textbooks through that unfamiliar language. Thus, grade 3 is the inflection point and this is where children who have not made it, get left behind³.

b. The Yashpal Committee report on Learning without Burden (1993):

This report had highlighted the meaningless and joyless nature of school-based learning in India and strongly raised the issue of non-comprehension in the classroom. Reading is essentially a process of understanding the context and comprehending the information.

c. The National Curriculum Framework – 2005:

It clearly pointed out “A majority of children have a sense of fear and failure regarding Mathematics. Hence, they give up early on, and drop out of serious mathematical learning.” Far too many abstractions are introduced at once with scant attention to well-known facts about development of mathematical thinking in children. Many a time, the tendency embedded in teaching is to accelerate children’s mathematical skills by teaching them mechanical rules at the expense of understanding and intelligent application. Therefore, there is a need to help the children learn mathematics in a way that develops liking and understanding of mathematics during the early years of schooling.

d. Sustainable Development Goal 4 (SDG):

Widespread high-quality education is considered a key for socio-economic growth, poverty reduction and overall development of the country. Sustainable Development Goal 4 (SDG) also lays emphasis on acquisition of high-quality learning and the same is recognized by its signatories across the world.

³World Development Report 2018 (WDR 2018)—LEARNING to Realize Education’s Promise



SDG 4 aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”

The major commitments and targets under SDG 4 are:

Target 4.1

Ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.

Target 4.2

Ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.

Target 4.5

Eliminate gender disparities in education and ensure equal access to all levels of education

e. **The National Education Policy 2020:**

NEP 2020 highlights that a large proportion of students currently in elementary level—estimated to be over 5 crores, have not achieved foundational literacy and numeracy. The NEP, 2020, further reiterates that it is imperative to address this crisis head on and immediately, so that basic learning can be accomplished in schools, and all students may thereby gain the opportunity to obtain an education of quality. Attaining foundational literacy and numeracy for all children must become an immediate national mission. Students, along with their schools, teachers, parents, and communities, must be urgently supported and encouraged in every way possible to help carry out this all-important target and mission, which indeed forms the basis of all future learning.

It is also imperative to note the key role of a familiar language in ensuring better learning of children. As highlighted in the NEP 2020, bringing children’s home languages into the formal teaching and learning process in primary grades is crucial for ensuring inclusive and equitable student learning. There is a huge body of research to prove that a multilingual approach supports learning all the languages well by beginning with a strong foundation of a familiar language, usually children’s mother tongue or home language. Our effort, thus, should be to develop a consensus around the importance of multilingual education to support improved literacy and numeracy skills, as well as better learning of other languages and subjects.

In order, to avert the learning crisis, the policy has suggested that there will be **an increased focus on foundational literacy and numeracy and generally, on reading, writing, speaking, counting, arithmetic, and mathematical thinking-throughout the preparatory and middle school curriculum, with a robust system of continuous formative/adaptive assessment to track** and thereby individualize and ensure each student's learning. The aim of education will not only be cognitive development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills for which the assessment in our schooling system will shift from one that is summative and primarily tests rote memorization skills to one that is more regular and formative. The assessment should continuously indicate the learning gaps in each child corresponding to grade appropriate learning outcomes, to timely bridge the gaps. The system will be competency-based, promote learning and development of children, and test higher-order skills, such as analysis, critical thinking, and conceptual clarity.

Recognising the crucial role of Foundational skills in the national development, it was announced under the 'Atma Nirbhar Bharat' campaign that a National Foundational Literacy and Numeracy Mission will be launched, for ensuring that every child in the country necessarily attains foundational literacy and numeracy in Grade 3 by 2026-27. For this purpose, a vibrant curricular framework, engaging learning material – both online and offline, learning outcomes, teacher capacity building, and their measurement indices, assessment techniques, etc. will be developed to take it forward in a systematic fashion.

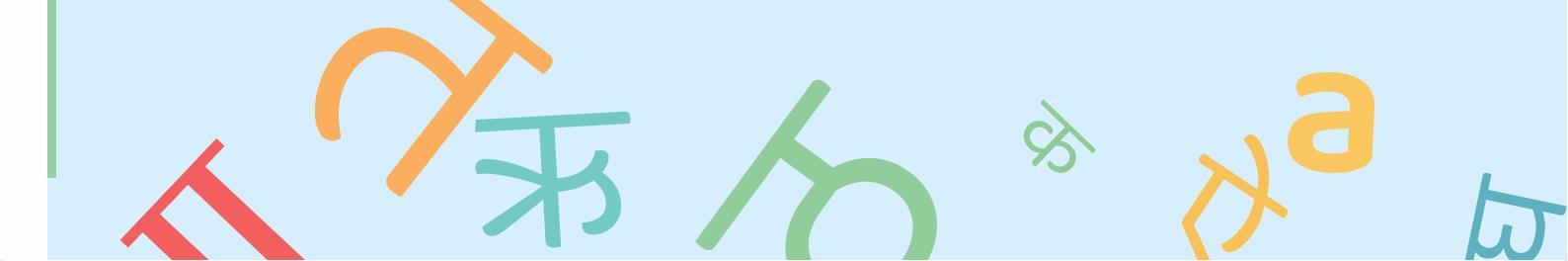
1.2 International Scenario

a. UIS Report:

Globally, six out of ten children and adolescents are not achieving minimum proficiency levels in reading and mathematics. The UNESCO Institute for Statistics (UIS) has estimated that **617⁴ million children and adolescents worldwide** are not achieving minimum proficiency levels in reading and mathematics. The UIS has estimated that **81% of children in Central and Southern Asia and 87% of children in Sub-Saharan Africa, but only 7% of children in Europe and Northern America** are not achieving minimum proficiency levels in reading and mathematics. Globally, of those who completed primary education, one in two did not have basic reading skills.

The data also highlights that the **Central and Southern Asia has the second-highest rate of children and adolescents not learning**. Across the region, 81% of children and adolescents (241 million) will not meet minimum proficiency levels in

⁴ Including 230 million adolescents at lower secondary school (age group 12 to 14 years old)



reading by the time they are of age to complete primary and lower secondary education. This includes 152 million children of primary school age and almost 89 million adolescents of lower secondary school age. Boys of both age groups face greater challenges to read than girls. In total, almost 132 million boys of primary and lower secondary school age (84% of the male population) will not read proficiently. In contrast, the rate is 77% for girls (108 million).

UIS data shows that two-thirds (68%) of the children – 262 million out of 387 million are in school and will reach the last grade of primary but will not achieve minimum proficiency levels in reading. These findings show the extent to which education systems around the world are failing to provide quality education and decent classroom conditions in which children can learn. Analysis of the PISA 2015 Mathematics results show that a ‘middle or a high performing’ country has significantly a smaller number of students in the bottom percentile compared to a ‘low performing’ country. Thus, to move from low to middle performance, it is crucial to “lift the tail”, or ensure that the weakest students at the bottom percentile achieve foundational learning and move towards average performance.

While high-income countries are on the pathway to achieve this goal, a recent report by the World Bank highlights that currently, 53% of children in low- and middle-income countries suffer from learning poverty; explained by the inability to read and understand a simple text by age 10. 55% of children in late primary age in India are suffering from it currently.

1.3 National Scenario

a. Focus on Access:

The educational reforms in elementary education instituted in the country during the 1990s and beyond (e.g., District Primary Education Programme; Sarva Shiksha Abhiyan (SSA); Right to Education Act, 2009) have provided access to schooling in the 6–14 year age group across the country and paved way for children from all strata of the society to reach school. Various enabling provisions such as neighbourhood schools, free textbooks, free uniforms, transport/escort facilities, infrastructure support, residential schools and hostels etc. have been provided to facilitate access to children to schools. However, access does not automatically result in quality of education and to ensure that children are retained in school, quality education is the key.

617 million includes

More than 387 million (56%) children of primary school (age group 6 to 11 years old)



b. Focus on Quality:

Many steps have been taken at both policy and programme level by the Ministry of Education to improve quality of learning. To ensure quality at the foundational years of schooling, MoE had launched a nationwide sub-programme of SSA i.e., Padhe Bharat Badhe Bharat (PBBB) on 26th August, 2014 with focus on early reading and writing with comprehension, and early mathematics. The two tracks of PBBB are: Early Reading and Writing with Comprehension (ERWC) and Early Mathematics (EM). Through this programme, it was envisaged that all children can read with comprehension as well as acquiring basic numeracy skills. The programme also envisaged dedicated teachers for Classes I & II and emphasised on capacity building of teachers, organizing separate reading periods in daily school timetable, maintaining a print rich environment, for reading through children's literature in school libraries and reading corners in classes I & II; for tribal children special bridge materials have been prepared in States which have a high tribal population. It helped create awareness about the importance of early reading and early mathematics and hence helped prepare the base for Foundational literacy and numeracy mission.

In this context, MoE also issued detailed guidelines³ to States and UTs to develop stage-wise/class-wise learning improvement programmes with a specific focus on early primary classes. States and UTs were advised to use funds available under the different components of the SSA programme. This framework also provides broad guidelines for early reading and early mathematics programmes. States have designed specific interventions targeting children in classes 1 and 2 to improve learning outcomes. There are a variety of focussed programmes being currently implemented across the country.

In the last few years, several states, like Assam (Reading Improvement Programme), Chhattisgarh, Rajasthan, Uttarakhand, Uttar Pradesh, Odisha, and West Bengal (Early Grades Reading and Numeracy), have implemented learning improvement programmes targeting children in Classes 1 and 2. Most of these programmes have been around improving early reading/literacy, following varied approaches and methodologies. A few states, such as Punjab and Meghalaya have experimented with implementing programmes to improve learning levels of children in mathematics.

c. Learning Outcomes:

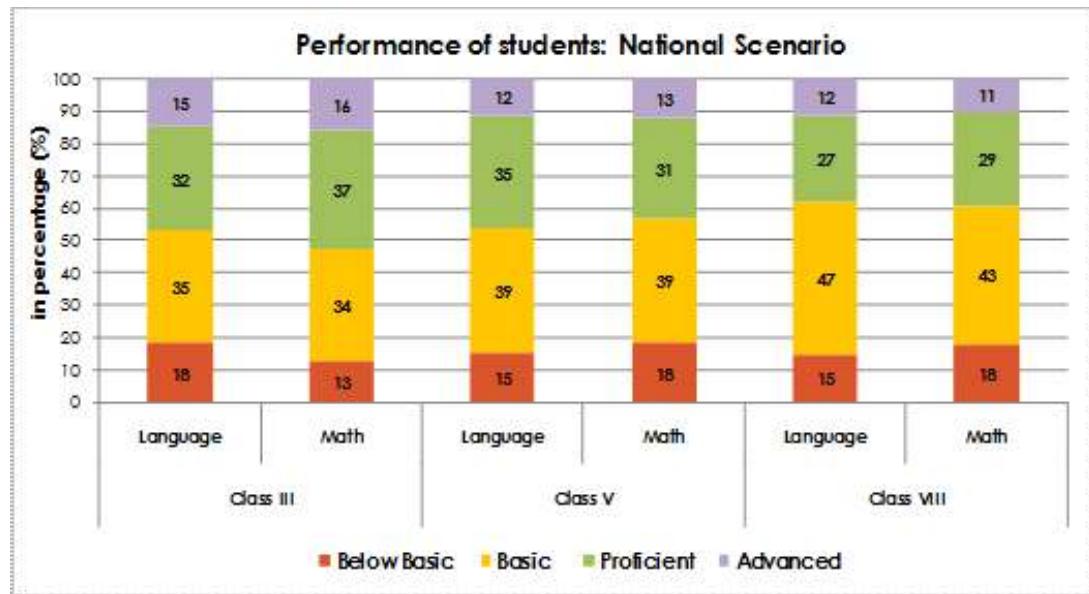
Consequently, Learning Outcomes (LOs) for each class in Languages (Hindi, English, and Urdu), Mathematics, Environmental Studies, Science and Social Science up to the

⁵ Padhe Bharat Badhe Bharat, MoE; https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/Padhe-Bharat-Badhe-Bharat.pdf

elementary stage were developed. Learning Outcomes are formal statements that tell us what a student can do after learning a given topic/concept/course. The learning described in outcomes encompasses the essential and significant knowledge and skills that students should develop during classroom transactions. These LOs were codified by amending the Central Right of Children to Free and Compulsory Education (RTE) Rules, 2010 (Rule 23(2)(c)) on 20th February, 2017 to include reference on class-wise, subject-wise LOs for all elementary classes.

d. Measuring achievement of Learning Outcomes:

To assess the learning levels of students, the National Council of Educational Research and Training (NCERT) under the aegis of MoE conducted the National Achievement Survey (NAS) in 2017. NAS evidenced on sample basis, student attainment of LOs, in Classes 3, 5, and 8 in 701 districts of the country. The NAS 2017 highlighted the problem of low learning levels which decline as the child progresses.



As can be seen from the graph, only 47% of students had acquired proficiency level in Language in Class III which declines to 39% in Class VIII. Also, only 53% had acquired proficiency in Maths in class III, which declines to 40% by the time they reach Class VIII. This requires urgent and focused attention to ensure that students can achieve desired learning competencies at each grade.



1.4 National Mission

a. National Mission on Foundational Literacy and Numeracy:

To address aspects of quality of learning and achieve the goal of attaining foundational Literacy as envisaged by NEP and AtmaNirbhar Bharat Campaign, it has been decided to **establish and launch a National Mission on Foundational Literacy and Numeracy and attain its objectives by 2026-27.** The National Mission lays down priorities and actionable agendas for States/UTs to achieve the goal of proficiency in foundational literacy and numeracy for every child by the end of grade 3.

The mission will be set up under aegis of the centrally sponsored scheme of Samagra Shiksha which is an integrated scheme of school education covering from Pre-School to Senior Secondary level. The Mission will focus on children of age group of 3 to 9 years including pre-school to grade 3, children prior to age 5 and before entering to class I will be attending Balvatika in Anganwadis or primary schools having pre-primary sections. The children who are in Class 4 and 5 and have not attained the foundational skills will be provided age appropriate and supplementary graded learning materials to acquire the necessary competencies.

Recognizing the importance of early learning, the National Education Policy 2020 states that ‘Our highest priority must be to achieve universal foundational literacy and numeracy by the end of grade 3 by 2026-27. The rest of the policy will be largely irrelevant for such a large portion of our students if this most basic learning (reading, writing, and arithmetic at the foundational level) is not first achieved.’

Useful Resources

Learning without Burden, 1993, Report of the National Advisory Committee Appointed by the Ministry of Human Resource Development (Yashpal Committee Report)
<http://14.139.60.153/bitstream/123456789/22/1/122.pdf>

National Curriculum Framework, 2005, NCERT
<https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf>

Padhe Bharat Badhe Bharat, MoE ;
https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/Padhe-Bharat-Badhe-Bharat.pdf

World Development Report 2018 (WDR 2018)—LEARNING to Realize Education’s Promise
<https://www.worldbank.org/en/publication/wdr2018>

National Achievement Survey 2017, NCERT and MoE
https://ncert.nic.in/pdf/NAS/WithReleaseDate_NPPTL.pdf

National Education Policy 2020
https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

UNESCO Institute for Statistics (UIS) 2017; More Than One-Half of Children and Adolescents Are Not Learning Worldwide(Fact Sheet No. 46 September, 2017)
<http://uis.unesco.org/sites/default/files/documents/fs46-more-than-half-children-not-learning-en-2017.pdf>

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Chapter 2

UNDERSTANDING FOUNDATIONAL LANGUAGE AND LITERACY



HIGHLIGHTS

This chapter discusses the

- Need of Foundational Learning Skills: Reading with Comprehension, Writing & Numeracy.
- Multilingual Classrooms & Multilingualism in Classroom
- Approaches of Teaching Language and Literacy: Phonics, Keyword, Whole Language & Balanced Approach
- Recent shifts in Perspectives in Early years Literacy Education
- Key components in Foundational Language and Literacy: Oral Language Development, Reading Comprehension, Concept about Print, Writing, Vocabulary, Phonological Awareness, Reading Fluency, etc.

2.1 Need of Foundational Learning Skills

(Reading with Comprehension, Writing and Numeracy)

- a. **Developing a strong foundation of language, literacy, and mathematical skills in the early years (Age group 3 to 9) is critical to all future learning:**

The ability to read and write, and to perform basic operations with numbers, is a necessary foundation and indispensable prerequisite for all future schooling and lifelong learning. Early literacy and numeracy skills are not only foundational for learning but are correlated with greater quality of life and personal well-being and are critical for educational outcomes in later years. A robust foundation in literacy and numeracy helps children to learn, experiment, reason and create, to be active and later become informed citizens, and contribute socially, culturally, and economically. Literacy is no longer perceived as a simple cognitive skill but as a complex and active process with cognitive, social, linguistic, and psychological aspects (Teale & Sulz by, 1986). Children's concepts about literacy are formed from their earliest experiences and interactions with readers and writers. The process also involves their own attempts to read, write, and develop their own meaning and purpose of literacy skills. The idea is to focus on building the skills in early childhood education itself.

- b. **This understanding of early literacy development complements the current research supporting the critical role of early experiences in shaping brain development:**

Surveys conducted by NCERT and other agencies show that the number of children

who cannot read is extremely high despite completing primary school. The studies are constantly drawing our attention to the grim reality of reading in early classes.

c. **Mathura pilot project:**

Achieving early literacy skills following the philosophy of emergent literacy was the objective of **Mathura pilot project initiated by NCERT in 2007**. It was implemented in 561 schools of 5 blocks of Mathura. Findings of the project showed that after the implementation of emergent literacy/framework, children could read with comprehension and made attempts to write on their own.

d. **The'India Early Childhood Education Impact Study, (2017)' conducted by Centre for Early Childhood Education and Development (CECED) at Ambedkar University, UNICEF and ASER:**

This report mentioned that 'High quality Early Childhood Education programmes help the children to develop a conceptual and language foundation for later learning of reading, writing and mathematics'. Early childhood (birth to 9 years) is a critical period of development and early literacy and early numeracy are two important skill areas that develop along with social, emotional, cognitive, and physical development of the child during this period. Literacy and numeracy development is intricately linked with participation of children in everyday communications, actions, thoughts and self-expression in speech and initial forms of writing. Communication and bonding with family, and friends play an important role in developing early literacy skills. Resources and materials such as children's literature, stationery, art, and craft materials, counting objects enhances children's interest in reading, writing and numeracy. Relevant literacy experiences give them opportunities for self-expression in oral and written forms, reading with comprehension, pleasure, and critical perspective. It also develops good communication skills and personal social qualities. Their awareness of materials, shape, space, pattern, and difference, classifying, matching, comparing, and ordering are important for the development of numeracy. The knowledge, skills, attitudes, and dispositions developed in these early years impact significantly upon their later learning experiences. It is evident that the skills related to literacy and numeracy develops in integration with each other as per the child's experiences in daily life. In the initial years of learning, the skills of literacy and numeracy are learnt without making conscious distinction between languages and numbers e.g., the numeracy skills can be naturally learnt from their experiences of reading and writing, stories, poems, riddles etc.



e. NEP 2020:

The NEP 2020 firmly recognises the importance of quality Early Childhood Care and Education (ECCE) and clearly stressed upon that.

“Over 85% of a child’s cumulative brain development occurs prior to the age of 6, indicating the critical importance of appropriate care and stimulation of the brain in the early years in order to ensure healthy brain development and growth. ”

- NEP 2020, Para1.1

Therefore, it is imperative to have a quality ECCE programme in place to attain optimal outcomes in the domains of physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.”

The National Policy on Education (2020) has focused on pre-school education and made it integral part of the education system. The needs and demands of child will be at the centre while formulation of curriculum for foundational literacy at early grades. The physical, motor, psychological, social, emotional, intellectual development of children of varied ages should be considered while developing content for the children of early grades for the attainment of foundational literacy.

f. The foundational literacy skills are nurtured in the school:

Much depends upon the understanding and attitude of the teachers towards the language the young learners bring to the school. It is to be acknowledged that when children enter school, they have good control over at least one spoken language, are aware of environmental print and have experimented with written forms of communication through scribbling on walls, mud, paper, books, etc. These experiences of children reflect the fact that reading and writing develop at the same time among children and are inter-related. The goal in all reading situations should be ‘to understand’. It is imperative that the message that is conveyed in the printed text be understood. Literacy is not viewed merely as decoding but rather the whole act of reading, including comprehension. (Mason and Sinha, 1993).

2.2 Multilingual Classrooms

- a) **Children bring their home language in the classroom, and their learning process should accommodate their languages as a resource and not as interference:**

Language reflects society. The values inherited in a society can be inferred from its language. Multilingual education can play a significant role in engaging diverse learners and ensuring academic success. In a typical Indian classroom, there will be children speaking more than one language. Further, there will be children who speak region specific language as their mother tongue. The foundational literacy skills can be developed on the linguistic and cultural resources of children. The natural ways of learning language are based on the fundamental idea that mother tongue is the best medium of comprehending, and learning. It has been observed that the learning achievements of the children suffer if they are not given support in using their own language for literacy learning. This happens very commonly when the focus remains on teaching learning of dominant language. This situation leads to the accumulation of load of incomprehension among children. The focus of foundational literacy practices should be on promoting multilingualism for learning in the classroom. Further, if the child has exposure to more than one language, the child becomes academically more creative and socially more tolerant. This also facilitates the development of divergent thinking among children. The wide range of linguistic efficiencies and skills that they gain through this helps them in negotiating in different social situations more efficiently.

2.2.1 Multilingualism in Classroom

- a. Possible Situation - 1-child's language is different from the school language, and textbooks.
- b. Possible situation -2- child's language and language of the school is common, but other children speak different languages.
- c. Possible Situation -3: child's home language is combination of two or more languages, and language of the school is different.
- d. Possible Situation -4: In multilingual families there can be a home language spoken by other family members who may sometimes be different from mother-tongue or local language. (NEP, 2020)



- e. There could be more such situations in early years of education. **To build a strong foundation of Literacy and Numeracy in the foundational years, it is crucial that the States/UTs map the children's spoken languages with that of the teachers' and provide for teachers who can negotiate the classroom transactions⁶ as per comfort of the children in their own spoken languages.**

2.3 Defining education in the early years

The National ECCE Curriculum Framework, 2013 conforms to the vision of holistic and integrated development of the child, with focus on care and early learning at each sub-stage of the developmental continuum, to support children's all round and holistic development. It also mentions that **the pre-school curriculum must address the following interrelated domains of holistic development through an integrated and play-based approach:**

- a. **Sensory and Perceptual Development:** Development of the five senses through visual, auditory, and kinaesthetic experiences.
- b. **Physical, Health and Motor Development:** Gross motor skills, fine motor skills, coordination of fine muscles with dexterity; eye-hand coordination; sense of balance, physical coordination, and awareness of space and direction; nutrition, health status and practices.
- c. **Language Development:** There is no linear progression of language skills, but the skills develop holistically. Children do not learn how to read first and then learn how to write. Language classroom experiences of teachers have shown that the processes of reading, writing, listening, viewing, and thinking develop simultaneously as learners become literate. In schools, these research findings and rich experiences of children should be built upon in the learning process. Emergent literacy perspective advocates literacy learning by interacting with meaningful texts for genuine purposes including enjoyment.
- d. **Cognitive Development:** Development of various concepts, including pre-number and number concepts and operations, (knowledge and skills related to comparing, classification, serration, conservation of space and quantity, one-to-one correspondence, counting); spatial sense, patterns and estimations in measurement;

⁶ Classroom transactional modalities to deal with multi lingual situation, foundational literacy, numeracy, assessment etc. will be included in the capacity building programmes for teachers at national level through NISHTHA FLN and also at the State level through contextualised programmes.



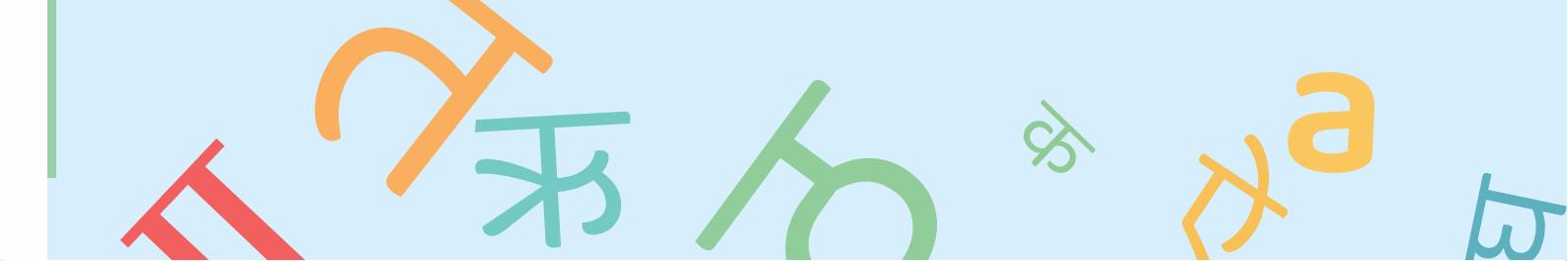
data handling; skills related to sequential thinking, critical thinking, observing, reasoning and problem solving; and knowledge of concepts related to the physical, social and natural environment.

- e. **Development of Creative and Aesthetic Appreciation:** Exploring different art forms, developing dispositions, expression, and appreciation for artistic, dance / drama and musical activities.
- f. **Personal, Social and Emotional Development:** Development of self-concept; self-control; life skills / self-help skills; habit formation; initiative and curiosity; engagement and persistence; cooperation; compassion; social relationships; group interaction; pro-social behaviour; expressing feelings, accepting others' feelings.

The 'Pre-School Curriculum' NCERT (2019) emphasises on three developmental goals that comprises of all the five domains rather than talking about each domain in isolation. One of the objectives of preschool is to help children become involved learners, think critically, be creative, collaborate, communicate, and connect with their immediate environment which are well aligned with the early literacy and numeracy skills. The overall development of the personality of a child through play, manipulation of concrete material for discovery, experimentation, and exploration is the purpose of preschool education. It emphasises on a print rich environment that allows young children to practice foundational literacy skills in their daily life, combined with age and developmentally appropriate pedagogical practices of key concepts and literacy skills. This lays the foundation of literacy learning in the preschool. It also suggests about how to plan the pedagogical practices in such a way that goes along with the developmental stages of young children in the age group of three to six years.

2.4 Language Acquisition

- a. The language acquisition journey for the child begins in the womb and continues throughout the child's school years. Even before birth, infants experience and process sensory stimuli that promote neurological development in the brain.
- b. **It is understood that by the age of 5, children grasp the sound system, grammar and communicative competence of their home language(s) and acquire a sizable vocabulary.** They learn to talk which is one of the most observable and significant achievements of their growing up years. For children, getting hold of newer language tools with the passage of time means new opportunities for social communication, for sharing lived experience, pleasures and needs and for making better sense of the world around them.

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- c. It is worth mentioning that phonemic awareness and enriched vocabulary skills acquired during early years are one of the key predictors of effective language competence. It can be used as an effective resource for classroom teaching and learning by activating their previous knowledge and giving space to their lived experiences such as discussing a theme like seasons through songs or folk songs. The focus during acquisition is not the form or structure of the language's utterances, but purposeful and meaningful interaction through the act of communication itself.

2.5 Approaches to Teaching Language and Literacy

a. Reading Readiness Model:

Over the years, there have been much research on how and when a child learns to read and write. In the early 1950s, some theorists focused on maturation levels of children and believed that reading instruction should not be taught until children reached an age of mental readiness. The dominant theory was that reading readiness was the result of biological maturation. They believed that for formal reading instructions are necessary. In this reading readiness model, there are two ways in which theorists saw how children became prepared for instructions.

- i. In **Maturation view**, researchers instructed families and teachers to not interfere with their child's natural development and advised postponing the teaching of reading until children were in kindergarten or first grade (6 years and six month of age). Arthur Gesell, a developmental psychologist advocated that instructions should be postponed until child naturally possesses some prerequisite skills.
- ii. On the other hand, in **Experience view** researchers believe that rather than waiting for children to be ready they need to experience pre-requisite skills to accelerate readiness. Instructions for pre-requisite skills can be seen as auditory discrimination, visual discrimination, visual motor skills and large motor skills. These skills were directly taught to young children to prepare them for formal reading instruction referred to as "**reading readiness**". The reading-readiness model implies that children need to acquire these four skills to prepare for literacy. These skills are taught systematically to all children with little concern for experiences and information that children might already have.

We no longer accept the reading readiness model of literacy learning and development because it does not take into consideration some of the key

aspects of engagement with oral language and print that promotes literacy acquisition.

b. Emergent Literacy:

By the 1980s, researchers challenged the perspective of readiness and believed in early literacy development. Researchers began to consider the importance of learning environment in which children interact and develop reading skills. The term **emergent literacy** proposes that literacy begins at birth in literate societies and continues till the child becomes conventionally literate (by grade 1 or 2). This view supports the notion that children in literate societies come to early childhood settings with rich yet diverse background of language experiences including recognizing written symbols and variety of conventional writing efforts from their homes. In addition to the linguistic development, child also gets inputs for development of numeracy skills such as handling numbers, thinking critically and creatively and develop spatial understanding. This stage of emergent literacy lasts till children begin to conventionally read and write.

- i. Emergent reading skills include awareness about print and pretend reading, including practices like 'look and say', i.e., reading words as pictures.
- ii. Emergent writing skills include drawing and scribbling to represent something and express themselves in a form of writing.

There are many approaches, which were used to instil foundational skills in the students such as, phonics approach, keyword approach, whole language, however, all these approaches have their own limitations. Therefore, **there is a shift in approach in recent times and balanced approach is favoured to get best results.**

2.5.1 Balanced Approach

In the recent years, there has been an attempt to blend multiple approaches for literacy teaching in the initial years. This has been described as a balanced approach. This model acknowledges the importance of the function (comprehension, purpose, meaning) along with the form (phonemic awareness) of the literacy processes focussing on that learning happens best in teaching language holistically. **The balanced approach is where teachers follow what is appropriate for their classroom and where every child learns in a joyful and stress-free manner, by taking the best of multiple approaches.**

For example, being literate requires much broader language skills than simply reading and writing and therefore children should be given plenty of opportunities to make

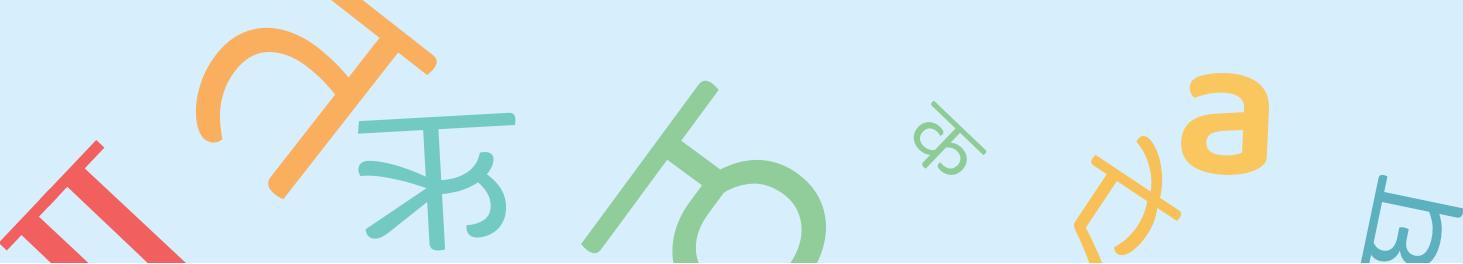


meaning from texts, ask questions and read between the lines in many ways. In a balanced literacy approach, teachers encourage their children to see reading and writing modelled as s/he reads/writes in front of them, children share and get paired in the reading activities and write with the teacher, children get scaffolded in their literacy learning and gradually start practicing reading and writing independently. This broadens the scope of giving autonomy, flexibility, opportunity for planning the literacy process as per the need of young children. It also acknowledges the diversity in language and socio-cultural perspectives. Teachers should be aware of reading instruction like Read aloud, Shared Reading, Guided Reading, Independent Reading, Modelled and shared Writing, Guided Writing, and Independent Writing for enhancing literacy skills. This is characterized by meaningful literacy activities that provide children with both the motivation and skills to become proficient and lifelong literacy learners. **The Balanced Literacy approach advocates balancing what is taught, how it is taught and with what it is taught** (Fitzgerald, 1999).

Recent shifts in Perspectives in Early years Literacy Education

Major shifts that have occurred in the understanding of how children should be enabled to attain literacy are:

- a. Learning to read and write may be a necessary but not a sufficient aim of literacy education. A more central aim should be to enable students to use language skills to participate meaningfully and in an empowered manner in society. Oral language and literacy development activities must therefore be planned concurrently for children as opposed to sequential approach, to help children not only learn to read but also make meaning of reading and read with comprehension.
- b. New methods may be adopted for introducing them to the basics of language and literacy which are informed by the more recent research and understanding of emergent and early literacy which are sensitive to children's learning needs and contexts along with the early learning continuum from preschool to the primary stage. This understanding is based on the adoption of judicious and balanced approach to teaching reading and writing to young children instead of adopting either a purely whole language approach or phonics-based approach.
- c. Oral language development must be linked to learning of literacy and must be developed concurrently in children along with literacy skills.
- d. There should be an understanding and acknowledgement of the fact that both free drawing and independent writing are forms of expression related to literacy.
- e. It is critical that teacher's own beliefs and knowledge related to early language and literacy need to be addressed to enable them to see meaning making as central to learning to read and write.
- f. Explicit modelling of literacy practices should follow a "gradual release of responsibility model" which incorporates a range of reading/writing activities for helping children develop literacy skills, such as Read aloud/Modelled writing, Shared reading/writing, Guided Reading and thus graduating to Independent Reading/Writing.
- g. Language and early literacy education should lead to not only development of these skills and competencies but also to the development of critical thinking and reasoning.



2.6 Early Language and Literacy

Language is more than just listening, speaking, reading, and writing. Language serves the purpose of communication, thinking and making sense of the world through the processes of inferring and reasoning.

a. Understanding Reading and Writing

- (i) **Children begin to read the written material around them**, like on wrappers of biscuits and toffees, posters on the roadside, etc. As soon as children start holding pen, pencil, chalk, they start scribbling and try to add some meaning or message to them - this is also a part of the beginning of writing. **These are the signs of their early literacy and natural efforts of shaping meaning** and not the results of any formal education. In fact, the cognition of reading and writing also develops like development of oral language in the day-to-day meaningful and workable contexts.
- (ii) **The goal in all reading situations should be 'to understand'**. It is imperative that the message that is conveyed in the printed text be understood. Emergent literacy perspective advocates literacy learning by interacting with meaningful texts for genuine purposes including enjoyment. This perspective focuses on all aspects of language (semantic, syntactic and grapho-phonetic), and not merely on phonics (Sinha, 2000).
- (iii) **Reading motivates students to read books independently, develop creativity, critical thinking, vocabulary, and the ability to express both verbally and in writing**. It helps children relate to their surroundings and real-life situations. Thus, there is a need to create an enabling environment in which children read for pleasure and develop their skills through a process that is enjoyable and sustainable, and which remains with them for life.
- (iv) **Writing is also a process of comprehending the thoughts and sharing it with others**. It not only includes the process of joining words together rather it is a systematic procedure of sharing the knowing, information and ideas in a coherent manner. Writing enables children to explore, shape and clarify their thoughts, and to communicate them to others. By using effective writing strategies, children discover and refine ideas and compose and revise with increasing confidence and skill. Emergent literacy perspective emphasizes on

Children who
read often become
better learners,
which lead to
success in school
and other areas
of life.



similarities between oral and written language acquisition. Children's comprehension of their written language mostly depends on their effective use and understanding of oral language. Even before starting their formal instructional training for writing, children begin to interact with the literacy environment around them and start building connections between symbols and their meanings.

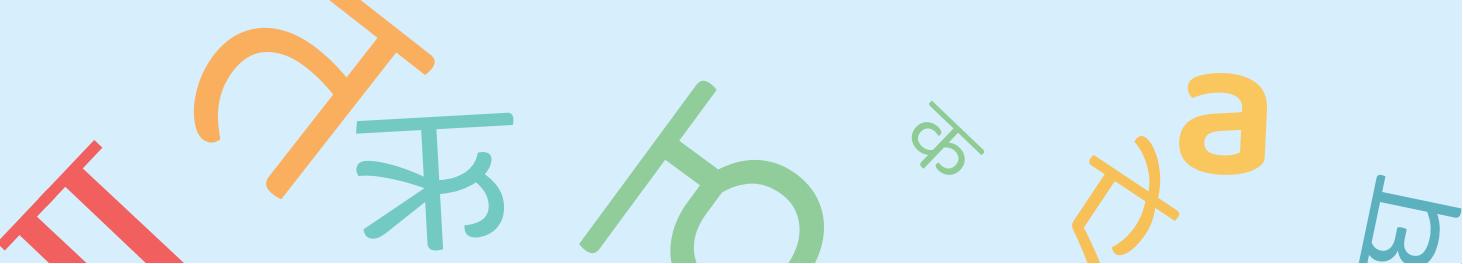
b. Concept of Writing in the Classroom

The learners who come to school are already proficient in the knowledge of conversational language and some important concepts of reading and writing. If the process of teaching is gradually developed by making this proficiency an important base, then learning to read and write will become an interesting and meaningful experience for children.

The zig-zag lines of children's pictures convey a lot. The opportunity to draw motivates them to express their thoughts and experiences. In this phase of writing, teacher can facilitate in giving meaning to their drawings by writing for them in conventional manner. Writing/print is used to say something meaningful; such acts clarify this concept of literacy. This concept deepens with the increasing opportunities of reading and writing. Along with it, the technical aspects of writing also emerge like the direction of writing from left to right (in Hindi), from right to left (in Urdu), the shape of symbols, the space between two words. The understanding of these concepts slowly becomes visible in the effort of independent writing by children; in this phase the teacher should focus on formative assessment and explore the relationship between the reading and writing needs of the children.

c. The process of developing skills in writing during the early foundational learning period are as follows:

- (i) **Emergent Writing-** drawing and scribbling: Children to be given time to draw during a language class and asked to talk about their drawing. Children's drawings slowly change to representational drawing when they start drawing from the environment like people, characters and start telling stories about it. Children also start including random letters (invented spellings) in their writing. As children gain more experiences in language, they notice that words are made up of more than one sound, each word is a group of conventional letters.



- (ii) **Conventional Writing:** As children progress in their writing, they start using formal rules of grammar, punctuation, and spelling. Overtime invented spellings are replaced by appropriate spellings.
- (iii) **Writing Composition:** It is observed that teaching of writing must be focused less on techniques and more and more with fundamental insights about how children process information for writing. Writing is a complex cognitive process, and it is important to understand the role and participation of the child as a writer in this process and writing as a thought process. Children share experiences or narrate/describe an incident making use of their understanding of conventional writing.
- (iv) Reading and writing association is necessary to understand the interdependence of reading and writing. Both processes are complementary to each other. Skills and concepts learnt during reading are used in writing, and those of writing, in reading. Therefore, the written messages of children should be read by them, and written assignments should be based on material read by them. In this way, the understanding of read material will help the children in the expression of their personal experiences. This process will motivate learners to use writing in meaningful contexts.

Language Learning- An Everyday Process

The children engage with language in their everyday without realizing it. In one form or another they make use of language and their knowledge about the language too. They know how to address their elders, teacher. They are listening to conversations, may be radio too, watching television- these are the sources from which they draw their language and use it for communication. There is a lot of written and printed material available at our homes, the house number plate; folk art (Mandha) on the walls of the house; calendar; company's name on the gas stove, name of the family head engraved on the utensils; name tattoos on the arms; page of newspaper; shopping lists; toothpaste box etc.

What is important is the amount of attention paid to that writing or printed material. Children develop an understanding of reading and writing even before coming to the school. This pre-knowledge of the children can be considered as the foundation of developing their literacy skills.



2.7 Key components in Foundational Language and Literacy:

Development of early language and literacy in the formative years requires developing a wide range of skills, knowledge, and attitudes. This also requires developing literacy to build comprehension, writing for self-expression, vocabulary enrichment, experiences of reading with pleasure, engaging in interesting conversation. Rich early language and literacy experiences also give opportunity for getting familiar with the aspects of language such as fluency, word recognition, letter knowledge and phonological awareness.

Oral Language Development



Includes improved listening comprehension, oral vocabulary, and extended conversation skills. Children come to school with a rich repertoire of oral language of their homes. However, some children's home and school languages are quite different, and they need to acquire a new language at school. Even children who speak the same language at home and school need to continue to grow in their understanding and use of their mother tongue. The experiences in oral language are important for developing skills of reading and writing.

Reading Comprehension⁷



Involves constructing meaning from a text and thinking critically about it. When a child can comprehend, she/he is able to explain, extend, give examples, make inferences, predict, and summarise what she has read. Thus, this domain covers the competencies of understanding texts and retrieving information from them, as well as interpreting texts.

⁷ Reading essentially is a process of meaning making and comprehension is an integral part of reading. There are multiple factors which makes reading a meaningful activity instead of just pronouncing some words. Some of these factors are as follows-

- Prediction- While reading the reader predict about the next word or next sentence.
- Comprehension- The reader tries to comprehend the content of the picture and the text.
- Self-Correction- Reader tries to re-read the content and sometimes correct their own pronunciation.
- Meaning Making- The reader tries to develop the meaning of the content which he or she is reading.
- Joy- Reading needs to be joyful process.

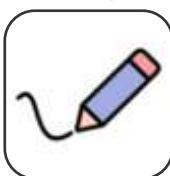
The reading strategies are motivated by facts that written words have pronunciation, written words are part of sentence and a sentence has meaning; words are composed of parts, including letters and morphemes; the ultimate goal of reading is to extract meaning from text. Comprehension is an integral part of oral reading fluency. In a literacy rich environment the children are motivated to read with comprehension.



Concept about Print

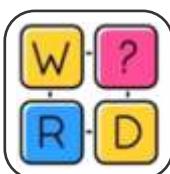
Before children start their formal instruction in literacy their understanding about print is essential, as print conveys meaning and has its own purposes and features (ranging from direction of writing to turning of pages, reading of book cover, about the author, and text). Children need exposure to different types of print rich environment to develop the skill of comprehension.

Writing



Involves the ability to express themselves in writing in initial stages with their familiarity and understanding encoded sounds to write words. This process progresses towards conventional writing along with the presentation of thoughts or information in a logical and organized manner. Learning to write is a developmental process, starting with children scribbling and drawing in the preschool years. This domain includes the competencies of writing aksharas and words as well as writing for expression.

Vocabulary



Developing knowledge of a wide range of words and word meanings. This is not just about learning word definitions. If vocabulary is developed in contexts, children learn to use words in appropriate contexts. This domain includes the competencies of oral vocabulary, reading/writing vocabulary, and morphological analysis of words.

Phonological Awareness



Involves building an understanding of the sound structure of a language. The ability to notice, think about, and words with the sounds in spoken language that can be ultimately linked to the symbol system of the language. This domain includes the competencies of word awareness, rhyme awareness, and awareness of sounds within words which should emerge from their meaningful engagement with language.

Decoding



Involves deciphering written words based on understanding the relationship between symbols and their sounds. This domain includes competencies of print awareness, akshara knowledge and decoding, and word recognition. The aspect of decoding the text is important but it should emerge from a context of children. The purpose is to develop phonemic awareness. For this teachers should select familiar and interesting texts for drawing attention to the sounds of the words and letters, and not follow the alphabet in sequence. This is also based on the principle that young children should move from known to unknown age appropriate text.

Reading Fluency

Refers to the ability to read a text with accuracy, speed (automaticity), expression (prosody),



and comprehension that allows children to make meaning from the text. Many children recognise aksharas, but read them laboriously, one-by-one. This hampers the process of understanding what is being read. Research links reading fluency to comprehension as to comprehend a sentence, children should be able to decode it in about 12 seconds. It leads to a quantitative model of reading efficiency that has a simple and transparent monitoring indicator⁸.

Culture of Reading / Inclination towards Reading

Involves the motivation to engage with a wide variety of books and other reading materials.



Children should be able to appreciate good literature and be able to respond to it in informed ways. Even incredibly young children demonstrate this by expressing interest in handling books, looking at illustrations and trying to "pretend" read. For developing the culture of reading the participation of family, community and school is important. The cultural of reading also promotes democratic values and personal social relationship for responsible citizenry in later years.

2.8 Pedagogies for enhancing language and literacy development

- a. **Creating a Print Rich Environment:** In a print rich classroom, children have many opportunities to interact with various forms of print. The displayed text needs to be meaningful, inviting, and relevant for the children. A class can be made print rich by labelling objects or places, writing children's names, displaying samples of children's emergent writing, creating word walls, labelling pictures related to the theme. The reading corner/reading area is a significant place for language learning and exploration.

Various child-friendly components such as poem corners, message boards, theme boards, various charts like class responsibility chart, mid-day meal chart, chart of stories etc., display boards (children's writings, drawings, collections, variety of texts, pictures with captions, instructional material developed by teacher etc.) may be developed and displayed on walls at the eye level of children.

⁸ Helen Abadzi, 2006, World Bank Report

- b.** **Read-aloud** is a practice where teachers, parents, and caregivers pick up an engaging story from a book and read it out. Variations in pitch, tone, pace, volume, pauses, eye contact, questions, and comments make for a fluent and enjoyable experience for children. Reading aloud develops their listening skills along with their interest in understanding the story. This session should be followed up by conversation with children and writing/drawing task.
- c.** **Listening, Telling and Writing Stories and Poems:** Stories-whether they are about real events or about events imagined by someone- bring new material to the attention of the children and becomes interesting material for literacy development. The teachers can provide children with the pleasure of listening to the stories. The skill of telling can only develop with time and practice. It is important to select age appropriate, interesting, stories related to children's familiar context and surroundings. And no story needs to be a single occasion. Good stories deserve many re-tellings. Discussion on the story can be initiated on the messages, perceptions, impressions which children gather from the story. The freedom to recreate a story and its characters in a way that is meaningful to child should be promoted. A teacher should create opportunities for children to talk about a story in any way they like, to extend it, substitute its characters, and to make up their own stories
- d.** **Songs and Rhymes:** Children enjoy songs and rhymes. The rhyming words in the rhymes help children notice and play with oral language and construct their own words enriching their vocabulary. Activities like storytelling, rhymes and songs, free and guided conversations help children develop phonological awareness, vocabulary development, listening comprehension skills along with developing their attention span.
- e.** **Sharing Experiences:** Children need to be given ample opportunities to participate in teacher-initiated conversations about their experiences with pets around them, characters/events of the stories, cartoon films, cleanliness, and favourite food.
- f.** **Drama and Role Play:** When children are given the opportunity to engage in drama and role play, they learn to express themselves as well as learn new words. Drama is invariably a part of children's own traditional play activities and games. A story or part of the story can be enacted. It enriches all the skills of language learning-LSRW

THINGS TO REMEMBER

- Read aloud the story in an interesting manner
- Reading focused on text direction and words
- Creating Book awareness and way of handling a book
- Material must be displayed & changed on a regular basis



(Listening, Speaking, Reading, Writing). Children can be involved in creating props, writing, and reciting short dialogues, invite/poster etc. It helps in becoming effective communicator and developing interpersonal skills and facilitate bonding with others.

- g. **Picture Reading/Talk:** With the help of picture books, and other relevant collection of pictures made available to children creates opportunities for reading with meaning making and speaking about them.
- h. **Shared Reading:** In shared reading, big books with relevant illustration and text are read in pairs or by the teacher involving children. The book has large font, illustrations, and simple text so that all children can participate in reading and talk about the story. This also builds up their vocabulary, sense of directionality while reading. This also facilitates peer reading. Shared reading is important for early literacy and most effective for Grade 1 and Grade 2 children.
- i. **Activities based on Reading and Writing Corners:** Every class should have a reading corner/reading area with a variety of age-appropriate children's literature. Children should be provided enough time and opportunities to spend time with the books. There should be stationery and art craft material for self-expression.
- j. **Use of Classroom Wall:** Various activities can be designed around the stories and poems read by the children. They can draw pictures, list familiar and unfamiliar words, and display them on the walls of the classroom. Green strips (Haripatti) can be used for writing, drawing by the children. These strips can also be used to display the works of children, attendance chart and other informative and interesting materials to motivate children to read and write.
- k. **Experience Based Writing:** Daily experiences of classroom or outside world are important opportunities of writing. Some prescribed time of the class may be devoted daily to share the experiences of the previous day in class and to write them. Further, the learners may be encouraged to write their own daily in their own words. They may also be given opportunities to develop stories and poems from their own experiences.

Teacher must spend more time with children who are struggling to read. Mixed groups could also be made where weaker children benefit from peer support.

I. **Mid-day Meal-** It is also one of the routines with which children have a deep connection and they take keen interest in it. Different activities can be planned around this. For instance, a teacher can draw pictures of food, utensils etc. and initiate conversation on mid-day meal, eating habits, health and hygiene, nutrition, junk food, foods of different cultures, plants, and environment, etc.

m. **Use of Textbook and other Resource Materials-**

Teachers may use textbook and other resource materials including, stories and poems to provide opportunities of writing. Careful planning can make a connection between these textbook lessons and children's literature available in the class and children can enjoy the material related to one content/subject. If the writing activities related to textbook are made more interesting and meaningful instead of traditional question-answer and fill in the blanks, writing will soon become interesting medium of expression. Further, use of different resource materials like, posters, story books and poems may provide ample opportunities to learners to engage with written text and will surely facilitate the process of writing.

THINGS TO REMEMBER

- Each day the teacher may select one of the activities suggested for oral language
- Activities to be conducted not only in Class 1 but in all primary classes

Children need to be exposed to a range of children's literature for independent reading, shared reading as well as read aloud. These are critical for children to develop sustained literacy skills as well as develop critical thinking, imagination and creativity. There is a need to have carefully selected books that are suitable for children with varying age group, reading abilities and diverse interests. There should be relevant, age appropriate books in the Functional library, which may be set up in every FLN class. This will be active and dynamic where teachers and children can share their books. This may include UDL books. The criteria for the selection of children's literature should be determined and there should be space for literacy activities. The books should be kept within the reach of the children.

Emphasis to be given to child's Home language

The focus of oral language should be development of the child's first language or Home Language (HL) while providing exposure to the School Language (SL). HL should continue to be used and developed in the early primary classes while helping children acquire strong oral and literacy skills in the SL. Oral language activities have to include both children's HLs and SL.

2.9 Developing literacy skills in third language/English

- a. **The pre-existing knowledge of language helps in building literacy skills in languages.** Children who have a strong foundation in their home language can learn second and third languages more easily. The literacy engagement for third language/English language learners requires connectivity and linkages to what they know in their first language. However, children do not become literate automatically; careful and sensitive planning is essential; Presenting language as story reading and storytelling, in the first language, and in English ensures authentic engagement with meaning, and unconscious acquisition of recurring language. It also promotes aspects of language use ranging from punctuation, spelling, and paragraphing, to reading and writing multi-lingually.
- b. **The recitation of rhymes** gives them an understanding of implicit music/sounds in words and pleasure in the rhythm. This activity motivates children to pursue learning the language.
- c. **Reading texts which are translations of what they have read** in their mother tongue or first language into English facilitates their comprehension leading to developing vocabulary in English.
- d. **In the above context, the teacher should allow the use of code-mixing and code-switching** to children for expressing themselves. This is essential for ensuring the development of creative and even critical thinking among children.
- e. **The context of texts in English should not be culturally and socially alien to children** because this will hamper the process of meaning-making.

The multilingual scenario becomes a resource for learning English specifically in situations where its reach is minimal. In such a situation teacher must take note of words which children speak in English and weave some activities around them. All such activities should be followed first in the child's language in the form of facilitation.
- f. **On-going assessment of children's knowledge acquisition and skills helps teachers develop meaningful and outcome-oriented learning plans.** A significant challenge for the teacher is to create interest in reading in English beyond the textbook curriculum which children may find difficult to access. Provide them opportunities to express themselves in more than one language or their first language and English. Let children make use of their prior knowledge in LSRW by engaging them in pre-reading while reading and post-reading reflections.

How to develop reading habit among children?



When children's home language is different from school language

- Extended period for oral language activities in home language and school language including storytelling, read-aloud, shared reading conversations, rhymes and songs etc.
- Introduction of basic vocabulary in school language in the oral language activities
- Using home language to support teaching-learning of school language and promoting mixed language use

Useful Resources

SARTHAQ: Students' and Teachers' Holistic Advancement Through Quality Education (NEP Implementation Plan, MoE)

https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/SARTHAQ_Part-1_updated.pdf

https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/SARTHAQ_Part_2.pdf

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Chapter 3

FOUNDATIONAL NUMERACY AND MATHEMATICAL SKILLS



HIGHLIGHTS

This chapter discusses the

- Need of Early Mathematical Skills for developing logical thinking and reasoning
- Major aspects and components of Early Mathematics: Pre Number Concepts; Numbers and Operations on Numbers; Shapes and Spatial Understanding; Measurement; Patterns; Data Handling; Mathematical Communication
- Pedagogical Processes to enhance Foundational Mathematical (Numeracy) Skills
- Assessment for supporting the learning of important mathematics and furnishing useful information
- Exemplar Rubric Curricular Area: Mathematics Task – Identification of Basic Shapes

3.1 Introduction

a. Foundational Numeracy:

Foundational Numeracy means the ability to reason and to apply simple numerical concepts in daily life problem solving. **When children acquire the following skills, it is said that they have developed number sense and spatial understanding. It includes the ability to:**

- i. Make an understanding of quantities.
- ii. Develop concepts like more and less, and larger and smaller.
- iii. Establish relationships between single items and groups of items (seven means one group of seven items which is one more than a group of six items).
- iv. Use symbols that represent quantities (7 means the same thing as seven).
- v. Compare numbers (10 is greater than 8, and three is half of six).
- vi. Arrange numbers in a list in order: 1st, 2nd, 3rd, etc.
- vii. Visualise shapes and space around them.

b. In general, the numeracy skill includes:

- i. Solving daily life problems using four fundamental operations – addition, subtraction, multiplication, and division.
- ii. Relating mathematical knowledge with the surroundings; applying logic to daily life, thereby developing ability to think mathematically, and taking logical decisions with reasoning.

3.2 Need of Early Mathematical Skills

- a. **Numeracy is important for developing logical thinking and reasoning in daily life.** We need numeracy to solve problems and make sense of numbers, time, patterns, and shapes etc. for simple daily life activities like cooking, traveling, playing, shopping, communication etc. These are not just skills, but life skills which every child should acquire and develop. Focusing on the basic numeracy skills in the foundational or early years will eventually improve the achievement of learning outcomes at later stages.
- b. **Dealing with numbers and spatial understanding are integral part of any communication and daily life discourse.** Without being able to do basic calculations, a child cannot progress in the education system and eventually in life. No doubt some skills develop naturally with the daily life experiences and the context in which child grows, but a systematic intervention helps in building a strong understanding of mathematical ideas that lays a foundation for having better life skills like criticality, creativity, communication, and problem solving.
- c. **It is noteworthy that it is during early years that the mathematical foundations are laid** and can be effectively complemented with the provision of relevant and meaningful learning experiences to the children. The major determining factors for effective foundational Mathematics learning are awareness and understanding of concept of early Mathematics skills among stakeholders, teacher's and teacher educator's competence, curricular flexibility, and availability of resource material for teachers and children through pedagogy that keeps child's contextual experiences at the center.
- d. **From a future perspective, research has also linked foundational numeracy to increased employability and higher GDP.** It is directly correlated to increased workforce participation and opens opportunities for social and economic advancement. These basic skills make an individual well-equipped for facing life situations and have better life outcomes.

3.3 Major aspects and components of Early Mathematics

- a. **During the learning of Mathematics at early stages, a child is expected to:**
 - i. Count and understand the numeration system.
 - ii. Learn conventions needed for mastery of Mathematical techniques such as the



use of a base ten system to represent numbers.

- iii. Perform simple computations in her/his own way up to three-digit numbers and apply these to their day to life activities in different contexts.
 - iv. Understand and use standard algorithms to perform operations of addition, subtraction, multiplication, and division on numbers up to three digits.
 - v. Learn vocabulary of relational words to extend his/her understanding of space and spatial objects.
 - vi. Identify and extend simple patterns starting from repeating shapes to patterns in numbers.
 - vii. Collect, represent, and interpret simple data/information in his/her daily life activities.
- b. **These have been put into 7 major themes:**
- i. Pre-Number concepts
 - ii. Numbers and operations on numbers
 - iii. Shapes and Spatial Understanding
 - iv. Measurement
 - v. Patterns
 - vi. Data Handling
 - vii. Mathematical Communication

The early Mathematics skills associated with each topic are elaborated further along with opportunities for enhancing these skills.

3.3.1 Pre-Number concepts

Mathematicians and psychologists have often argued that before children start counting objects or develop an understanding of number, they need to be able to classify, order and set up one-to-one correspondences to some extent. Since these skills are preliminary to the understanding of numbers, they are called as pre-number concept.

The following are the essential requirements for counting:

- Every time when objects in a group are counted the objects are classified into two subgroups of objects counted and to be counted.
- While counting is done it is important to organise or serially arrange the objects so that neither an object is counted more than once, nor some objects are left

uncounted.

- Number names in an order or serial need to be known before attempting to count.
- A one-to-one correspondence is established in the groups of objects and the numbers like for every group there is a corresponding number and for every number a group can be formed.

Children grow up counting their toys, toffees, people at home or other small sets of objects. They are often asked who has more/less or are there enough objects in their regular conversations. So, when schools begin to develop the understanding of pre-number concept, they should build upon the child's experience from his/her familiar context.

- a. **Classification** involves putting together things that have some characteristics in common. So, when organising tasks on classification, we must make sure that the activities are meaningful to them and, they are familiar with the objects which she/he must classify. Initially children should be encouraged to classify on one property/characteristic only. Gradually, complexity of the task should be increased where they can classify on more than one property such as colour, size, shape etc. This will later help them in understanding number sense.
- b. **Seriation** involves ordering a set of objects according to some rule. Intrinsically, it also involves ordering objects in two directions. For example, the child applies the relations 'bigger than' and 'smaller than' at the same time. It also means understanding the logic of transitivity which means that if A is more than B and B is more than C, then A is also more than C. Seriation also forms the base for understanding of patterns. Thus, it should be built using the objects from the familiar contexts of children and initially using 3 objects only. Gradually, children should be presented with more objects to seriate.
- c. **One-to-one correspondence** involves matching or pairing of objects. For building upon the understanding of one-to-one correspondence, children need to understand the meaning of 'many and few', 'more than/ less than' and 'as many as'. Teachers need to design tasks contextual to child's context so that the child relates and uses them in daily life experiences.

Thus, while introducing a concept, we should devise as many different activities as possible with variety of materials, so that children can correctly glean and generalise it. At every point they should be encouraged to talk about what they are doing and how they are doing it giving them ample space to express. Teachers need to use concrete material and toys available around the child in providing opportunities to develop above pre number skills.

3.3.2 Numbers and number operations

- a. All children must have ample opportunities of developing the ideas of numbers and operations on numbers in their local context within and outside their syllabus.
- b. Numbers are the mathematical tool to count and measure. Numbers are used in many forms. **Three major types of numbers are Cardinal numbers, Ordinal numbers, and Nominal numbers.**
 - **Cardinal** numbers are used to measure and communicate the size of a group of objects, e.g., 30 students of class V went for a picnic.
 - **Ordinal** numbers are used to describe the position of an object when they are arranged in a specific order, e.g., Fourth child from the left has brown hair.
 - **Nominal** numbers are used as nouns/labels to identify the object in a group, e.g., Train number 2298 has just left.
- c. **The key skills that come under this category** are number sense, reading of symbols, writing words and symbols, comparison of numbers like bigger than/smaller than etc., fundamental operations - addition, subtraction, multiplication, division, and their applications in daily life.
- d. **Problems involving operations such as addition, subtraction, multiplication, and division are not merely abstract uses of numbers. These operations have wider applications in daily life.** The operations of addition and subtraction are complementary to each other. Addition is a combination/aggregation of distinct sets of like entities while subtraction is the exact opposite, i.e., take away or left over from a set of elements. Similarly, multiplication and division are also complimentary to each other. Multiplication is done by repeated addition while division by repeated subtraction. These operations are not just to develop computational abilities in children but to use them as tools for problem solving in daily life context. This would feed into the higher aim of mathematics as a problem-solving tool.

The problems which commonly use addition and subtraction involve an increase or decrease of some quantity, combination of two or more objects and comparison of objects. A common strategy to represent subtraction problem are “take away”/ “left over” problems. There are some informal strategies in dealing with addition and subtraction of small numbers as it helps to build a “number sense”. These operations are useful to interpret, represent and solve simple problems in daily life context.

- a) **By acquiring these skills, the child should be able to achieve the following-**
 - Quantification: Counting objects in a collection (**Visualization, Generalization**)



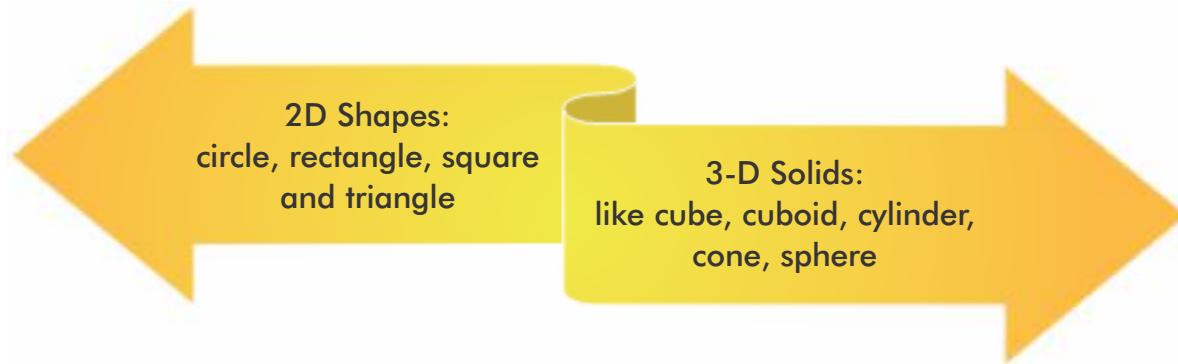
- Counting as a means for solving problems such as determining quantity/comparing (**Problem Solving**)
 - Associate number concepts, vocabulary, quantities and writing numerals to communicate (**Communication**)
 - Abilities to combine, separate and name “how many” concrete objects leading to operations of addition and subtraction for small collections (**Problem solving, Communication**)
- b) **The following approaches can be followed to achieve these skills: -**
- While teaching numbers, concept of groups of tens should be used using a variety of objects like sticks, pencils etc.
 - Involve children in matching and sorting objects using one-to-one correspondence and ordering objects that vary in colour, size, or other parameters
 - Encourage children to count different groups of objects and to think about quantity and number.
 - Use strategies that help children learn to count accurately and efficiently such as pointing to/touching/moving each object being counted.
 - Draw attention to numbers and how they are used such as house addresses, prices of objects marked on packets, etc.
 - Use words related to estimation – more than, less than, about, nearly, approximately, and in between.
 - Ask children to estimate or how many by looking at a group of objects. Encourage them to test for the actual answer.
 - Play games that include counting and using numbers like simple board games, card, or dice games etc.
 - Give children problem solving situations involving combination, taking away, equal distribution of objects so that they can make the concept of addition, subtraction, multiplication, and division.
 - Engage students with some fun loving and learning based activities so that they can develop the concept of different operators.
 - Encourage children to use the vocabulary like together, take away, number of times, equal sharing.

3.3.3 Shapes and Spatial Understanding

a. Spatial understanding:

Spatial understanding is the area of mathematics that involves shape, size, space, position, direction, and movement. It helps describe and classify the world we live in. Spatial sense gives children an awareness of themselves in relation to people and objects. The key concepts include 3D shapes and solids, flat and curved surfaces of solids, 2D shapes as seen on surfaces of a solid shape e.g., straight lines, curved lines, shapes made up of straight lines, curved lines etc. e.g., triangles, quadrilaterals, circles etc.

b. By acquiring these skills, the child should be able to achieve the following-



- Observe the objects in the environment and get a qualitative feel for their geometrical attributes.
- Use her own vocabulary to describe space and the shapes of various familiar objects.
- Identify various elements of an object such as edges, corners and faces while exploring and playing with them.
- Explore and communicate the association between an object (3D) and its shape (2D)
- Draw simple shapes on paper and trace and explore the outlines of objects on paper.
- Trace her way in space by talking of direction and spatial relationships.

Since children are familiar with the shapes of objects around them, it is better to explain differences between shapes by making a connection with other objects like this is round like a ball etc. When children use their own language or common vocabulary, they can communicate what they find through their explorations. It helps them to generalize and to understand the concept better. Later, they can relate this base of understanding to the formal mathematical vocabulary. Children can be taken on exploratory walk to the nearest places and then asked to draw its map using the various landmarks they observed during the walk.

The teachers may follow the approaches given below:

- Encourage children to identify different shapes as they draw, look at different objects, work with puzzles, building with blocks.
- Give children many opportunities to handle objects such as blocks, boxes, containers, shape sorters and puzzles.
- Encourage children to climb in and out of boxes or large block structures, on or around outdoor equipment, and over, under, around, through, into, on top of, and out of different things to experience themselves in space.
- Encourage children to make new shapes by putting materials together and taking them apart in different arrangements. They can do this by moulding clay playing with blocks.
- Introduce spatial vocabulary, including location and position words – on/off, over/under, in/out, above/below, front/behind, top/bottom, movement words – up/down, forward/backward, toward/away from, straight/curving, distance words – near/far, close to/far from, shortest/longest etc.

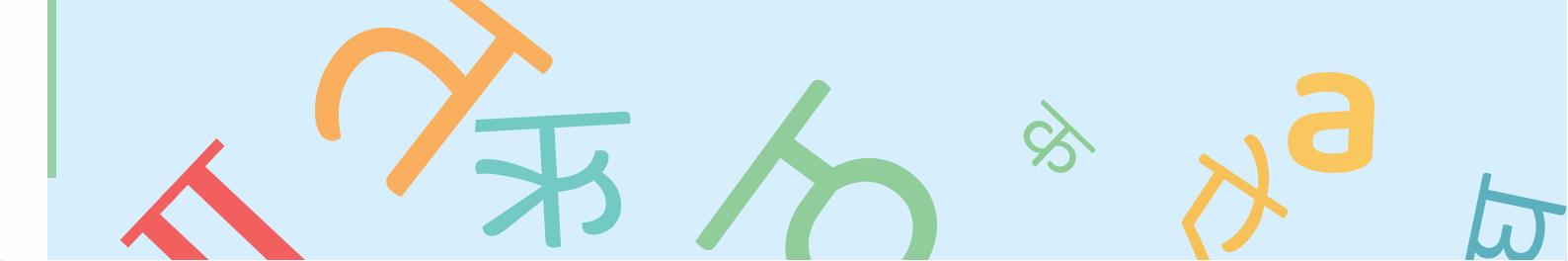
3.3.4 Measurement

a. Measurement in daily life situations:

There are numerous situations that we encounter in our daily life which involves dealing with quantities, for example, buying clothes, constructing wooden items and buildings, cooking a meal for guests etc. Children are often involved in activities like comparing their heights, checking whether there are enough sips of water left in their water bottle, how much time is left for the lunch break, refusing to lift a heavy item, letting hot milk to cool down before consuming it, and so on. In this way children acquire an informal understanding of several physical attributes such as length, weight, volume, time, and temperature. Measurement is inherent part of human life, whether being used in the accomplishment of routine work or in an occupation. Thus, familiarity with different contexts of measurement is important for functioning effectively. This majorly contains the understanding of the following attributes of measurement

- Length/distance
- Weight/mass
- Volume/capacity
- Time
- Temperature





b. Planning learning of measurement:

We should use the experiential learning of children, and natural context to develop and plan learning activities. Focus should be made on designing activities that have inbuilt challenge in the form of a problem which children can easily relate to and find interesting. As children start to learn the various attributes of measurement, they are introduced to vocabulary of comparison. Learning starts with comparing an attribute of objects directly (comparing length of a pencil and a scale) and then moves to indirect comparison (comparing length and height of the blackboard). While teaching indirect comparison, we use another intermediary object for example, a string could be used to compare the length and height of the blackboard. Later, they should be introduced to non-standard units such as hand span or a stick.

c. Comparing and measuring:

There is a big difference between comparison and measurement as measurement involves the use of number. The number describes how many matchsticks longer is a pencil, how far is my school from home, how many cups full of water will fill a jug completely, how many peas will balance a potato etc. Efforts should be made to ensure that children understand the necessity of unit of repeat in measurement, so that they will understand the importance of standard units. Later when they will be introduced to instruments used for measuring like ruler, weighing scale, clock, thermometer etc. they will not simply read the readings but know how they have been constructed and why we use them.

While comparing and measuring, children should be encouraged to make a guess or do a visual estimate first, and later to verify their guess or estimate by carrying out more systematic comparison or measurement (or by using a specific instrument). For example, let children guess whose arm is longest among them. See what all ways they suggest for comparison, and provide them with some strings, matchsticks, paper strips, etc. Let them think and select the most suitable way. Help them use it and finally reach the answer. Children can be shown two different shaped containers filled with unequal amount of water (not much difference in amount of water) and can be asked to guess which has more/less water. Observe what arguments they put up to justify their answers and have an elaborate discussion. Provide them some identical glasses and prompt them by asking, ‘can we use these glasses to find out which bottle has more water?

d. Approaches for teaching measurement:

Thus, measurement is a skill that is inherently activity-based. There is plenty of opportunity for children to measure and to work in groups. Measurement involves

both understanding and skill. The following approaches may be followed by teachers:

- Give ample opportunities to use language of comparison - use appropriate attribute words for different situations.
- Let children figure out their own units for measurement. Children better understand standard units like metres, centimetres, grams, litres, etc when they have lots of experiences working with their own ways of measuring and comparing in non-standard units.
- Involve children in activities such as block building, cooking, crafts and other experiences that involve measurement.
- Look for opportunities to help children make comparisons and measurements of volume, height, weight, length and temperature in day-to-day conversation.
- Provide simple experiences that help children begin to develop an understanding of time concepts by comparing how long different activities take. Start with daily time references (after the story, before lunch) and proceed to more abstract concepts (yesterday, tomorrow, months, years, etc.)

3.3.5 Patterns

a. Patterns in our daily lives:

Patterns are all around us. The word pattern is used in almost every context of our daily lives such as decorative designs, figures, motifs, shapes etc. Mathematically, a pattern is an arrangement, order, sequence, or repetition. The sequence of daily activities forms a pattern in a child's life that the child can recognize. Patterns can also be seen in numbers, shapes, sounds etc. Arrangement, repetition, and order are important in many branches of Mathematics. Patterns can be identified based on color, shape, size, etc.

b. Patterns in mathematics:

As patterns are all around us, it is important to develop the understanding of pattern. Identification of the pattern helps in enhancing observation and analytical skills as while identifying pattern, one observes the similarities, dissimilarities, repetition, non-repetition, growth/decay etc. Describing patterns helps in enhancing vocabulary and improving language which is one of the important aspects in mathematics learning.

c. Pattern Types:

Patterns can be identified based on a particular rule. For example, counting numbers have a pattern- each number is one more than the preceding number and each



number is one less than the succeeding number. Patterns can be of many types like sound patterns, number patterns, patterns in shapes, patterns in colours, patterns based on symmetry etc.

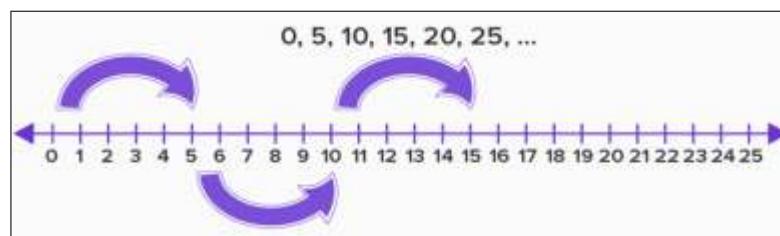
d. Four steps to teaching patterns:

Working with patterns usually consists of four major steps. Teachers need to conduct appropriate activities within and outside classrooms to develop the conceptual idea of Patterns among children. Some suggestions are:

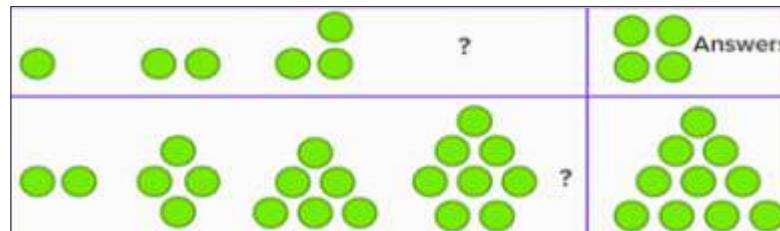
- i. Identifying pattern: Pattern can be identified by observing the rule which the pattern is following for example, if it is a repeating pattern, progressing pattern etc. like 1,2,1,2... or 2,5,8,11,....
- ii. Describing the rule: After identification of pattern, next step is to describe the rule and identifying the unit of repeat (In case of repeating patterns). Let children see patterns around them and form rules to extend like patterns on sarees, tiles, boarders, etc.
- iii. Extending pattern: Further extending the pattern by using the unit of repeat. For example, in the pattern 1, 2, 3, 1, 2, 3, 1, 2, 3, the unit of repeat id '1, 2, 3'. So, by recognizing this unit of repeat, the pattern can be extended further as '1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, and so on'. Similarly, for any repeating pattern, once the unit of repeat is recognized by the child, he/she can easily extend the pattern.
- iv. Creating new patterns: Once the child can achieve the above three steps, child can start creating new patterns by identifying, analyzing, extending and exploring patterns further and using his/her own creativity.

Example:

0, 5, 10, 15, 20, 25,



Patterns with dots





3.3.6 Data Handling

a. Data in everyday life:

Data refers to information in a raw form which is collected from various sources. Having access to data and the capacity to interpret data can be a source of power. The availability of data, which is reliably and systematically collected, makes a system transparent. This is important for a democratic society. It is only when people have confidence in their own capacity to handle and interpret data that they will also seek data.

We collect data when we need to answer a specific question, a problem or when we want to understand a situation in generality. This may be because we need to decide. It is noteworthy that though data answers some questions, at the same time it raises further questions which cannot be answered from the data. Data collection and handling are usually thought of as a part of statistical activity and so only of interest to people specializing in statistics. We rarely acknowledge the fact that in everyday situations, we are collecting and using data. A teacher is collecting data even when she takes the attendance of children in her class.

b. Data components:

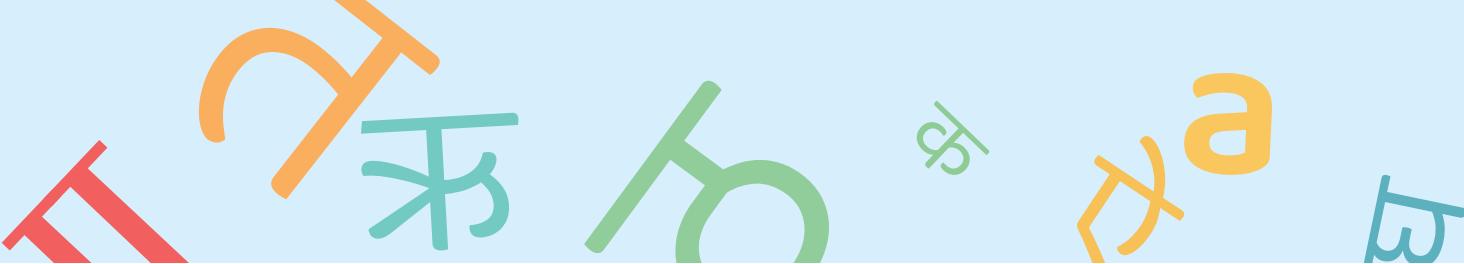
The major components of data handling include collecting, representing, and interpreting simple data, recording data using tally marks, collecting data, and representing in terms of pictograph, choosing appropriate scale and unit for display through pictographs, drawing conclusions from the data.

c. By acquiring these skills, the child should be able to achieve the following:

- i. Attempt to record information in her/his own way.
- ii. Participate in discussions with others to draw inferences from the recorded information.
- iii. Devise ways to present the recorded information in such a way that its interpretation can be made simpler.
- iv. Show/describe problems in interpretation of information.
- v. Devise pictorial ways of representing information like pictograms and bar graphs.

d. The following approaches should be followed –

- i. Organise activities and provide opportunities to record information in numbers and to draw inferences or make decisions out of it.



- ii. Involve children in discussion to highlight the importance of recording of information.
- iii. Create situations such that child uses her/his ways to record and present the information in a meaningful manner.
- iv. Give opportunities to children for exploring ways of recording and presenting data and draw inferences from the data.
- v. Encourage children to participate in activities and discussion, raising questions, making interpretations, etc.
- vi. Engaging students with group assessment where students work as a group and collect and present data and draw inference based on it.

3.3.7 Mathematical Communication:

Mathematical communication refers to a process by which information is exchanged between individuals through mathematical symbols, signs, diagrams, graphs. It encompasses both listening and reading (comprehension) and both speaking and writing (expressions).

a. Understanding Mathematical Communication:

Language plays a crucial role in the construction of knowledge and in the learning of mathematics as well. Every discipline has a specialized language. Mathematics also borrows words from everyday language but gives them special meanings. When the children begin solving simple problems presented through words in the mathematics class, they begin working with mathematics language. ‘How many?’ ‘How many altogether?’ ‘How many are left?’ - all these are examples of the use of mathematics language. Children mix such mathematical language with their ordinary, everyday language while discussing a mathematical problem.

Children learn by constructing their knowledge through interaction with their environment. A critical part of constructing knowledge is the communicating of ideas with peers and others. Initially such communication takes place in and through child’s home language. While sharing, new thoughts and ideas are generated. While doing any activity, the child tries to understand her/his own or others’ actions and this happens when children communicate with each other. This communication is possible only through a language that the children are comfortable in. For example, while exploring a spherical object, the child may relate it with laddoo and calls it ‘laddoo jaisa’, instead of ‘golakaar’. Notice that when the children use the phrase, ‘laddoo jaisa’, for a spherical object, they are making correct categories.

b. The following approaches may be followed by teachers to enhance mathematical communication:

- Use simple, friendly, and clear language that relates with home language.
- While giving oral and written instructions use blackboard and ask questions or shapes a discussion.
- While introducing mathematical ideas, symbols and signs a careful connection is required to develop with child's own language.
- If teachers make a conscious effort to analyse the language that they use to communicate with children and use language wisely, a big change can be seen in the teaching-learning process.
- Appropriate opportunities need to be provided to all children to communicate their ideas through newer terminology in a stress free and friendly environment. Initially children should attempt to use mathematical language without any fear of being wrong. Gradually they will improve their mathematical communication with time and concerted opportunities.

3.4 Pedagogical Processes to enhance Foundational mathematical (Numeracy) Skills:

a. Important Mathematical Skills:

Quality Foundational education should work on developing the following mathematical skills in children through the early mathematics concepts such as Observation, Reasoning, Visualization, Generalization, Communication, Critical thinking, Problem-solving, Creativity and Collaboration. Such pedagogical processes should be adopted inside and outside the classroom which provide equal opportunities to all children despite their socio economic and cultural background. The teachers and parents have to devise/design appropriate activities and material contextual to child's surroundings and experiences. All activities and interaction with children should focus on experiential learning and use of manipulative and concrete material.

b. Some of the suggested processes are given as under:

- **Learner Centric Pedagogy:** A change in the role of teachers from information providers to facilitators must be done. This should also be re-



emphasized in the curriculum, textbooks, and teacher training curriculum, which should focus on development of skills rather than content. It should enable child to solve other real-life situation problems too and not just textbook problems.

- **Providing scope for Exploration and Mathematical Thinking:** The classroom environment should cultivate the spirit of exploration and visualization of concepts that lead to mathematical thinking. Different ways of calculations and strategies for problem-solving need to be explored (other than employing standard algorithms) along with many diverse ways of communicating the results of exploration. The teacher should create situations/contexts for creating understanding and exploration.
- **Use of Manipulative /Toys (Toy Pedagogy):** Providing hands on experience is an integral part of mathematics, especially in the lower classes. It provides an implicit understanding of concepts in children which a child may not get when told explicitly. Toys and manipulatives also help children in visualising of concepts. Many indigenous toys are generally available in every child's surrounding. These should be used as important resource of teaching and learning of mathematical skills.
- **Mathematics with daily life:** Pedagogy should be such that the understanding with real-life applications is given more space, like including life application projects and assignments. Assessment of these projects and assignments should be part of the all-round yearlong school-based assessments.
- **Medium of instruction:** The language which a child brings from home, plays a big role in mathematics classroom. The instruction should be given in home language, so that he/she can easily understand it. Mathematics learning should not seem like learning some foreign language for the child. No doubt, a strong linkage of the home language with the language of mathematics will help the child in understanding and communicating mathematical ideas.
- **Integrating mathematics with other subjects:** Mathematics is not only a subject, but also a language which is used in learning of all other subjects like different languages, environment, science etc. Short stories, poems, rhymes, simple riddles usually involve different aspects of our life and provide opportunities to think holistically and link mathematics with other subjects or vice-versa.



- **Communicating Mathematically:** Creating a classroom environment that provides confidence among students to raise doubts, ask questions, participate in discussions, and share her/his thoughts and imagination. An environment should be created where the child expresses his/her observations, understanding and the teacher is moulding that understanding mathematically. The skill of meaningful problem posing need to be enhanced to think and communicate mathematically. For example, the teacher can ask the students to describe their position in mathematical terms – I have three people in front of me and four behind, or I am sitting at one of the corners of a square, etc.
- **Giving space to alternate strategies supporting Problem Solving:** Creating facts and formula – not promoting rote learning of facts, formulae and procedures should be encouraged in a mathematics classroom. Instead of emphasizing on standard algorithms, the teacher should encourage diverse ways of problem solving with peer learning and collaborative learning. A teacher should provide support and confidence to the students when they struggle with problem-solving so that mathematics anxiety is avoided.
- **Joy in Mathematics (Recreation with Mathematics):** Mathematics curriculum needs to emphasize on experiential learning and provide scope for learning flexibility by integrating the use of poems, rhymes, stories, riddles and puzzles, local art and culture, music, dance, rap songs, cooking, and games, etc. to help students enjoy the learning.
- **Space for errors in child's room:** In all mathematics classrooms, every response/question of the student needs to be treated with respect. Care needs to be taken about discussing them with the class. Such an environment would encourage students to raise questions and voice their doubts. Moreover, child's errors provide a window to the teacher and parents to understand child's thinking and the way she/he is progressing in learning mathematics.
- **Collaborative learning:** Collaborative or group learningshould be practiced with students i.e., learning from each other and helping each other to learn. Such an approach would have the teacher focus on many other aspects of the classroom. Peer learning also helps children in developing conceptual understanding and mathematical communication without any fear and hesitation.

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Chapter 4

SHIFTING TOWARDS COMPETENCY BASED LEARNING



HIGHLIGHTS

This chapter discusses the

- Importance of Competency Based Learning
- Life Skills in Early Grades: Focus on competencies arising out of a combination of abilities in the domains of knowledge, skills, attitudes and values.
- Integrated and Holistic Development through 3 Development Goals.
- Codification of Learning Outcomes as per the 3 Development Goals

The teacher was waiting for them. "You all worked hard this morning," she said, "so what would you like to do this afternoon?"

Before Totto-chan could even begin to think about what she wanted to do, there was a unanimous shout.

"A walk!"

"All right," said the teacher, and the children all began rushing to the doors and dashing out. Totto-chan used to go for walks with Daddy and Rocky, but she had never heard of a school walk and was astounded. She loved walks, however, so she could hardly wait.

Out of the gate they went--all nine first grade pupils with their teacher in their midst-- and began walking along the edge of a stream. Both banks of the stream were lined with large cherry trees that had only recently been in full bloom. Fields of yellow mustard flowers stretched as far as the eye could see. The children chatted away about anything they liked as they walked along. The sky was blue and the air was filled with the fluttering of butterflies.

After they had walked for about ten minutes, the teacher stopped. She pointed to some yellow flowers, and said, "Look at these mustard flowers. Do you know why flowers bloom?" She explained about pistils and stamens while the children crouched by the road and examined the flowers. The teacher told them how butterflies helped flowers bloom.

And, indeed, the butterflies seemed very busy helping.

Little did the children realize then that these walks--a time of freedom and play for them--were in reality precious lessons in science, history, and biology.

- Excerpt from **TOTTO-CHAN-The Little Girl at the Window**, by Tetsuko Kuroyanagi,
translated by Dorothy Britton

4.1 Learning Outcomes and Competencies

Learning outcomes are statements that describe the knowledge, skills and attitudes, students should acquire by the end of a particular assignment, class, course, or program, and help students understand why that knowledge and those skills will be useful to them. The combination of knowledge, skills, attitudes, and values form the competencies that are expected to be developed in everyone. They focus on the context and potential applications of knowledge and skills, help students connect learning in various contexts, and help guide assessment and evaluation. In competency-based education, teaching and learning focuses on acquiring these basic competencies which can be measured through learning Outcomes.

The National Council of Educational Research and Training (NCERT) developed "Learning Outcomes (LOs) at the Elementary Stage" in 2017⁹ for each class and subject. These learning outcomes were the result of wide consultations and field trial in different types of schools located in different parts of the country. In continuation, learning outcomes for the secondary stage¹⁰ have also been developed in 2019. These are expected learning achievements which are spelt class-wise. These learning outcomes are not suggested in hierarchical manner. Learners can achieve these learning outcomes at their own pace and skills. Teachers are provided with pedagogical and assessment inputs to follow process-oriented methods of achieving the stated LOs. They can design and provide a variety of learning situations/opportunities as per the needs of different learners in an inclusive classroom. These LOs have served as guiding points for the teachers and the stakeholders and are being used widely to assess the progress of learning of children in different classrooms.

4.2 Importance of Competency Based Learning

a. Unique Experiences of Children:

Children come to school from different backgrounds and contexts-some children have parents and adults in the family who engage with them-play, tell stories, provide interactive language experiences, provide safety, connections, and high-quality routines, which are enriching and interesting for children. On the other hand, there are children who have experienced less engaging and enriching early childhood years, without secure attachments, safety and connection, good nutrition, and rest,

⁹ Learning Outcomes at Elementary Stage, <https://ncert.nic.in/pdf/publication/otherpublications/tilops101.pdf>

¹⁰ Learning Outcomes at Secondary Stage Stage https://ncert.nic.in/pdf/publication/otherpublications/learning_outcomes.pdf



and without enriched learning opportunities. As a result, children have differences in readiness for school when they begin preschool or kindergarten. Additionally, children in the same class might have a 12-month age difference. There are differences in the levels of language skills, visual-motor skills, and social readiness. Children having varied levels of oral language development, second language learners, diversity in home atmosphere may result in different types of learners having different learning needs.

b. Competency Based Learning:

When children from diverse backgrounds having different learning needs enter the formal school, all of them are expected to be ready for grade-level content to be covered and tested in a time-limited learning system. In many schools in India, children are offered non-responsive instruction which does not serve their learning needs, but focus is on completing the syllabus without monitoring what children are learning. One-size-fits-all instruction and testing quickly classifies children into winners and losers. By the end of third grade, children have settled into patterns of learning that usually persist for life. An alternative to the traditional learning system is the competency-based learning. Competency based learning is focused on student learning outcomes, and is characterized by the following:

- Explicit and measurable learning outcomes are defined which are the pathways for competency acquisition.
- The pedagogy is based on activities, experiences, integration of arts/sports/technology, etc. and connecting the learnings to real-life situations, so that child learns to apply knowledge.
- Children advance to the next level of learning outcomes only upon achieving certain level of proficiency at the current level¹¹.
- Primarily formative assessment is used, and skills or concepts are assessed in multiple contexts to ensure that both deep understanding and applications are acquired by children.

¹¹ World Class – How to build a 21st century school system; by Andreas Schleicher, published by OECD page 67-68, "Mastery learning builds on the understanding that learning is sequential, and that mastery of earlier tasks is the foundation on which mastery of subsequent tasks is built. According to American psychologist John Carroll, student learning outcomes reflect the amount of time and instruction a student needs to learn, and whether the opportunity to learn and quality of instruction are sufficient to meet students' needs. For teachers, that means that they do not vary the learning goals, which hold for the entire class, but that they do whatever is needed to ensure that each student has the opportunity to learn the material in ways that are appropriate to him or her. Some students will require additional instruction time, others will not; some students will require different learning environments than others. Behind this thinking is the deep belief that all students can learn and succeed, and that the task of teachers is to design the learning environments, whether inside or outside the classroom, that help students realise their potential."

In the competency model, instruction is designed to match the developmental readiness of the students. Students are given instruction at their personal level of readiness for as long as necessary to achieve desired competency. Moving to the next level is not determined by time or age but by the mastery of the competency. This can be different for different competencies/subject areas. With such flexibility, students fall in love with learning and become successful learners. For higher rate of success, instructions should be provided at a level that is challenging for children.

c. Assessments in Competency Based Learning:

Formative assessments are emphasized so that teachers get to understand where students are facing difficulties, having misconceptions so that they can be extended help and are given feedback about their performance and where they need to improve. Assessment is used as a guiding tool, which is meaningful and provide positive learning experiences for children. Students construct their own knowledge by actively participating, applying critical-thinking and problem-solving skills along with good communication skills, collaboration, and cultural responsiveness to help them work in ever-changing, diverse environments.

4.3 Life Skills in Early Grades

a. Life Skills:

Competency-based education requires focus on competencies arising out of a combination of abilities in the domains of knowledge, skills, attitudes, and values. Life skills are defined as a set of abilities, attitudes and socio-emotional competencies that enable individuals to learn, make informed decisions and exercise rights to lead a healthy and productive life and subsequently become agents of change. Life skills promote mental well-being and competence in children as they face the realities of life. These skills support the development of foundational skills such as literacy, numeracy, digital skills. In today's digital age, everything is changing at an amazingly fast pace and therefore to adapt to new situations, children need to be taught to focus and exercise self-control, think critically, work collaboratively, take on challenges, make connections and engage in self-directed learning and develop effective communication skills. The early years are a time when children begin to develop self-concept and their feelings of competence and confidence as learners. The knowledge, attitudes, and skills that children acquire during these early years serve as the foundation for future success in their school and community and prepare them to be effective global citizens.

b. Decision Making Skill:

Making good decisions is a life skill that every child should begin learning at a young age. Children are required to make decisions and choices. The decision-making process involves identifying the issue, gathering data, generating possible courses of action, evaluating alternatives, and making a thoughtful decision based on the information available. The curriculum should be based on making connections, constructing knowledge by building on prior knowledge and involving students in meaningful tasks that relate to real life. By involving children in projects, they are practising their organizational, collaborative and time management skills.

c. Organising Skills:

Children learn through routines, schedules, and habits. Teaching children, the values of sharing, caring, working cooperatively, organizing spaces by keeping the toys back, tidying up and sharing classroom experiences with their parents is also important. Spaces at home and in school should be organised in such a way that children know where to keep their belongings like bags, shoes, clothes etc. This provides security to children and they learn to develop self-control and focus. Inform children about the expectations each day like tidying up after the activity, stacking the toys back etc. The value of routines and schedules should also be instilled in children from a young age.

d. Communicating Skills:

To build healthy social-emotional skills, children require communicating with others and needing high-touch personal interactions every day. When adults listen, talk, and respond to children by providing undivided attention, children also learn to listen carefully and learn to read social cues. They also learn to consider what they want to communicate and how it can be communicated in the most effective way. Confidence in speaking, discussion, debate, writing, and problem solving provides a good start for acquiring the skills. Students become independent in their own learning, where teachers assume the role of facilitators, guiding them through their learning process.

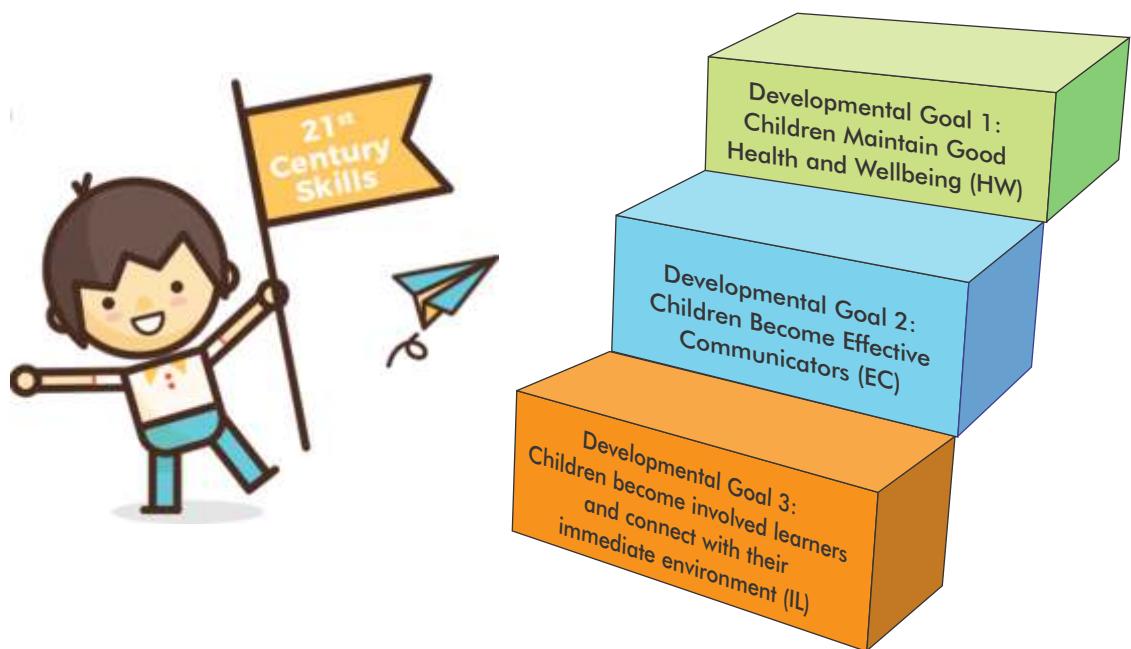
e. Encouraging Curiosity:

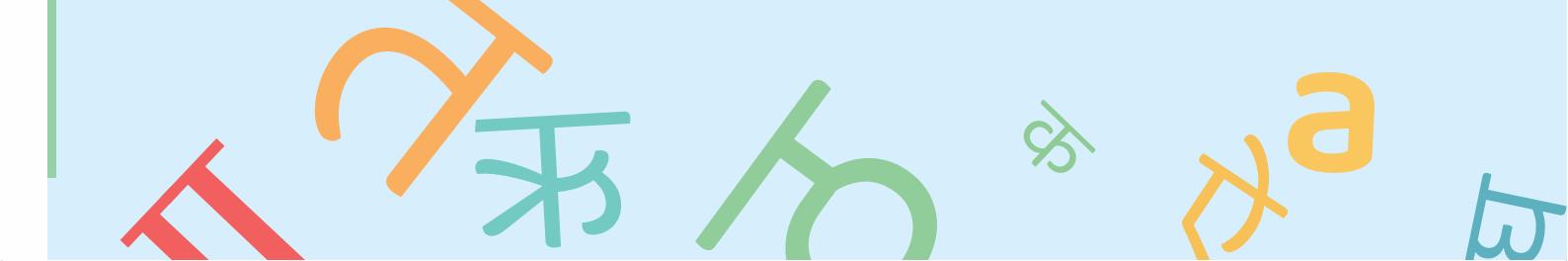
Children should be fully engaged in the learning process. They should be assisted in making personal connections and making meaning of the new material and integrating these learnings with what they already know. Facilitating the transfer of knowledge and skills to real-life situations is important. Children should be encouraged to think and ask questions when they do not understand.

The primary aim of education is that the learner will acquire knowledge, understand what has been acquired and make informed decisions in the application of that knowledge to solve problems. The process necessitates thinking. Thinking is the contextual connection between the relevant pieces of knowledge; thinking connects the dots. With reading and writing, if the learner is unable to make connections between the content and their life, the content loses meaning. Schools should provide an environment where students can develop the ability to see relationships between subjects, content, and skills as well as between school and life outside of the classroom.

4.4 Integrated and Holistic Development through 3 Goals

The NEP 2020 has focused on the holistic development of the child. There are different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, spiritual and moral development, art, and aesthetic development which are interrelated and interdependent. These developmental aspects make child competent to deal with complex life situations. All these domains have been subsumed into three major goals which are briefly discussed here:





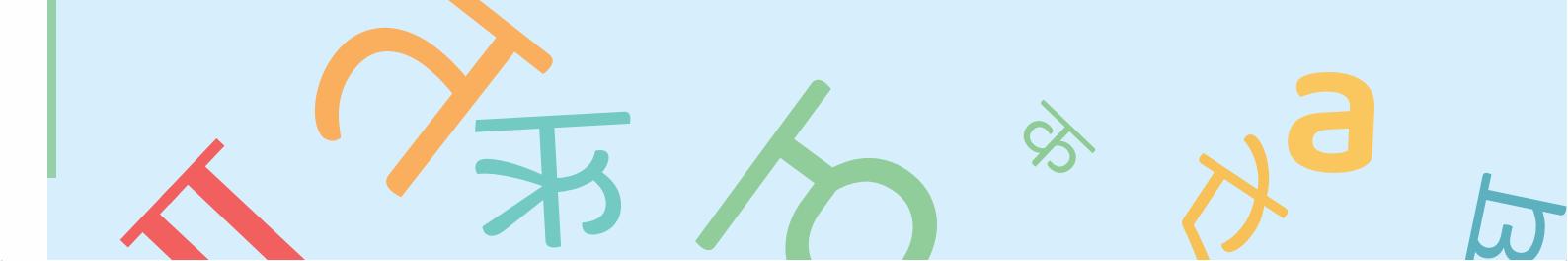
Developmental Goal 1: Children Maintain Good Health and Wellbeing (HW)

- a. The foundational years are of critical importance for laying the foundation for optimal physical, socio-emotional, and psychological health and well-being of children for life. These are the years when children, given the right opportunities and encouragement, are developing the five senses, strengthening their larger and finer bones and muscles, and refining their eye hand coordination, which is also one of the prerequisites for being able to write in later years.
- b. Alongside, their sense of identity and social skills are developing, as they initiate and engage in more and more play activities with other children, initially in pairs and then gradually in smaller and then larger groups. Thus, they learn to play, work, and live with others in harmonious ways.
- c. They also begin to appreciate how each one of them is different and how these differences need to be not only accepted but respected.
- d. Most important of all, children need to experience a sense of autonomy and confidence in their own growing abilities and achievements and develop healthy habits leading to a good physical health and development of self-esteem and a positive self-concept, which if appropriately nurtured, will stay with them for life.
- e. This goal continues to provide experience for health and well-being, socio emotional development, health, nutrition, hygienic practices, and safety from FY1-FY6 which covers age group 3 to 9 (Pre School to Class III - consisting of 2 years of Anganwadi/pre-school, one year of Balvatika and 3 years in primary school)

Developmental Goal 2: Children Become Effective Communicators (EC)

- a. By the time three-years old come into a preschool in monolingual cultures, they have typically already begun to communicate their needs, likes and dislikes orally in their home language, which is also the school language.
- b. The experiences provided during the foundational years are required to build on all these early experiences and exposure and further enhance their communication skills so that they can orally share their thoughts and feelings or describe their experiences more effectively.
- c. It also ensures that children can receive and share information and develop higher order skills such as critical and creative thinking. They gradually learn to read and write with comprehension in that language.
- d. However, this scenario is possible only in contexts where the medium of instruction or interaction in schools is the same as the child's home. Given our country's multilingual context, we have many children whose home language is different from the medium of instruction in school or preschool. These include contexts such as that of tribal languages or dialects of regional languages and the contexts of English medium preschools where children come in with little or no familiarity with oral English/school language. Starting children on reading and writing without ensuring their oral language base results in children learning to read mechanically through simple decoding, but without much comprehension. Since all school subjects are language-mediated, this early learning gap inevitably has an adverse impact on children's later performance in school. In addition to this challenge, we have many children who are first generation learners and do not have an environment of literacy at home. They may not have seen books or had anyone reading to them or have a vague concept of print, text or meaning and value of reading and writing activity.

Therefore, it is imperative that teacher communicate with the child in his language in pre-school and once the child is comfortable and learns to express himself, the teacher may introduce school language or language used in the state as medium of instruction. This will lay the foundation of language and literacy at the pre-school (3-6 years) and this goal will lead to subject- first/second language for example Hindi/state language/English.



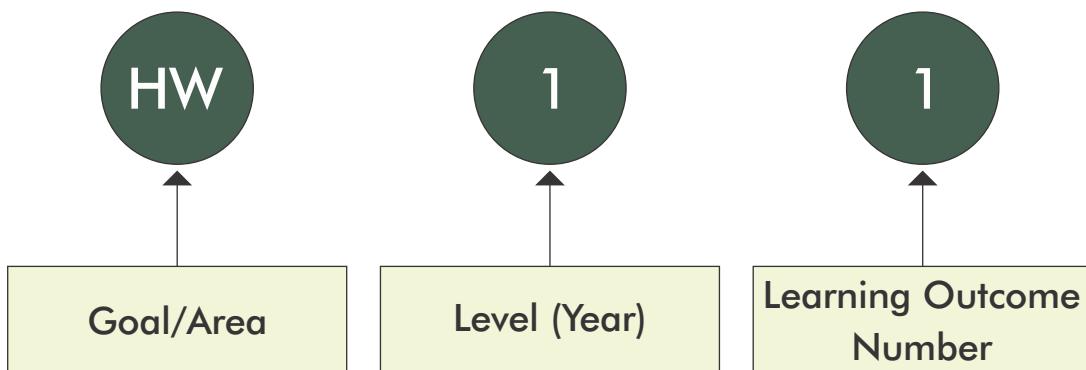
Developmental Goal 3: Children become involved learners and connect with their immediate environment (IL)

- a. Children are born curious and enchanted about the world – its colours, its shapes, its sounds, its sizes, and its forms. This ability to connect with others and to share feelings with them lays a special basis for learning- the cultural social basis of human learning. Children notice and explore patterns, shapes, and other mathematical dimensions in their immediate world. Children begin to understand the world around them by making sense of it as they ‘see’ it. Children’s learning in the cognitive domain needs to be facilitated through development of their five senses and encouragement of the 3E’s, i.e., Exploration, Experimentation and Enquiry, based on children’s prior knowledge and immediate context.
- b. A major goal of foundational years education is, therefore, to help children move towards more logical thinking by helping them graduate from their perception-bound to more concept-based understanding. This gets addressed by helping children form concepts related to the world around them through direct experience and interactions with the physical, social, and natural environment.
- c. A sound framework for planning their learning experiences could help them develop understanding or knowledge for the environment, through the environment and of the environment.
- d. Mathematical thinking and reasoning is an important domain of cognitive development. The foundation for this abstract rule-based thinking gets laid through activities that are meaningful for the child. Mathematical thinking involves thinking about objects and their quantitative and spatial relationships. To begin with, a sense about these relationships emerges and based on these, the patterns and the more abstract concepts develop. During early childhood, we can see a path of development for the foundational ideas of mathematics—from what are known as pre-number concepts related to a sense of quantity, size, distance, length, width, weight, and height to sense of numbers and algebraic ideas and from sense of shape and space to geometrical ideas



4.5 Codification of Learning Outcomes

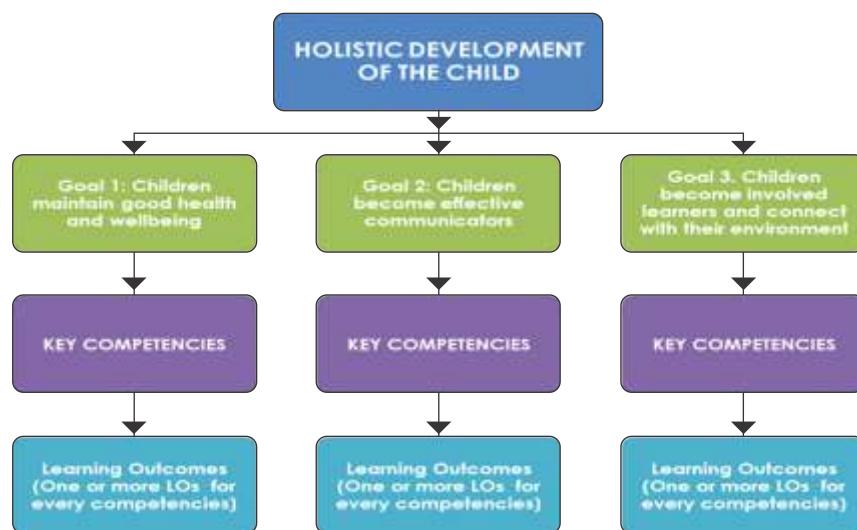
- a. The Learning outcomes for Foundational learning have been divided into 3 three developmental goals: Goal 1-HW (Health and Well-being), Goal 2-EC (Effective Communicators), Goal 3-IL (Involved Learners). Key competencies of each goal are highlighted. These competencies have been drawn from the documents 'Pre-school Curriculum' and 'Learning Outcomes' developed by the NCERT. Also, the perspectives of language and mathematical thinking, design learning etc. as envisaged in the NEP 2020 has been taken care of.
- b. Each learning outcome has been given a number/code for easy identification and referencing. It is important to understand that these numbers are not hierarchical, but these experiences can be provided simultaneously in an integrated way.
- c. The developmental goals have been further divided into six levels corresponding to the 3 years of ECCE followed by 3 years of schooling.
- d. For criterion referenced measurement, NCERT and SCERTs to develop item banks on DIKSHA platforms tagged to the uniform coding system as laid down in Annexure I.
- e. All textbooks developed by NCERT/SCERTs for the Foundational Years may also use this uniform coding system.
- f. Description of the codification



Details of the Developmental Goals, competencies, and codification of learning outcomes are given in Annexure I.

Understanding the linkage between developmental goals, competency and learning outcomes

- * **DEVELOPMENTAL GOALS:** There are different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, spiritual and moral development, art and aesthetic development which are interrelated and interdependent. These developmental aspects make child competent to deal with complex life situations. All these domains have been subsumed into three major goals for holistic development of the child.
- * **COMPETENCY :** Competencies are statements that specify what children will know, be able to do, or be able demonstrate when they have completed or participated in a course or program
- * **LEARNING OUTCOMES:** LOs are essentially evidence of having acquired competencies. Learning outcomes are specific statements that describe exactly what a student will be able to do in a measurable way. There may be more than one measurable outcome defined for a given competency.





EXAMPLE OF COMPETENCY AND LEARNING OUTCOMES

COMPETENCY	Preschool 1	Preschool 2	Balvatika	Learning Outcome		
				Class 1	Class 2	Class 3
Demonstrates awareness of Self	Begins to state some physical characteristics about self	Describes self in terms of physical characteristics	Describes self in terms of physical characteristics of physical characteristics, gender, interests, likes, dislikes	Recognises different body parts and uses various body movements	Maintains correct posture, uses various body movements to participate in games and sports	Participates in games and sports to strengthen and extend gross motor skills
Demonstrates phonological awareness-rhyming	Sings/hums words/lines/parts of songs and rhymes, in own language/L2.	Identifies few rhyming words	Enjoys and creates non-sensical rhyming words.	Creates rhyming words based on the available text.	Writes selective rhyming words in pair.	Uses rhyming words for writing short sentences
Compares and classifies given objects and pictures	Compares two objects based on one observable property, for example-length, weight, or size	Compares and classifies objects by two factors like shape and color, size and shape etc.	Compares and classifies objects by three factors like shape, color and size etc.	Compares and classifies objects /pictures based on multiple factors and demonstrates understanding of position	Compares and classifies objects /pictures based on multiple factors and describes them using properties	Compares and classifies objects/ pictures in different categories and describes the properties used for classification
GOAL-2	GOAL-2	GOAL-2	GOAL-2	GOAL-2	GOAL-2	GOAL-2

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Chapter 5

TEACHING AND LEARNING: FOCUS ON DEVELOPING CAPABILITIES OF THE CHILD



HIGHLIGHTS

This chapter discusses the

- Major aspects and components of teaching-learning process with a focus on Learning of the Child
- Learning Enhancement Programme and Implementing Learning Enhancement under FLN
- Emphasis on Child-centred Pedagogy based on learner's needs and interests.
- Understanding the process of development of content including Digital content to help teachers build their capacities in the development and use of content.

Jiten never liked the English classes in school, particularly the spelling tests. TV and games were always on his mind - so much more exciting. And the less said about Ms. Sheela's strictness the better. Being asked to write a paragraph on "the day that everything went wrong" ... how boring. He could not wait for class to get over and meet Amit, Shankar, and his other friends. So, it was with a heavy heart that he sat in class on the first day of the new year... except instead of Ms. Sheela, was a smiling Ms. Amita. And what had happened to the tables... they had been arranged in a circle - how odd. Perhaps she didn't know the rules, this new teacher.

Jiten watched as Ms. Amita did not open the textbook. Instead, she turned to the class and asked each of them to draw picture of their favourite place or thing in the town. She gave us the option of writing a line under the picture if we wanted. Jiten drew an ice-cream with an attempt to draw the ice-cream shop as well. He kept wondering - what does all of this have to do with English. And yes, I'd better not write... I could make spelling errors.

Ms. Amita went through each of the drawings and said "What a lovely town we all live in. You know there is a sports event for children roughly your age coming up in May. Wouldn't it be nice if we could make a story that introduced people to our town? Let us do it. Let us use the pictures you drew as a starting point. Of course, we'll have to add some writing as well but don't worry about that yet"

And so "Project Welcome" was born. Jiten was grouped with two other children one of whom was good at spellings though Ms. Amita seemed quite tolerant about the errors. They decided to write about all the eating places in Jeevan Nagar that young people like. Jiten wanted to mention that the ice-cream parlour had a freezer, so the ice-cream was always good. So, he asked Ms. Amita how that word was spelt.

They kept putting the different parts together and three weeks later the first draft of the brochure was ready, albeit handwritten. They put their heads and hands together to polish the spellings and pretty pictures. What a joy it had been. Ms.Amita secretly thought to herself - "children have learnt spellings done in a project-based learning way", but knew very well that explicitly stating that would take the joy out of the project. And with that off they went to the printer to explore layouts for the brochure

Children are born with innate curiosity and eagerness to learn about their immediate surroundings. Thus, it is important that young learners falling in the age group of 3-9 years are provided with rich experiences through well-planned appropriate activities that develop communication skills, critical thinking, problem-solving and understanding about themselves. The pedagogical practices must include activities and experiences keeping in mind the WHOLE CHILD, all aspects - cognitive, socio-emotional, language and literacy, psycho-motor and creative development, which are inter-dependent, and interlinked.

5.1 Major Aspects and Components of Teaching-Learning Process

5.1.1 Content

Under FLN Mission, the focus lies on providing appropriate opportunities in early literacy and numeracy. With a focus on Language, Literacy and Numeracy, Learning and development in children is holistic and it advances in the areas of health, cognition, linguistic, personal, and social development and well-being simultaneously. Children learn in different ways, styles and at different pace.

5.1.2 Learning Environment

The learning environment should be designed according to the varied learning needs of learners. A classroom should have a print rich environment and math/manipulative objects, puzzles, toys etc. for children. Also, the classroom should provide children with the opportunities to engage in meaningful written expression. Materials such as drawing sheets, writing sheets, coloured pens, sketch pens, colours, pencils, white board and other writing resources should be made available to encourage children to write to express. A strong linkage of activities within classroom should be made with the experiences that children have at home. The activities conducted in school must continue at home in a friendly environment including parental engagement.

5.1.3 Prior Planning

The following steps help the teachers to handle variations in early learning:

- **Collect and select suitable range of toys and materials** that enable learners and teachers to connect with listed concepts and skills for the age group of 3 to 9 years.
- **Collect and plan activities** for learners of varied contexts, according to their interest, abilities and needs, to keep them engaged and help them acquire meaningful and developmentally appropriate skills.
- **Once the child is enrolled, their developmental level is to be identified** to plan further strategies; this would help to carry out the early developmental screening of ALL children and identify their strengths. Early intervention minimizes learning difficulties and accelerates child development. The curriculum content then needs to be made flexible and accessible to children with different abilities.

5.1.4 Methodology to adopt age and developmentally appropriate pedagogical practices:

Based on children's interests, needs and abilities, following methodologies need to be considered:

- Teacher guided and child-initiated learning.
- Balance between concrete and abstract ideas
- Balance between teacher and learner's dialogue (teacher initiated and child-initiated interaction)
- Connections with the child's previous knowledge
- Use and integration of technology in daily schedules.
- Use of open-ended materials to enhance thinking and questioning skills.
- Continuum in pedagogical practices from preschool to classes 1- 3(spiral lessons)
- Continuous observation of children's progress in foundational literacy and numeracy
- Connections with children's home language and daily experiences
- Smooth and seamless transitions from Pre-school, Balvatika and between classes 1-3.

5.1.5 Suggestive pedagogical processes for achievement of learning outcomes

a. Pedagogical Practises:

Pedagogical processes are the strategies to be used by the teachers to transact the curriculum in such a way that learners learn by exploration, observation, investigation, expression, problem-solving and critical thinking to achieve the specified learning outcomes.

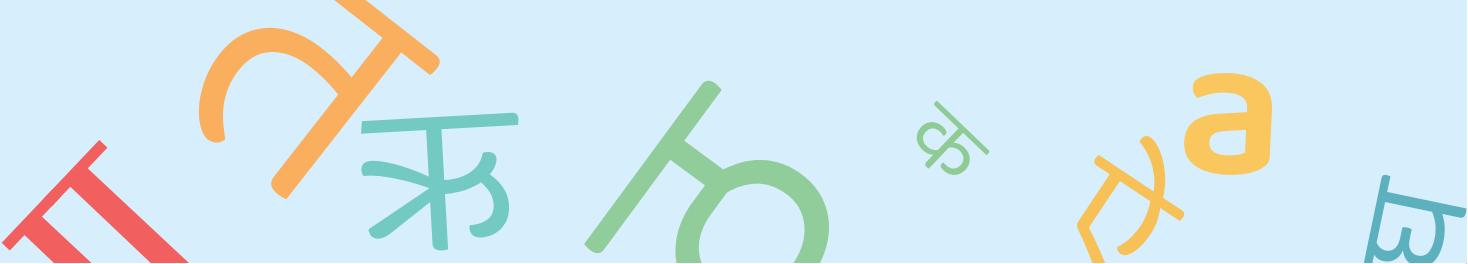
Teachers need to align pedagogical practices, curriculum content, materials, and resources to achieve the desired learning outcomes. One of the especially important pedagogical practices is knowing and reviewing previous learning or knowledge of children. Then after selecting and planning the goal-oriented activities for achieving learning outcomes for literacy and numeracy, teacher may chalk out the monthly, weekly, and daily schedule. Thirdly, the environment of the classroom should be such that it is attractive and welcoming to every child, well equipped with age and developmentally appropriate variety of books and manipulatives; Further, there should be provision of sufficient time for children to practice each concept/skill, and continuous observation of how children are using the materials.

b. Planning Activities:

Prior planning and thoughtfully planned pedagogies to handle variations in early learning, work quite well. Teachers can plan these activities in a phased manner, proceeding from simple to complex, using the process indicators that would help in achieving the learning outcomes. Gradually, teachers should support the children's learning by progressively introducing new skills and knowledge. The kind of teaching instructions in the form of open-ended questions would help in knowing children and challenge children at the same time. Every teacher should know how to plan, execute, observe, and assess children's learning in foundational literacy and numeracy. Teachers must not hesitate to learn from one another and through exchange of ideas with cluster/block and other schools.

c. Teachers to provide Enabling Environment:

Teachers need to know the developmental characteristics of children, their individual learning styles and thereafter modify their teaching strategies. Pedagogical processes should consist of indigenous toys, materials, literacy, and mathematics related games that facilitate overall development. For example, movement games help to teach



spatial sense, body coordination, sense of rhythm, vocabulary development and so on. A good teacher would be friendly and interactive with all her/his learners, such as ask questions regarding their creation/activity individually to help them extend their thinking and encourage conversation. She should not be intrusive or directive in her approach, rather allow for learner's initiative and imagination to flourish and encourage them to express freely. Most importantly, the teacher must be encouraging and appreciative of each learner's efforts to give each learner a sense of confidence and boost their self-esteem. This would motivate them to come to school regularly and draw their attention towards learning.

d. **Multiple Opportunities for Learning:**

Lots of opportunities for use of expressive and receptive language skills should be provided. Children need to be given opportunities to interact with adults and other children, to express themselves creatively and to communicate confidently. The small group interactions, read aloud, construction tasks in small groups, solving big puzzles in pairs are some of the proven strategies to improve communication skills, and increase the self -esteem of learners. These skills would help children to communicate ideas effectively, grasp the verbal information, listen to others, understand what other says, and thus develop and maintain relationship with their peers and adults. The read aloud and picture reading provide opportunities for learning new words, critical thinking skills etc. Asking questions are some of the especially important strategies to strengthen language and early literacy. When children engage in meaningful literacy activities with purposeful instruction, they develop listening, speaking, reading, and writing skills that enable them to be effective communicators.

Similarly, to enhance mathematical thinking and scientific temper right from the beginning there should be ample opportunities and a variety of experiences /activities for developing skills related to problem-solving, critical thinking, reasoning, and analysing.

e. **Managing Varying Abilities:**

For preschool and Balvatika, the younger age group of children with emerging abilities can be engaged in free play, while the teacher conducts the guided activities with the older age group of children with higher abilities. After a period of 20 minutes, the teacher can conduct guided activities for the younger age group with emerging abilities while the older age group children are engaged in free play/activities. Thus, the teacher will be able to manage the varying abilities and age groups through development appropriate activities. Here it is to be noted that this grouping is not

meant for any kind of discrimination among children, but to facilitate learning and guide learners for smooth progress in literacy and numeracy learning.

Another example is taking advantage of group mealtime or small group play time where all children sit together and enjoy their lunch/play together. The teacher should utilise this time by encouraging good meal habits and work habits among learners, like eating food properly, how food tastes, throwing the fruit peels in the bin, putting away materials after playing, not dirtying the room, etc.

f. Areas to be focused upon while planning activities:

All children from the age of 3 to 9 years are required to build on all their literacy and numeracy experiences and exposure to enhance their communication and mathematical process skills so that they can describe their experiences more effectively. It also needs to be ensured that all learners can receive and communicate information and develop higher order skills critical and creative thinking. This would help them to learn to read and write with comprehension that eventually enable them to solve the appropriate math problems using the process skills. This is the reason foundational literacy and numeracy must be seen as continuum from pre-school to class 3.

The following should be considered while planning and promoting the specific pedagogical practices for FLN:

- Model literate and mathematic behaviour
- Intentional and guided practices/activities
- Listing of Process indicators for timely checks
- Continuous review and reflection by the teacher
- On the spot guidance by the educator/specialist
- Use of varied strategies for children of different abilities and interests.
- Use of varied indigenous toys, materials, and other resources to support the classroom plans and activities.
- Making good use of time and integrate FLN in daily schedules.

5.2 Learning Enhancement Programme

a. Learning Enhancement Programme:

To enhance the quality of education Learning Enhancement Programme (LEP) has



been adopted by different States and UTs. The programme, supported under Samagra Shiksha, aims at bridging the learning gaps of students in government primary schools; remedial teaching after identifying students based on an assessment and post assessment to be conducted to see outcomes; activities under Padhe Bharat Badhe Bharat (PBBB) for early grades; developing modules and exemplar material for teaching-learning, teacher training and continuous and comprehensive evaluation; interventions for enhancement of Learning Outcomes especially for students in areas having lower performance under the National Achievement Survey etc.

b. LEP Guidelines – COVID-19 Response:

During Covid-19 pandemic situation, National Council of Education Research and Training (NCERT) framed ‘Students’ Learning Enhancement Guidelines’ for students with or without the digital resources to continue learning while schools may be closed, especially for an indefinite period to prevent the spread of the coronavirus. These guidelines seek to help children who cannot access online learning as well, recommending ways to learn at home. The Learning Enhancement Programme (LEP) guidelines –

- emphasize upon the community working closely with the school to get learning materials such as workbooks, worksheets, etc. delivered at the doorsteps of children by teachers and volunteers.
- suggest teaching local students by volunteers or teachers by setting up television at the community centre and make children sit while maintaining social distance norms.
- suggest measures for three types of models i.e., students not having any digital resource; students with limited digital resources; and for students with available digital resources for online education.
- suggest a continuous learning plan for each child of each class with special reference to their accessibility to resources.
- Setting up a helpline at a community centre with the help of local body and forming a team of volunteers to help students without access to digital resources are among a few measures listed in the guidelines.

The guidelines further recommend orientation of parents to support and participate in the learning of their children. However, these guidelines can be

¹⁰ https://ncert.nic.in/pdf/announcement/Learning_%20Enhancement_Guidelines.pdf



of immense value even in the post COVID scenario as they involve the parents, volunteers, peers, and the whole community in facilitating learning of children.

5.2.1 Implementing Learning Enhancement under FLN

- **Teachers need to focus on developing phonological awareness and sound discrimination, and visual perception and visual association** that helps children to develop into better readers and writers. Reading story books aloud or book browsing experiences in reading or book areas should be informal and enjoyable with access to a wide range of reading materials, including picture books, children's magazines and graded story books with progressively more and more text being introduced along with pictures. The foundation for mathematical learning or abstract thinking gets laid through play and activity-based approach (including toy-making, art integration, sports integration, storytelling-based learning, ICT integration, group work, role plays, project work in groups, etc.) that are meaningful for every learner. Mathematical thinking involves thinking about objects and their quantitative and spatial relationships without thinking about their specific characteristics or qualities. The objective should be covering each child to develop the desired competencies so there is no need of any remedial teaching in later years.
- **Involve Parents/Guardian or Volunteers** to orient parents on conducting activities with children on foundational literacy and numeracy skills for inculcating the habit of reading and basic numeracy in their daily life. For reading comprehension they may be asked to tell a story in their own language, which they have read from a book (story book or language textbook or from magazine or newspaper) or read the wrappers or sign boards. For basic calculation, they may be asked to make a list of items purchased for use at home in last two days and calculate total expenditure incurred for that or recognise numbers on wrappers, signboards, vehicles and try to add and subtract them on fingers/mentally.
- **Parents/Volunteers may be guided on creating cards** using hard paper/cardboards/waste cartoons for children, by making diagrammatic representation of numbers or alphabets or words on it. Through play way method, they can create interest in children to learn the same.
- **School needs to collect some interesting picture and story books from the community** or parents of older children, which may be distributed to

parents of foundational learners for developing interest and habit of reading.

- **With children of classes 1 and 2, use of fingers, pebbles, pulses, or other objects** may be promoted for doing basic addition and subtraction, and classification.
- **First generation learners may be supported** similarly through teachers, volunteers, community members and their peers through various activities at a community level.

5.3 Emphasis on Child Centred Pedagogy

The whole planning of foundational literacy and numeracy should be child/learner centred and based on learner's needs and interests. The activities should be planned in such a manner that provides ample opportunities to ALL children a chance to express themselves and the teachers should accordingly modify their practices. Teachers must be sensitive to each child 's needs and take immediate review of her/his teaching practices. The goal of teacher is to motivate each child towards reading, writing and early mathematics by creating harmonious environment where emphasis is given to engage ALL children. The activities should be contextually relevant (in local context) and planned progressively from simple too complex to allow for challenge and yet be achievable for most learners with same effort, while also catering to individual needs.

Sometimes learners show disinterest or reluctance to read or write, a good teacher should keep some transitional activities handy and ready with them to provide to children in such cases. For example, moving periodically during the day, around the classroom and playing some movement games would help children to focus on planned activity. The teacher should establish positive rapport with ALL learners. The pedagogical practices need to include plenty of opportunities for small and large group interaction among children as this would also provide for collaborative process. To enhance foundational literacy and numeracy, learner centred pedagogy will encourage children to use language to listen, speak, read, and write. The learner centred classroom emphasizes on interactive classroom that includes authentic, appropriate, and accessible toys and materials.

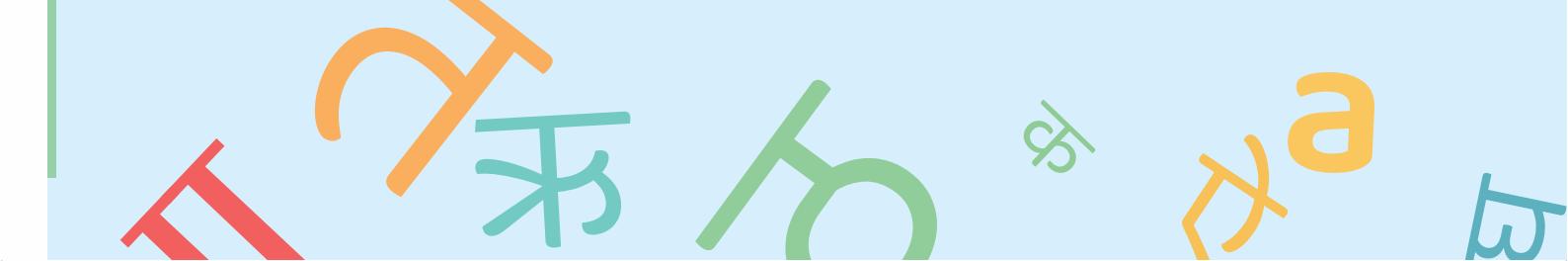


Teachers need to

- Demonstrate equal and appropriate expectations from boys and girls by providing equal attention, respect, and equal learning opportunities in an inclusive environment.
- Select books, pictures, posters, toys/materials, and other activities free of gender bias.
- Not use gender biased statements while talking to the learners or giving instructions in the classrooms
- Select such stories, rhymes/songs, activities, and facilitation aids that depict girls and boys, including some with special needs, in the same roles as men and women in all professions.
- Encourage learners to follow their interest that enables them to develop skills of self-regulation, perseverance on task and good work habits.
- Use toy-based pedagogy and experiential learning. Emphasis to be given on self-making of toys by children with no/low-cost material easily available in the surroundings. Toys owned by children can be pooled for communication skills, where each child brings a toy to school and then talks about it or writes about it, etc.

5.4 Linkages Across FLY-1 and FLY-6 (Ages 3-9 years)

- a. **The foundational literacy and numeracy activities should be linked to the learning outcomes** and be spiralling and progressive in nature that would eventually help the teachers to see the overall progress of children in each component and sub-component.
- b. **At every stage, the basic learning principles will be followed** namely- moving from familiar to unfamiliar, simple to complex and from concrete to abstract as this would help the learners become more confident.
- c. **Teachers should be skilled in using assessment techniques that are a part of the teaching learning processes;** for example, how each child is responding to the print and numeracy rich environment, whether the child explores books, how the child is handling books, how s/he is exploring and managing the early attempts of writing etc. Are they able to construct with blocks and use manipulatives in a variety of ways,



what they talk and how do they interact, what kind of mathematical language they use as they get engaged in exploring materials and manipulatives both indoors and outdoors, are some other examples? Assessment must be done with the purpose of recognising and encouraging strengths (how they are progressing in each of the skills/concepts), identifying areas which need additional support (such as sound discrimination activities), and addressing learning/developmental gaps (any kind of developmental delay).

- d. **Various tools and techniques** like anecdotal records, check list, portfolio and interactions with other children can be used for recording observations and assessment. Assessment should be in-built and a part of the pedagogical practices and non-competitive.

5.5 Content Development including Digital Content to support Teachers

- a. **Quality of teaching and learning are determined by the teachers:** Well trained teachers with requisite knowledge, skills and commitment can broaden the learning process. A well-designed content including Digital content helps support teachers during this process. Presently, the whole world is heading towards digitization and quickly learning new things by using new technologies. But these new technologies are placing more demands on teachers to learn how to develop and use them in their teaching learning processes in more creative and productive ways. Let us understand the process of development of content including Digital content to help teachers build their capacities in the development and use of content.
- b. **Development of good content does not happen by chance:** It takes extensive planning and preparation. Understanding of ways, how students learn, can help teacher develop an effective content. Before designing any content, course preparation or the lesson plan, the teacher must think about the following key questions:
- What do I want my students to learn?
 - How do I measure my students' learning?
 - How will my students learn?

Based on these questions, teachers must determine the best means for transacting the

content and meeting the learning objectives defined for the content. This can be done through the lesson plan. It is the teacher's roadmap to transact the content effectively in the class. Accordingly, learning activities and strategies can be designed. The teachers first define learning objectives, then determine the assessment process and finally plan instructional strategies.



- c. An ample range of digital materials and e-content with educational implication are accessible online: DIKSHA is a one nation one digital platform where such resources are easily available and accessible along with proper classification. Such materials offer both teachers and students a better interactivity and social collaboration. Teachers should access these resources to learn, relearn and unlearn as often as possible. However, teachers should be encouraged to become not only consumers but also creators of e-content as per their local context and experiences as well as needs of the learners, especially for foundational levels. E-content can be created in a variety of ways by using variety of tools and software. There are various software packages, which can be used easily by the beginners for e-content development.

5.6 Teaching Learning Materials (in Local Context)

- a. Local toys, games and other educational play materials should be kept in easily accessible open shelves for children to explore. These open shelves should be duly labelled with print, numbers and pictures that would help children to easily take and keep back the toys and play materials. The activity or interest areas such as reading or book area/mini library in each classroom, math/manipulative



area, writing area, construction/block building area should be well equipped with local contextual literacy and numeracy materials. Rather every other area such as circle time area, attendance area and other play areas should be designed to promote literacy and numeracy in a meaningful way so that children's attention can be drawn to this print and numeracy rich environment and learning can be absorbed in a joyful manner.

- b. **There should be enough materials to display which are made by the local/regional community or parents or by children themselves** so that consciously or unconsciously children are sensitized about their local culture and traditional knowledge. Children can be encouraged to develop and play with their own board games with pictures, numbers and text which help them relate pictures to text, identify text and numbers and get exposure to addition (forward steps) and subtraction (backward steps) etc.

The toys and educational play materials should be acquired/developed according to the developmental concepts/skills and teachers should plan their monthly/weekly and daily plans using the indigenous toys and materials.

Asha, Seema and Raju were three of the students in Ms. Maria's class. It was an English class and Ms. Maria narrated "The Lion and The Mouse" story. Then she went on to explain how no matter how powerful we might be, the smallest of persons can be of immense importance and help to us. It was usual for teachers to then ask the boring question "What's the moral of the story" and we all knew the right answer. Instead, she turns to Asha and says "What comes to your mind when you hear the word small?" Asha was suddenly attentive and thought for a moment. Then she said "not taking much space". Then she turned to Seema and said "Do you agree? What do you think of that? Does small mean something else in a different context?" Seema said, "Sometimes I feel small when someone has hurt me". She then asked the class "So we see small describes both feeling and things - how interesting. Would you say feeling or being small is a good thing?" We thought about that for a while and then Raju said "I can be a good thing. Being small for a purpose. Less conspicuous" (ugh... where did he learn that word "conspicuous"... such a showoff). Asha countered saying "It's never good to be small". By then it was time for the class bell. We left with words ringing in our heads and a new way of seeing all things small and beautiful.



Useful Resources

Students Learning Enhancement Guidelines, NCERT

https://ncert.nic.in/pdf/announcement/Learning_%20Enhancement_Guidelines.pdf

Continuous and Comprehensive Evaluation Guidelines, 2019, NCERT

<https://ncert.nic.in/pdf/announcement/CCE-Guidelines.pdf>

Guidelines for library grant and promoting reading in schools, 2020, MoE

https://dseb.education.gov.in/dseb/sites/default/files/update/lib_grants.pdf

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Chapter 6

LEARNING ASSESSMENT



HIGHLIGHTS

This chapter discusses the

- Various modes of Assessment including School Based Assessment in Foundational Learning
- Assessment Domains: Physical; Language & Communication; Personal, Social & Emotional; Literacy; Mathematics; Understanding the World; and Expressive Art and Design
- Use of Observation & Portfolio in School Based Assessment and Holistic Progress Card (HPC)
- Conducting Large Scale Assessment in Foundational Learning: National Achievement Survey for FLN; Large Scale Assessment Domains

After the dictation they put down their slates and I went through their writing. I found many words misspelt. Quite a few of them were unable to write conjunct consonants.

Their handwriting also left much to be desired.

I had made no corrections on their slates. These I returned after I had gone through them. The boys began to clamour, "How many mistakes have I made?" asked some, while others wanted me to give them ranks.

One of the boys said, "Now Laxmirambhai will also teach us as other teachers do and give us ranks."

"I am going to do nothing of the sort," I said. "You all know how to write fairly well.

Try again tomorrow. Gradually you will learn to write well. And practice will help you to write well -I am sure of that. Anyway, what's the point of marking your mistakes?"

"But what about ranks?" asked one.

"Do I give you ranks when I tell you a story?" "No."

"Do we have ranks when we play games?" "No."

"Some of you are tall, while others are short; does that mean ranks?" "No."

"Some of you are fat, some quite lean; does it imply ranks?" "Not at all."

"Some are rich, some are poor; does the school give ranks according to whether you are rich or poor?" "No."

"Then we just don't want the rank system at all. A person who can sing may sing our poems. He may try to recall the words when he forgets them. A person who does not know a game may observe others' and learn; and one who is good at a game may play for the pleasure of it. A child with a good handwriting may serve as a model to others who would like to improve their own. Those who are good at doing things can always teach others who are not so good. That's all!"

- Excerpt from 'DIVASWAPNA' by Gijubhai Badheka

6.1 Understanding Assessments

- **Assessment involves** the gathering of information from all possible sources, regarding knowledge, skill, attitude, ability, and beliefs of the children, document the same and use this data to make informed instructional decisions, refine or restructure processes and ultimately improve the Children' learning.
- **Assessment serves** several related important intentions, including informing the teachers as to how to plan learning experiences, identify areas of learning and development where children may need support or extension, to quantify the gain in achievement of learning outcomes.
- **Assessment serves the best interests of the child when** all stakeholders, including the parents/care givers, teachers, administrators as well as the policy makers are involved in the process of understanding the data obtained through assessment. This involvement and collaboration are key ingredients to support children' learning and vital for system improvement.
- **Assessment is important** in all stages of learning but more so during foundational learning.

6.2 Assessment during Foundational Years

- **The period of foundational learning is a crucial phase** for the development of intellect, ability, physical growth, mental maturity and values. The quality of education in this phase determines all future achievements and accomplishments. The nations known for excellence in school education like Finland and Singapore invest intensively in this stage.
- **The primary purpose of assessment** is to support and guide each child's learning from FYL-1 to FYL-6(age group of 3 to 9 years). This is to support the teachers across the foundational stage to gather and share appropriate information about their children and pay specific attention to the traits that might lead to early signs of disabilities.
- **Learning at the foundational years happen at varying rates** and it entirely varies from child to child. It even varies across different developmental areas / subjects and it depends upon how an individual child responds and functions because the learning at this stage is majorly influenced by many social and cultural contexts. Assessing learning progress of children helps to identify children's strengths, needs, interests and preferences.

- **Assessment is vital to track children's progress in a continuous and comprehensive manner** using multiple techniques of assessment. Assessment aims at early identification of learning gaps at each foundational stage i.e., at FYL-1, FYL-2, FYL-3, FYL-4, FYL-5, and FYL-6 including children with special needs so that there can be possibilities of early intervention through referral to specialists.
- **Assessment at this stage should essentially be designed to** encourage each child's efforts to explore, observe and learn. The results of assessment are used for purposes of not only conveying about 'what has been learned' but also 'what factors had restricted the learning' and the 'altered strategies that would improve learning'. Assessment of child's learning should not be restricted to the four walls of the school but should permeate to their parents/ care givers, and to the community at large. The fundamental purpose of assessment is to use the data obtained through different sources to support, guide, and maximize each child's potentialities. The transaction of knowledge and the assessment must go side by side.
- **A holistic and purposive assessment** is therefore vital to track children's progress by using different techniques to help the stakeholders to:
 - identify the child's strengths, needs, interests and preferences.
 - potentiate child's performance and scaffold it through interventions.
 - collaborate to solve issues and areas of concerns.
 - contribute to early identification of learning gaps and learning difficulties.
- **Though the rate of learning (and hence development) varies** from child to child, the sequence of the process of learning remains similar. The ability to learn and the pace of this learning are affected by factors like health, nutrition, sense of safety and levels of love and affection, involvement and participation of the family, school, and the community.
- **Continuous interaction and collaborative effort are required with the parents/care givers.** Involvement of the parents is vital to achieve maximum learning and development of competencies in the child. Enrolment into a school system is certainly not the end-all of the parent's responsibility towards their child's education. They must actively engage themselves in encouraging the child to learn from their home surroundings as well as outdoor experiences. Parents/care givers need to monitor the child's progress, growth, and development in all spheres, taking active interest and participation, celebrate their success and form a support system in events of temporary setback or when the going become stormy.

The Three Goals and Assessment

- The foundational years of education has three developmental goals as discussed in earlier chapters that comprises of 'prime learning areas' such as physical and motor development, socio-emotional development, language and literacy, cognitive development (mathematical understanding and numeracy as well as understanding the world), spiritual and moral development, art and aesthetic development which are interrelated and interdependent. Development in these learning areas make child competent to deal with complex life situations and all these areas have been subsumed into three major goals which are briefly discussed here: -
- These 'prime learning areas' are considered as different subjects as the child moves to early primary grades i.e., class-1 or at the FY-4,5 and 6 stage. However, it must be noted that all these six stages should be continuum. All these areas are intimately intertwined with each other and should be assessed to support the process of learning at this stage.
- The teaching learning strategies need to be planned around these three goals and these goals support the foundational years of learning of ALL children. These learning areas are mentioned above under the three goals. The system is comprehensive, providing behaviors to observe, a systematic way to collect anecdotal remarks, and a means to draw conclusions about the children's performance to plan instruction.
- Testing children or grading their work should not be encouraged during foundational learning. The FLN curriculum promotes the idea of encouraging children and helping them to develop a positive self-image, gain confidence in their own abilities and individual progress at one's own pace. Also, children do not have to repeat the class, regardless of their attainment levels.
- Assessment is the process which is integrated with the teaching-learning processes and principally aimed at empowering the teacher to see the individual child as well as collective impact of the classroom transactions and attaining the desired leaning outcomes as intended in the in the three developmental goals mentioned in earlier chapters.
- **Assessment during the foundational stage can be broadly categorized into two major areas, namely:**
 - a. School Based Assessment (SBA) by the teachers: for assessment of the individual child's progress.
 - b. Large-scale achievement survey: for assessment of the processes and functioning of the educational systems (such as NAS, SAS, and Third-Party Assessments).

6.3 School Based Assessment

- In School Based Assessment¹¹ (SBA), the teacher herself devises the assessment tasks along with the children to evidence the learning continuum (as opposed to standardized tests where at the state/national level, where the assessment is designed centrally). School-Based Assessment (SBA) is principally aimed to see the individual as well as collective impact of the classroom transactions, and experiences at home in attaining the desired leaning outcomes as intended in the curriculum. The school-based assessment helps monitor the quality of education in a decentralized manner.
- Standardized tests administered by the state/national level cannot be a replacement for SBA. SBA is all about assessing the quality at the micro level through assessment tasks created by the class teacher in accordance with the requirements of the class/child.
- SBA system of assessments, done by the teachers, works more in favour of the child than the rigours of sitting for one-time exams. In SBA, the child has an equal partnership in the assessment process and involves use of techniques like observation by the teacher, maintenance of individual child's portfolio to document progress, peer assessment and self-assessment.
- The success of SBA is dependent on the capacity of the teachers and degree of autonomy provided to the teacher to assess her class in creative ways. Therefore, in SBA, the teacher is the primary facilitator and emphasis is on empowering the teachers by providing complete autonomy to them to assess the child's performances, aptitude, attitude interest and achievements.

6.4 School Based Assessment in Foundational Learning

- School Based Assessment at the foundational stage should be stress-free and largely through qualitative observation based on performance of the child in a multitude of experiences and activities. It should be through day-to-day observation and documentation of stated outcomes achieved as well as children's development in terms of their health and nutrition status, their participation and involvement in learning experiences, artwork, games and exercises, music and movement etc.

¹³ School Based Assessment Module (SBS) <https://itpd.ncert.gov.in/course/view.php?id=949§ion=5>



including their behaviour in classroom and outside. Assessment at this stage is done to recognize and encourage strengths, identifying areas that need additional support, and addressing learning/developmental gaps.

- **Various tools and techniques** like anecdotal records, checklist, portfolio, and interactions (through a holistic 360-degree assessment with teacher, peers, family, and friends) can be used for assessment. Assessments, when designed properly, can support, and not just measure, children's learning, building their competencies and granting them the feedback they need. Therefore, the learning assessment during the foundational years cannot be limited to a paper pencil test at the end of the academic year. The assessments done should necessarily be communicated to the parents/ care givers at appropriate pre-determined intervals.
- **Also, it is important to remember that the learners bring their own individual approach**, abilities, and interests to the learning situation. In SBA the teacher familiarizes herself with the individual child's culture, language, learning preferences, family background, and socioeconomic level and design assessments based on the same. Understanding the context in which the child grows and develops has an important impact on learning and helps design assessment tasks free from cultural biases.
- **The learning outcomes** outlined in the **Annexure-I** for Foundational year level 1 to 6 (FYL1 to L6) are arranged in a spiral and progressive continuum to enable teachers to track the progress of these learning outcomes. However there is also a need to assess progress of learning at different levels of a learning outcome within a class. The fact, that all children learn on their own pace and style, also need to be kept in view while assessing children on each of the learning outcomes. They may show their progress at different levels. Experiences of working with children show that children often show learning progress at the following levels as given in the table:

Level I	Level II	Level III	Level IV
Trying to achieve the learning outcome with teachers' support in the given time frame	Achieves the learning outcome with teachers' support in the given time frame	Achieves the learning outcomes on her/his own	Achieves the learning outcomes and helps and supports others to achieve the learning outcomes and require more challenging tasks.

There may be 5-15% of children who need support and teachers need to take this fact in cognizance and plan intervention to support these children accordingly. These children may belong to different socio-economic contexts including linguistic background. Also, there may be gifted children in the same class, for whom teachers need to plan more challenging tasks.

For more clarification, assessment of learning outcomes based on exemplar activities are given below:

HW1.8-LO- Makes choices and expresses preferences.

Exemplar Activity- Painting

Level I	Level II	Level III	Level IV
Child's asks teacher about which colour to be used in the picture already created. (Teacher will discuss with child about his/her liking about colours and encourage the child to choose the colour on his/her own from the colour collection)	Child gives his/her preferences of colours to teacher and asks for teachers' approval. (Teacher will encourage child further choose specific colour and paint)	Child picks up the favourite colors and completes her/her painting. (Teacher will encourage child to explore more shades of colours and to support other children)	Child completes his/her painting and helps his/her peer in choosing colours with the permission of teacher. (While appreciating, teacher will encourage child to explore more shades of colours and to support other children)

IL 1.3b-LO- Identifies the missing parts of familiar picture.

Exemplar Activity- Observing* the picture of an elephant with missing parts, name different parts in the picture and finding the missing part.

Level I	Level II	Level III	Level IV
Child observes the picture and name some parts and points out one missing part without naming it. (Teacher will prompt the child to tell the name of the missing part by giving some clues and encourage for finding out other missing parts)	Child observes the picture and name some parts and points the one missing part using active vocabulary. (Teacher will appreciate and prompt the child giving some clues for finding out other missing parts)	Child observes the picture and name most of the parts and points out all the parts using active vocabulary. (Teacher will appreciate and encourage child to support other children)	Child observes and names out all the visible parts and missing parts and helps his/her peers in finding out the missing parts giving them clues with the permission of teacher. (Teacher will appreciate and encourage child to keep it up)

*For children with visual impairment, Embossed/textured pictures may be used.

Levels of performance: (i) level I: needs lots of support (ii) Level II: able to do with support (iii) Level III: Age appropriate and (iv) Level IV: more than expected (Advanced)¹⁴

¹⁴ Continuous and Comprehensive Evaluation Guidelines, NCERT <https://ncert.nic.in/pdf/announcement/CCE-Guidelines.pdf>



6.5 School Based Assessment in Foundational years under 3 Goals

The foundational learning has primary areas of focus, which are intimately intertwined with each other and should be assessed by the teacher through SBA to support the process of development during foundational years. These prime learning areas are subsumed in the three developmental goals of foundational learning described in the previous chapters:

Goal 1: Children Maintain Good Health and Wellbeing

This goal continues to provide experience for health and wellbeing, physical and motor development socio emotional development, nutrition, hygienic practices and safety from FY1-FY6. Assessment under this goal needs to keep in view the following:

- **Physical and motor development is an important** area consists of development of gross motor skills (jumping, hopping, etc.) and fine motor skills (drawing, colouring, threading beads, etc.), which affect educational advancement in the child. This must be ensured by the parent and the school system.
- **Exercises and games** must be designed and encouraged that give strength, coordination, flexibility, and endurance. Enhancement of gross and fine motor skills is essential for the child's ability to work on activities demanding eye-hand coordination. Thus, physical ability becomes a vital part of the child's assessment in the early years.
- **Aspects of hygiene** to maintain good health include observation of practices and habits such as washing hands before and after the meal, covering mouth while coughing, throwing the litter in the dustbin, taking bath regularly, etc.
- **Keeping objects, toys, etc. in an organised manner** - Children follow what they see, so the teacher needs to work with them to keep things at the right place, then only it will become a habit with the child. Cleanliness is a value which is 'caught' and cannot be 'taught'. If a child watches mother taking her shoes off on returning from work, and keeping it properly before entering the room, the child learns to do so. Teacher can observe the child's habits in ensuring that they keep their belongings back to the appropriate place.
- **Social and emotional progress is based on** the experiences that the children gather, reactions to pleasant and unpleasant stimuli through verbal and non-verbal

expressions, learning to regulate their emotions, and the initiation of relationships with others. These processes of regulating emotions and consequent behaviour as a part of interaction and communication need to be documented as part of the progress card.

- **Gregariousness (enjoying the company of others) gets developed around the age of six**, when children are ready to spend time with their peer and in groups. Using the techniques of peer assessment and self-assessment provides great insights into the child's world and their personal, social, collaborative, and emotional development.
- **All forms of creativity, art and design are an integral part of foundational learning**, such as, poetry, rhymes, songs, music (vocal or percussion/string /wind instruments), drawing and painting, puppetry, clay modelling, papercraft, toy-making, choreography, etc.
- **Every child must be exposed to various art forms** and the teacher must actively watch for interest, ability, aptitude, imagination and creativity, expression and correlation with outer environment and inner values, within the child. The same must be noted, necessary encouragement and opportunity must be provided by the school system as well as through communicating the same to the parents.
- **It must form an important and integral part of the child's assessment and final sharing.** For example, the use of paper toy-making or paper folding activities for assessing the child, helps to understand as to whether the child can follow the sequences and imitate the behaviour demonstrated by the teacher. The finesse of the artwork produced and the ability to perceive the details are some of the assessment criteria which can be demonstrated by the paper folding activities. Origami is the process of producing an aesthetically designed finished product by following sequencing and eye hand coordination. It introduces the child to the power of imagination coupled with the dexterity of the hand to transform a simple raw product into an object of delight, of use and beauty.



Goal 2: Children Become Effective Communicators

Once the foundations of language and literacy are laid during the preschool stage (3-6 years), this goal leads to subject- first/second language for example Hindi/state language/English. Following need to be considered under this goal for assessment:

- **The mother tongue of the child** must be the Language of communication (if not the medium of instruction) with the child in school in the formative years, so that the child does not suffer any confusion in understanding the transactions and is able to grow with free expression.
- **The ability to communicate must be developed both as the initiator as well as the receiver.** This means that the child may be assessed in perceiving the need to communicate, forming the idea to be communicated, use of the appropriate words, verbalize them in a manner that is understandable and substantiate the communication with appropriate facial expression and body language and finally receive verbal and non-verbal feedback from the receiver.
- **Three important aspects of communication** are listening, to empathise and the need to collaborate. Assessment tasks may be designed to gauge these aspects along with other aspects in holistic manner.
- **Giving importance to non-verbal communication, the child may be exposed to** the different ‘bhavas’ (emotions) and the ‘mudras’ (gestures), which were part of our rich Indian culture. Assessment tasks may be developed to identify the bhavas and the mudras and further ask the child to elicit situations in which the bhavas and mudras are observed. Sign language may also be used for this purpose.
- **The development of a ‘sense of humour’** is an important area connected to the development of language and communication, which should be encouraged so that it develops gradually as the child grows.
- **The importance of foundational literacy** has been established beyond any debate to be an important contributor to future success in academics, decreased failure rate, better overall scholastic achievements, and generally greater adult life success.
- **The developmentally appropriate exposure to language and foundational literacy at this stage has a direct correlation to the future ability to read. Literacy assessment is all about whether the child can read fluently with comprehension.** The reading text may be a road sign, a poster, grocery rapper, train schedule given in the platform etc. For example, the child may be asked to read a poster as shown below, followed by asking simple sentences relevant to the poster such as, ‘what does the poster tells us to do?’.





- The assessment rubric may be developed by the teacher including three four levels as per the needs:

Beginner - Whether the child can locate the information given in the text,

Progressing - The child can interpret the information located in his/her own words,

Proficient - The child can value the information as being useful or not so useful.

Advanced - Whether the child can use the information.

These four levels of assessment of reading comprehension help the teacher to design the interventions targeting the level which requires focus.

Goal 3: Children become involved learners and connect with their immediate environment.

Following need to be kept in view for assessment under this goal:

- Mathematics forms the foundation for the expansion of essential aptitudes** in an individual and this is especially vital in today's rapidly progressing digital world. Mathematics can introduce in the foundational years of education through exposure to solve puzzles, develop the concept of distances, weights and time, three-dimensional cognizance in forms of geometry and sizes and shapes.





- **Assessment of the child must essentially include the ability to make sense out of** numbers, prepare groups, shapes, patterns, understand direction, distances, weight, and time.
- **Learning numeracy is not limited to counting numbers, rather it entails learning the language of mathematics and use of mathematics by the child to relate to her/his environment.** It is not about following algorithms to arrive at a solution, but it is more of grouping and regrouping to perceive the things better.
- **An example of an assessment task** that tries to analyse mathematical thinking capabilities in a child is given below. In this activity, instead of just asking children to count the stars and colour them, the child can be prompted to make groups of 2, 3 and 4 and colour them differently on different papers and observe how many groups of 2, 3 and 4 are formed and to see the relationships between them. This activity of grouping and regrouping enhances the analytical ability of the child. Thus, it may be emphasised that learning numeracy is not just understanding of continuous mathematics and applying algorithms but also about discrete mathematics and using mathematics to make a sense of the world around us, i.e., mathematical thinking.
- Assessment should support the learning of mathematics and furnish useful information to both teachers and students.
- **Some of the suggestions for undertaking assessments in foundational years have been shared below:**
- **Multiplicity of Assessment Tests and Techniques-** India is a diverse nation, so ‘singular’ test cannot be used to assess the numeric skills of all the students of a nation. So, multiple assessment tests need to be created according to the socio-cultural, economic, geographical, and linguistic demands of the areas. Further, the assessment techniques also need to be innovative and should try to explore the attainment of learning outcomes by the students in their classrooms. However, students must not feel the pressure of assessment. Hence, it should be undertaken as a joyful activity in class, preferably through collaboration or group work.
- **Development of Model Assessment Test based on Learning Outcomes-** The assessment tests should be subjective and according to the learning level of children of the classes. But this subjectivity should not malign the aim of attainment of foundational numeracy among the learners. So, the learning outcomes which have been developed by the NCERT should be in the prime focus while developing these assessment tests, so that parity can be maintained in the tests designed for two different classes.

- **Development of Question Bank-** The organizations like NCERT and SCERTs can also develop a pool of questions related to varied aspects of foundational numeracy for the students of different age group. The learning outcomes of each class should be considered while developing the questions for the question bank. These banks can be used as quizzes addressed to groups in class, or children can be asked to work in groups to devise quizzes for other groups.
- **Creation of Audio-Visual tools for Assessment-** Some audio-visual tests can also be developed to understand and assess the attainment of numeracy and mathematical skills among the learners. They may be appropriated by the different state governments as per their needs. These audio-visual tools can be created in different languages and in different states, so that these can be more appropriate for assessing the learning outcomes of students of different states which come from different socio-cultural, economic, and linguistic backgrounds.
- **Portfolios:** Portfolio is an anecdotal record of child's work during teaching-learning. A portfolio gives holistic idea about child's progress, learning strengths of the child and learning gaps vis-à-vis learning outcomes. A portfolio also provides necessary inputs to teacher of new class (if any) about child's progress and learning process in earlier classes. Portfolios need to be developed by the child in consultation with the teacher and can also be used for peer and self- assessment. Take care that portfolio should not only have record of good work done by the child, but it is record of all noteworthy activities including, assignments, worksheets, projects, record of observations in the classroom and oral interaction with child in the form of teacher's note etc.
- **Assessment through Rubrics**

Some examples of rubrics¹⁵ for evaluating tasks for foundational numeracy are given below. These may include descriptive details of the work, which depend on the feasibility of users' available time, nature of task, etc. For example, if children will use them, then their abilities need to be taken care of while creating and using them.

¹⁵ Rubrics is an important tool for CCE and SBA. Rubrics should be developed by the respective class teacher with participation from students. They should be written in such way that it is easily understood by teachers, children, and parents.



Criteria	Level I	Level II	Level III
Identification of shapes	Identifies a given shape with the same/similar shapes of the familiar objects (given/existing around) after some attempts	Identifies a given shape with the same/similar shapes of the familiar objects (given/existing around)	Identifies a given shape with the same/similar shapes seen before but are not around
Naming shapes and the features	Able to generalise the features of a shape to name it informally after some attempts but not formally	Able to generalise the features of a shape to name it informally and formally	Able to generalise the features of a shape to name it informally and formally, and cites different examples
Naming shapes and the features	Able to draw but unable to name a given shape from Different Perspectives	Able to draw and name a given shape from different perspectives	Able to draw, name and explain a given shape from Different Perspectives
Imagination/Creativity	Imitates others/takes clues and attempts to create figures/objects through drawing/art and craft	Creates figures/objects through drawing/art and Craft Independently	Gives novel ideas and creates innovative figures/objects through drawing/art and Craft

- **Ability to interact with the immediate surroundings** as well as to know and comprehend about the world at large constitutes a large part of child's development.
- **Adequate opportunity must be provided to the children to explore the immediate physical environment**, the residents, flora and fauna, people, places of importance and interest (their need, importance, and utility), the available facility including technology (their need and utility) in the foundational years. Children can learn about their family history by talking to their parents, and grandparents. They can be encouraged to take care of a plant or animal and to study their growth.
- **The teacher must, through observation, interaction, and projects/tasks, assess** the level of interest and engagement of a child in comprehending and understanding the world around him/her.

- **Assessing through story telling is a useful way** by which the teacher can facilitate the understanding of the world around them. In addition to asking open ended questions to children, they may be encouraged to frame and ask questions. Assessment rubric could be designed to understand the level and the range of questions being asked by the child.
- **Children can also be encouraged to build stories around their toys** based on their interaction with their surroundings and society

Children's participation in class

- Make activities and learning tasks more participatory in nature keeping in view of varied needs of children.
- Encourage children to participate in classroom activities through asking questions and framing of problems.
- Allow freedom of mobility to children in class while working in groups and reading from reading corner.
- Encourage children to develop many informal strategies in dealing with problems related to numbers and measurement.
- Opportunity to respond, discuss and share readings and books.

6.6 School-Based Assessment: Tools and Techniques (illustrative)

6.6.1 Use of Observation

- a. **An important part of understanding children's learning** is to observe what engages them. 'Observation' is therefore, one of the important techniques of assessment during foundational learning.
- b. **Opportunities need to be created wherein while playing the child can express** their potentialities, because play-way method is the suggested pedagogy during the foundational learning. These play situations can be facilitated in the classroom and even at home. Observations may be done to note, 'With whom do they like to play?', 'How do they play?', 'How well do they communicate?', 'Which activities engage them?' etc.

- c. **Interest is an excellent motivator for children.** When children are engaged in an activity or experience that is absorbing, they are more likely to learn. Another pertinent question to ask is: 'In which situation do children learn best?' This will be different for different children. Each child will have a preferred way to explore their world; it might be in a group, along with few other children, in the presence of an adult; or on their own.
- d. **Through observation teachers and care givers become aware** of individual children's likings, which is a precursor for learning to happen.

Suggested Teacher Activity

Goal-'Children maintain good health and well-being'

The teacher will ask two children to hold the rope. The teacher will instruct to keep the rope half foot above the ground. Rest of the children will stand in a queue and will run and take high jump turn by turn. The children will perform accordingly.

6.6.2 Self-Assessment and Peer Assessment

Assessment should not be limited to paper pencil assessment, particularly in the early years. Teachers need to use self and peer assessment for letting children to assess each other and themselves. This will encourage children to take greater responsibility for their learning, engaging with assessment criteria and reflection of their own performance and that of their peers. Through this, children can learn from their previous mistakes, identify their strengths and weaknesses, and learn to target their learning accordingly. The teacher may use innovative and play-based strategies to do self and peer assessment, such as, by using clay or wooden (eco-friendly) toys. In fact, toys can be used very creatively to assess the personal, social, and emotional development of the child. Teachers need to be incredibly careful with small children while using self and peer assessment not to make these burdensome for children. Exemplar Self and Peer Assessment is given below focusing on the LO-EVS 6.7:

LO-EVS 6.7 Groups objects, birds, animals, features, activities according to differences/ similarities using different senses (e.g., appearance/ place of living/ food/movement/ likes-dislikes/ any other features) using different senses

Activity- Children are given a task to group objects based on their shapes.

Resources- Triangular, rectangular, circular, and square shaped cardboard pieces and some objects and toys of these shapes such as ink pad, bangles, rings, etc.

Self-assessment sheet

Name.....

Tick mark the option, that you think is right for you-

(for small children, teachers may use emojis or smiley faces where children put a mark)

1. I grouped the object, and I created new shapes using papers with the help of teacher/friends
2. I mostly grouped all those shapes and objects without any support; only for some objects, I asked for support.....
3. I could not understand how to group, so asked teacher.....
4. I took very little time to group the shapes and I helped others too.

Peer- assessment sheet

Name of my friend.....

1. Completed the task without help Yes/No
2. Helped others in completing their tasks... Yes/No
3. Was asking for support to complete the task...Yes/No
4. Finding the task very difficult, so he/she was sitting silently...Yes/No.

6.6.3 Use of Portfolios

- The teachers and children can jointly maintain a portfolio for documenting the progress made by the child. Each portfolio represents a child's journey in learning.
- The portfolio may be developed as follows:
 - Decide the learning area(s) to be assessed every week/month (e.g., listening/speaking skill, bonding with books, print awareness, math concepts, problem solving, creativity, peer relationships).
 - Develop a file folder (portfolio) with each child's name and a logo/code.
 - Keep adding/collecting the samples of children's work with date and specific learning area (e.g., drawings, paintings, video/ audio tapes, photos, anecdotes).
 - Relate the children's work/activities to the three developmental goals.
 - Ensure the work samples showcase the child's efforts.
 - Share the data and explain the clear picture of each child.



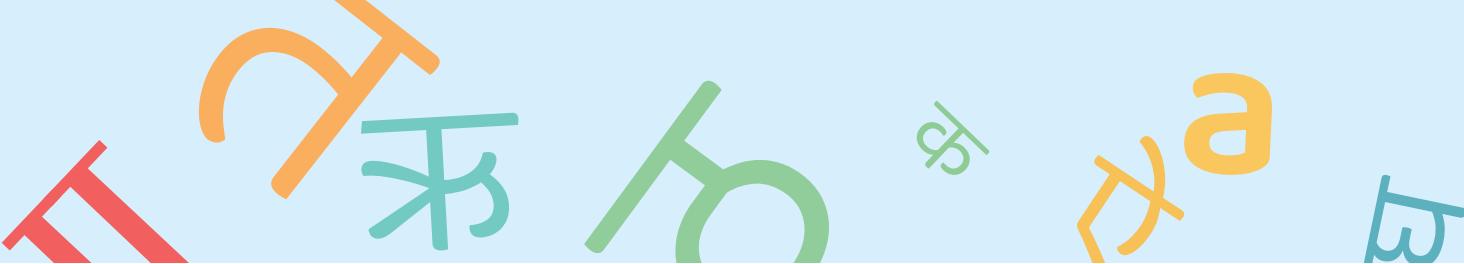


6.7 School-Based Assessment Compiling Progress through Holistic Progress Report Card (HPC)

- **Assessment of children on all the essential aspects of their growth and development need to be compiled in the form of Holistic Progress Card.** The evidence gathered through the activities designed need to culminate in an HPC, which is an individualized and comprehensive reporting of a student's progress. HPC builds on continuous assessment to present a picture of the student's progress across a specific time as opposed to a one-time assessment at the end of a term/semester or schoolyear.
- **The following are some of the attributes of an HPC:**
 - a. Provides disaggregated reporting, unlike a single score or letter grade in a subject area.
 - b. Holistic progress reports many unique competencies which are not just academic.
 - c. Multiple learning outcomes are defined (please see Annexure I) to indicate progress of the student in literacy, numeracy and in other areas such as psychomotor skills, environmental awareness, personal hygiene, etc. to enable identification of areas of strength and areas of improvement.
 - d. Painting, drawing, clay-work, toy-making, projects and inquiry-based learning, student portfolios, quizzes, group work, role plays, etc., can be used to assess student progress since indicators/learning outcomes are more comprehensive.
 - e. Informed conversations are held with the teacher, student, and parents for reporting.
 - f. Parent, Peers, and self-assessment can be used to report 360-degree progress.

6.8 Large-scale/Standardized Assessment in Foundational Learning

- Large scale assessment data at the National or the International level focuses on the 'System' and describes the educational health of the nation, state, or district. Since it



involves comparison of the ‘systems’, the tools and techniques used need to be standardized. The assessment tools commonly used in conducting large scale assessment studies are multiple choice questions (MCQ). The constructed responses are usually avoided to bring in objectivity in the process.

- Large-scale assessments are a mechanism to gauge how well learning is happening in their state, districts, and blocks. These large-scale assessment studies are carried out by defining the ‘assessment framework’ and with a clear purpose in mind regarding how the assessments study will be used to evaluate the system, to hold it accountable and to define strategies for improving the learning levels. Assessment design and administration are crucial to ensuring the validity and reliability of data generated by such studies. These kinds of surveys are crucial to understand whether the inputs provided are facilitating the learning.
- In India, the National Achievement Survey conducted in 2017-18 described the learning levels of the children in grades 3, 5, 8 and 10. With the focus of NEP (New Education Policy) 2020 on foundational learning, NAS for foundational learning would be conducted in 2021 to understand the system level preparedness and functioning. Further, a study will be undertaken by NCERT which will be the first large scale assessment & benchmarking study for foundational literacy including oral reading fluency across different languages in India. It is envisioned to be positioned as a subsystem study under the main National Achievement Survey (NAS) 2021 to extrapolate and understand the learning levels vis-à-vis the advancement in the grades.

6.9 Conclusion

To conclude, the teachers at the foundational stage need to observe children as they play, work on their task, perform or interact among themselves, it provides them a wealth of information about the children’s interests and learning. This treasure of information collected under School based Assessment is used to plan the teaching-learning strategies and help to modify the ongoing planning to ensure that it meets the needs of ALL children. Before actual implementation of FLN, there should be appropriate exposure to literacy and numeracy rich environment for the children which encourage interactions to achieve the desired competencies or learning outcomes. However, the data collected through Large Scale Assessment is helpful for assessing the health of the system, i.e., teachers’ capacity to implement FLN, parents’ involvement, quality of material, etc. Coherence in both the types of assessment will facilitate implementation of FLN mission in smooth manner. Large Scale Assessment

will help in reporting the progress on SDGs, but school-based assessment on the part of teachers will help in improving FLN learning outcomes leading towards holistic development of children.

Suggested Teacher Activity

Goal-'Children become involved learners and connect with their environment'

The teacher will take the children to the garden and will familiarize them with different trees. Children become familiarized and develop relationship with nature.

Sarah was all of 5 when her parents found that she was not quite keeping up with the class. She could not recite as well, was undisciplined (would not keep things in place in her Montessori class) and was irritated at the slightest loud sound. They were called in and the teacher explained that "she was behind" on many development milestones. Mother Shaila was most upset and as she reflected, she thought "I wasn't that smart either and I turned out ok" but then again something seemed amiss, and she could not put her finger on it. Then they met Kimaya's mother - Sandy. She mentioned that Kamaya too had similar challenges, but they had gotten to know of this program that explained brain development stage and how what Sarah was experiencing could be easily understood using that model. It clearly spelt out how chronological age could be different from neurological age and there was nothing right or wrong about this. This all seemed so difficult till Sandy shared a book with a simple diagram to check for milestones at different ages - in fact months. It covered how the brain took inputs (stimulus) and at the child's volition there was output (via speech, movement or any other). It gave simple test such as seeing how much the child could run or what size of text the child could read. It also had a guide on what to do next. Acting on this mother Shaila committed herself to ensuring Sarah would get all the input - stimulation that was relevant for her stage and hand-crafted tens of stories written nice and big. All of these were read to Sarah while her vocabulary was systematically built using flash cards. Along with this Shaila realised a physical program was necessary with some creeping and crawling to build physical strength while helping "grow the brain". A year later, Sarah could read at age, was bright eyed and could tolerate loud sounds (the latter thanks to a program that helped her auditory exclusion capabilities). Ever since, Sarah has been a fan of the neuroscience of child brain development and why not!

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Chapter 7

TEACHING LEARNING PROCESS: ROLE OF A TEACHER



HIGHLIGHTS

This chapter discusses the

- Role of Teachers in the teaching-learning process
- Understanding and addressing three Developmental Goals of Foundational Years
- What every Teacher who deals with Foundational Learners must understand
- Designing FLN Cards for Teachers and Specific Training Modules for FLN
- Capacity Building of Teachers for the implementation of FLN as per the NEP, 2020
- Creating a pool of Key Resource Persons for Mentoring and guiding teachers & Designing advanced courses in Pedagogies

7.1 Role of Teachers

- a. **Development of early language and literacy, and mathematics skills is crucial for building the foundation for future learning.** As per the National Education Policy, 2020, schooling in the early years lays too little curricular emphasis on foundational literacy and numeracy and, in general, on the reading, writing, and speaking of languages and on mathematical ideas and thinking. Indeed, the curriculum in early grades moves very quickly towards rote learning and more mechanical academic skills, while not giving foundational material its proper due. The principle must be that: if students are given a solid foundation in reading, writing, speaking, counting, arithmetic, mathematical and logical thinking, problem-solving, and in being creative, then all other future lifelong learning will become that much easier, faster, more enjoyable, and more individualised; all curriculum and pedagogy in early grade school must be designed with this principle in mind.
- b. **Therefore, strengthening teaching-learning of early literacy and mathematics is very much essential.** Language is intricately linked with thought and understanding. For a young child, a strong foundation of oral language, reading, writing, and thinking skills is the basis for all future learning. Mathematics is one of the core components in early learning. The burden of non- comprehension in early mathematics learning can result in fear and phobia, this continues to bother child in not only later grade mathematics but also across curriculum. Chapters on foundational literacy and numeracy in this framework provide detailed perspective of pedagogies of early literacy and numeracy.

- c. **Teachers play vital roles in the lives of the students in their classrooms,** especially in the foundational years. Beyond that, teachers serve many other roles in the classroom and schools. Teachers are the managers of their classrooms. They build a warm, inclusive learning environment, mentor and nurture students, become counselor, and listen and look for any symptom or sign of stress, anxiety, or other behavioural problems in students.

Teachers need to

- Care for children and should love to be with them.
- Understand children within social, cultural and political contexts.
- Be receptive and be constantly learning.
- View learning as a search for meaning out of personal experience and knowledge generation as a continuously evolving process of reflective learning.
- View knowledge not as an external reality embedded in textbooks, but as constructed in the shared context of teaching-learning and personal experience.
- Own responsibility towards society and work to build a better world.
- Appreciate the potential of productive work and hands-on experience as a pedagogic medium both inside and outside the classroom.
- Analyze the curricular framework, policy implications and texts. (NCF-2005)

- d. **Facilitating Learning through Knowledge Construction-** The most common role a teacher plays in the classroom is to provide children opportunities to learn and construct their own knowledge. Teachers are given a curriculum they need to follow taking care of child's contexts. This curriculum is followed by the teacher so that throughout the year, children should move towards holistic development acquiring all pertinent knowledge, social-personal qualities, values, and skills. Teachers teach in many ways – through interaction, play-way methods, small group activities and hands-on learning activities. With foundational stage learners, teachers need to create situations which replicate their day-to-day life and then implement their plan of learning.
- e. **Creating Classroom Environment-** Foundational stage children tend to depend upon teachers and look forward to them for their personal and learning related problems. So, teachers play an especially important role in the classroom when it comes to the environment. Children often mimic a teacher's actions. If the teacher prepares a warm, happy environment, children are more likely to be happy. An



environment set by the teacher can be either positive or negative. If children sense the teacher is angry, they may react negatively to that and therefore learning can be impaired. Teachers are responsible for the social behavior in their classrooms. This behavior is primarily a reflection of the teacher's actions and the environment she sets. Further, all essential teaching-learning material, that the teachers will require for implementation, must be made available at schools soon after the training programme or at the end of the training itself.

- f. **Motivating and Inspiring** – School children spend a major chunk of their time with their teacher and therefore, the teacher becomes a person, whom they like to follow, get inspiration and motivation from or one can say that teacher becomes role model to them. This can be a positive or negative effect depending on the teacher. Teachers are there not only to teach the children, but also to love and care for them. Teachers are typically highly respected by people in the community and therefore become a role model to students and parents.
- g. **Mentoring**- Mentoring is an important role of a teacher. It is naturally taken on by the teachers and gels very well with the teaching profession. However, this again can have positive or negative effects on children. Mentoring is a way a teacher encourages students to strive to be the best they can. This also includes encouraging students to enjoy learning. Part of mentoring consists of listening to students. By taking time to listen to what students say, teachers impart to students a sense of ownership in the classroom. This helps build their confidence and helps them want to be successful.
- h. **Counselor**- Another role played by teachers is that of a Counselor. Counselor is required the most for adolescent students is a myth. Children at all the stages may develop psychological or learning related problems. Teachers are taught to look for signs of these problems and difficulties. When students' behaviors change or physical signs of abuse are noticed, teachers are required to investigate the problem. Teachers must follow the procedures laid by the school, while taking care of these problems/difficulties of children.

7.2 Understanding and Addressing three major Developmental Goals of Foundational Years

As said earlier in this framework, the NEP 2020, has focused on the holistic development of the child. There are different aspects of development like physical and motor development, socio-emotional development, literacy and language development, cognitive development, spiritual and moral development, art, and



aesthetic development which are interrelated and interdependent. All these aspects, for the purpose of looking at competency development in totality and for codifying these competencies for smooth implementation of pedagogic and assessment frameworks, have been subsumed under three major goals. These three goals have been identified for foundational years but may continue to be there for preparatory, middle, and secondary years with some additional goals. Teachers dealing with foundational learners need to achieve these three major goals which are mapped with the concerned competencies/learning outcomes through various pedagogic processes suitable to the age and pace of learners and learning. They also need to carefully address language issues at the foundational year and learn to use multilingual approach. A detailed description of these goals is given in chapter 2.

a. Developmental Goal 1:

Children Maintain Good Health and Wellbeing

This goal is an overarching goal which includes development of competencies related to physical, socio-emotional and psychological health and well-being of children for life. This goal continues to provide experience for health and wellbeing, socio emotional development, health, nutrition, hygienic practices and safety from FYL1- FYL6 (Foundational years level 1 to 6, age group 3 to 9)

b. Developmental Goal 2:

Children Become Effective Communicators

Communication is an important aspect of one's personality. Sometimes, we know language and can show gestures and postures, but we fail to communicate effectively.

Enabling children to orally communicate with ease and competence in the preschool or school language, become print aware, understand, or make a meaningful connect with reading and writing in familiar contexts, develop interest in books and in learning to read is essential. It becomes the hallmark of early initiation of children at the preschool stage into developing their oral language skills and skills of reading and writing. In addition, helping children learn to decode text with ease and focus on developing phonological awareness and sound and visual association becomes important. Once the foundations of language and literacy are laid during the preschool stage (3-6years), this goal leads to subjects -first/second language for example Hindi/state language/English.



c. **Developmental Goal 3:**

Children become involved learners and connect with their immediate environment.

Children begin to know about the world around them much before they enter in the school. Listening, speaking, touching, seeing, grabbing, laughing are some of the actions through which they try to connect themselves with their immediate environment. This ability to connect with others and to share feelings with them lays a special basis for learning- the cultural social basis of human learning. Another major goal of foundational years education is, therefore, to help children move towards more logical thinking by helping them graduate from their perception-bound to more concept-based understanding. This gets addressed by helping children form concepts related to the world around them through direct experience and interactions with the physical, social, and natural environment through language, mathematical thinking and environmental awareness. Moving further to higher classes at the foundational stage, children progress to specific subject areas like mathematics and environmental studies.

7.3 Every Teacher who deals with Foundational Learners must understand

- Children learn in variety of ways and have different learning levels in each class.
- Children learn more when they are encouraged to talk and discuss in the classroom. In majority of classrooms, teachers talk most of the time while children either give choral responses or are passive spectators.
- Activities, like choral repetition, copying from blackboard, are repeatedly done in a mechanical way and do not result in learning. Children soon get disinterested or distracted and their ‘time-on-task’ is low. Most children are not actively engaged for most of the teaching time.
- Children get distracted if there is no sense of enjoyment or fun in the learning process.
- Children do not take interest in learning if teaching in the classroom is textbook centred and the emphasis is on completing the curriculum and if the teaching-learning is disconnected from the children’s context and real-world experiences.
- Teachers must be able to provide additional support to children who are lagging.

- Learning assessment, including examinations, to be largely focused on testing for skills or concept development rather than content. Teaching must integrate continuous assessment.
- Children join school with informal mathematical thinking as they solve simple problems in real life. Therefore, mathematics learning in the classroom must relate to the child's outside school experiences.
- There are very few children's reading materials or TLM in most classrooms. Often, there are alphabet and number charts displayed in the classroom or painted on the classroom walls. Thus, children do not get any chance to engage with books or other learning materials. Teachers need to provide a print-rich and toy-rich environment in the classroom.

7.4 Designing FLN Cards for Teachers

For developing and tracking the progress of FLN competencies mapped with aforesaid goals using various available support material without any specific syllabus and textbooks, teachers need to have a clear-cut detailed plan for the implementation of FLN. This needs to be developed at the block level following guidelines developed at the national level under three sections as given below-

a. Classroom Management

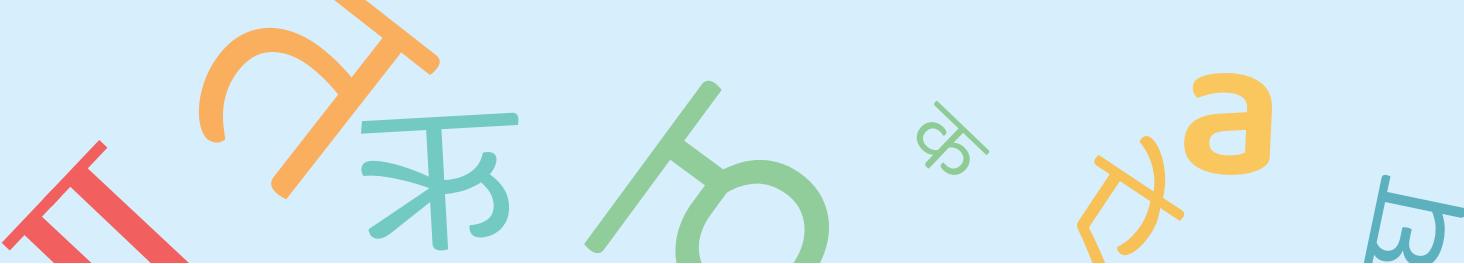
This will include guidelines (to be developed at the block level) related to classroom space, seating arrangement, age, abilities, pace of learning, special needs, FLN material, linguistic diversity, children's context, parent/community support, etc.

b. Competency Development (including pedagogic perspective)

Some sample cards may be given to schools which will include- Goal, competency to be developed, the pedagogic process, assessment approaches to be adopted, etc. Every card must have some blank space for teachers to write the challenges faced in the class and the solutions sought.

c. Holistic Assessment (achieving FLN major goals)

For every competency, teachers need to keep record of number of children having good progress on the competency and those children who require further support on every aspect of their personality. This may also include the reason for further support. Teachers need to keep records of holistic progress of each child as mention in the chapter 6 on Assessment in this document. This kind of details on cards will help



teachers to quickly provide report of progress of each child in consolidated form whenever required.

7.5 Capacity building of Teachers

- a. **Teacher capacity plays a central role in the attainment of foundational skills.** Currently, few teachers have had the opportunity to be trained in a multilevel, play-based, student-centred style of learning that, according to extensive ECCE research, is so important for students in early grade school, particularly in Grades 1 and 2. Children naturally learn at different levels and paces during their early school years. However, the current formal system assumes from the very beginning a common level and pace for all, due to which many students start to fall behind almost immediately
- b. **Regular professional development focusing on pre-school education and Foundational Literacy and Numeracy is yet not systematic.** If we look at the challenges of designing in-service training programmes for school teachers, we find that they are mostly designed at the state level, and often do not address real classroom issues, like multilevel learning situation, language diversity, etc. Many training programmes cover topics for all primary classes and are not focused on early primary classes. Training sessions are often delivered in lecture mode, with little discussion and activities. There is inadequate scope for experience sharing and practising new methods to demonstrate their effectiveness. Trainings are not followed up with further refresher workshops and on-site or other forms of mentoring for teachers. Since pre-school education in schools has recently been covered under Samagra Shiksha, in-service training in this area is still a major challenge across states and municipal corporations running pre-primary sections. In most cases, the training is inadequate. Similarly, capacities and training of anganwadi workers in this regard are inadequate.
- c. In view of the challenges of in-service teacher training across the different stages of school education, **NCERT has designed an innovative integrated programme of teacher training, now, popularly known as NISHTHA** (National Initiative for School Heads' and Teachers' Holistic Advancement). This was launched by the Ministry of Human Resource Development (now known as Ministry of Education) in August 2019. This includes one module on pre-school education and focuses on early literacy and numeracy across the modules like- EVS, Mathematics and Languages. The specific feature of NISHTHA is interactivity with teachers. It provides teachers opportunities to not only share their concerns and problems with the



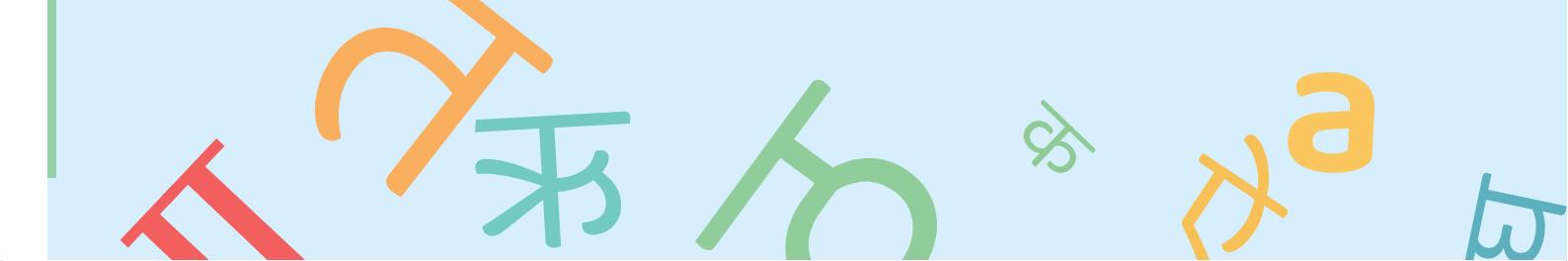
Resource Persons but also to present solutions of these problems through their activities and presentations.

- d. **Following NISHTHA model, a customized FLN package for teachers teaching at foundational stage of education will be designed** covering the continuum from pre-school to the early primary grades, to meet the specific content and pedagogical requirements. This package may cover following modules:

Understanding Foundational Learners and Learning	Early Language and Literacy	Assessment in Early Years	Identifying and addressing needs of Children with Special Needs in Early Years
Social-personal Qualities, Environmental Concerns and Values	Early Numeracy	Counselling in Early Years	Role of CRC/BRC in achieving goals of FLN Mission.
Addressing Teachers' Beliefs and Attitudes towards learners at the foundation stage	Pedagogic approaches including Art-integrated learning and Toy and Game based approach	Promoting role of parents and community in foundational literacy and numeracy.	

These ten modules may be taken up through face-to-face/online mode/blended mode in DIKSHA. Given the need to interact with teachers, interactive sessions will need to be ensured with the Resource Persons, even in the online mode of training.

On an average, two teachers and the school head in a school having pre-school and primary sections needs to be trained for the implementation of FLN as per the NEP 2020 perspectives. This training will be based on the above suggestive modules. This training will be of seven-day duration in face-to-face mode or will be of one month in online mode. Besides, these modules, which will include relevant and necessary activities for strengthening FLN, every teacher and school head will be expected to conduct action research to immediately solve problems related to foundational learning in the Classrooms and will also develop low cost innovative TLM as follow-up activities of the capacity building programme. Face-to-face training will be conducted by the SCERTs at the state level.



Further, Study groups (Professional Learning Communities) among peers focused on a shared need or topic may be created. Monthly meetings at cluster/block level to learn a new strategy, plan lessons and address classroom issues, like analysis of student assessment results may be conducted. Conferences and seminars to learn from a variety of expertise from around the state or country may be conducted.

7.6 Creating a Pool of Key Resource Persons for Mentoring and Guiding Teachers

- Some selected faculty members from DIETs, SCERTs, school heads and teachers may be given 7-day training for FLN mentorship based on the above mentioned 10 modules. They will form a pool of Key Resource Persons, who will be directly giving training to teachers through face-to-face mode or interact with teachers once they have attended their online modules on DIKSHA.
- 6 KRPs for 50 teachers may be taken as optimum ratio to impart training and for mentorship as FLN sessions will require many hands-on activities and intense discussion on foundational learners' learning needs.
- SCERTs need to identify school heads, teachers and their faculty members and DIET faculty members who can play a role of mentor for the FLN teachers. Their trainings may be conducted at the national and the state level.
- Training of Key Resource Persons must be planned carefully for the 7 day duration.
- Availability of all materials required for the training programme including training modules, FLN activity kit including variety of colourful toys, voice and video-recording tools, ORF tool, worksheets, drawing sheets, other supportive materials for the training sessions, like handouts, videos, reading resources for teachers, teaching-learning materials to demonstrate and use for practicing implementation of the instructional strategies, teacher handbook, etc., should be ensured prior to organizing the training.

7.7 Designing Advance Courses in Pedagogies (including toy- based pedagogy, assessments, classroom transactions, etc.)

- For developing professionals around Foundational Literacy and Numeracy, short-and long-term advance courses in FLN pedagogy may be designed and offered by the NCERT and SCERTs within 2-3 years from now. These courses will be offered for

teacher educators, school heads and teachers.

- These courses may be designed for face-to-face and online/blended mode. Digital content related to various themes under different courses may also be developed.
- Some proposed courses which may be designed are- Language Literacy and Numeracy at the Foundational Stage, Assessment for Foundational Literacy and Numeracy, Toy-based pedagogy for FLN which will help in developing a professional who can further help in developing skills of using and creating toys for small children thereby making the whole learning process child-friendly. etc.
- These courses may be of six-month duration, and must focus on development of knowledge, skills, and positive attitudes to strengthen FLN of children.

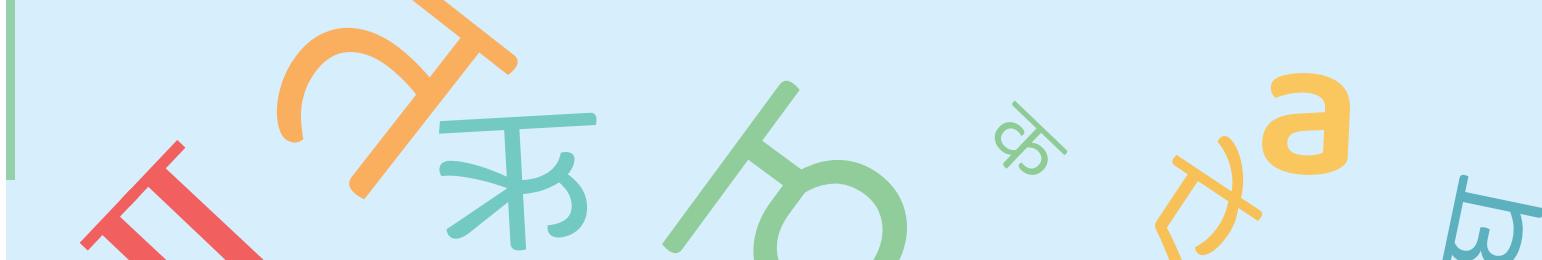
Addressing Teachers' Beliefs and Attitudes towards learners at the foundation stage through In-service Teacher Training

Talking to teachers at various occasions, one can find that they often express their own beliefs and assumptions about abilities, languages, and cultures of their children. These inform their practice in class. Often these beliefs and attitudes do not get addressed during pre-service teacher education and get reinforced in the system further. As per many research studies, teachers often expressed that children from deprived social and economic background with illiterate parents will not be able to learn everything taught in class and therefore, have low expectations from these children.

Further, they also believe that teaching-learning of language literacy must start with alphabets. Children's home languages are a problem. Many home languages are considered inferior to the standard language.

In case of mathematics learning, most teachers believe that once they have demonstrated a procedure followed by repeated practice by children, it will result in mastery in the concept.

Hence, it is necessary to address these misconceptions in the in-service training programmes to make for effective implementation of foundational learning in the classroom.



7.8 Contextualizing Low Cost TLMs (worksheets, story books, etc.)

Working with foundational stage learners, i.e., in the age group of 3-9 years, teachers may require variety of teaching learning material to get children engaged in meaningful activities. These may be toy kit, ECCE kit, FLN kit, worksheets, story books, digital activities, and content, etc. Once developed as model at the national level, these materials will be contextualized at the state level by the SCERTs. These may further be contextualized, if required, at the block level. While contextualizing these materials, linguistic and social diversity in each State/UT need to be kept in view.

Large size pictures/conversation charts	Pictures from newspapers or magazines	Book of rhymes/Posters with rhymes	Puppets and masks for storytelling
Varna and Akshara chart	Grids of aksharas for blending practice	Variety of games using grids and dice, including bingo	Rhymes with words from group of aksharas being learnt
Worksheets for children to write words and draw	Worksheets for colouring and painting	Drawing Sheets	Colour pens and crayons

7.9 Enabling Classroom Transactions:Sustained & Active Engagement with Every Child

- Teaching-learning preferably should be in the mother tongue of children. Language of school instruction should be related to daily life experience and socio-cultural context.
- Encouraging children to share their experiences in the class in their own language and use their talk as a resource in building classroom discussion richer by drawing from multilingual situation.
- Encouraging activities like morning message (AajkiBaat) that bridge home-school gaps and presenting reading writing connections to young children.
- Encourage children to build connections between oral language and written language.
- Specific strategy for smooth transition from home language to medium of instruction, if different.
- Allow children to invent their own ways of using existing vocabulary to convey mathematical ideas related to numeracy and spatial understanding.



- Provide opportunities to learn formal mathematical language viz., numerals, symbols for operation, terms etc.
- Use simple, friendly and clear language in classroom avoiding commands.
- Encourage children to express their mathematical findings and later gently pointing out errors if any.

Suggested Teacher Activity

Goal- 'Children become effective communicators.'

The teacher will show the pictures and tell the story of the best heroic children of India.
The teacher will also ask the question.

There are some important points the teachers should keep in mind during classroom transaction:

- A daily dedicated slot for FLN – 90 minutes for language and 60 minutes for numeracy needs to be included in daily schedule of activities.
- Teachers are free to design their own or use the existing activities and worksheets, toys etc. for achieving pre-determined early learning outcomes. Make activities flexible and accessible to children with special needs.
- The mother tongue is to be used as medium of instruction and teacher should welcome as many as languages in the classroom and appreciate. Use multilingualism in the classroom as a resource.
- Print rich classroom environment should be created in the form of word walls, story books, posters to assist in development of print awareness and literacy skills.
- Good quality teaching learning material for both students and teachers should be made available.
- Use indigenous/ locally available material which is low cost or no-cost and easily accessible. Make sure children can manipulate the material and have safe accessibility to the material and other resources.
- Variety of activity areas like reading area, creative area, etc. need to be designed by teachers to encourage free play , social-emotional development skill etc.
- Display of material should be at the eye level of the children.

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Chapter 8

SCHOOL READINESS/ SCHOOL PREPARATION MODULE



HIGHLIGHTS

This chapter discusses the

- Perspective of School Readiness for Class 1 students: Making children ready, the school ready and the family ready.
- Two-pronged approach to make children school ready for entering grade I (NEP, 2020)
- Main features of the SPM Module prepared by NCERT.

8.1 Perspective of School Readiness for Class I Students

- a. **The need for school readiness:** School readiness is the foundation for ensuring quality and equity in access to education as well as improving the learning outcomes. A more comprehensive definition of school readiness is located within a framework that has two characteristic features, ‘transition’ and ‘gaining competencies’; and three dimensions: children’s readiness for school, schools’ readiness for children, and families’ and communities’ readiness for school (UNICEF, 2012¹⁶). Thus, a simple definition for school readiness could be that a child who is ready for school has the basic minimum skills and knowledge in a variety of domains that will enable him/her to be successful in school (ibid). These could be linked to language, cognitive, psychomotor, and socio-emotional domains.



- b. **Framework for school readiness:** According to the EFA Global Monitoring Report (2007), “the consensus from research is that school readiness encompasses development in five distinct but interconnected domains – physical wellbeing and motor development, social and emotional development, approach to learning/language development, cognitive development, and general knowledge.” With this view, the National Early Childhood Care and Education (ECCE) Curriculum Framework, developed by the Ministry of Women and Child Development (MWCD), advocates that for the smooth transition of children from pre-primary to primary education, development of focused and more specific school readiness is necessary (MWCD 2013¹⁷). **The framework**

¹⁶ UNICEF, 2012. School Readiness: A conceptual Framework

¹⁷ Ministry of Women and Child Development. 2013. National Early Childhood Care and Education (ECCE) Curriculum Framework. Government of India, New Delhi.

also defined 'school readiness' as "making children ready, the school ready and the family ready to ensure required skills and competencies in children in all domains of development for their smooth transition from pre-school to primary school and also improving learning outcomes in primary and secondary school, both in terms of equity and performance".

- c. The curriculum further elucidated that "children, schools and families are considered ready when they have gained the competencies and skills required to interface with the other dimensions and support smooth transition of children from home to Early Childhood Care and Education (ECCE) centre and subsequently to primary school" (*ibid*). Each of the aspects is elaborated below.
- d. The '**ready children**' aspect focuses on children's learning and development and incorporates the following:
 - Children are eager to learn, thereby enabling a smooth transition to a primary school environment.
 - Children learn in their mother tongue/ first language as a prelude to and complement bilingual and multilingual education.
 - Children who enter school without having mastered specific skills or little or no ECCE experiences, primary curriculum should include child-initiated as well as teacher supported activities, and should emphasize hands-on, integrated learning to boost their school readiness.
 - **Comprises of building readiness for reading, writing and numeracy.**
 - Reading readiness is developing familiarity with print material, developing vocabulary and ability to handle books.
 - Writing readiness involves fine motor development, understanding directionality and finding meaning in writing.
 - Number readiness includes pre-number concept, categorization, classification, sequential thinking, seriation, problem solving and reasoning (shapes, colour).
- e. The '**ready schools**' aspect focuses on the school environment. It includes practices which foster and support a smooth transition for children to primary school and beyond; and promotes learning for all children.
 - Children have access and opportunity to develop their behaviours and abilities across the domains of development.

- Schools accept that children learn at different pace.
- Schools may be transformed to accept and accommodate different kinds of learners.
- Schools may use various practices to bridge the cultural divide between home and school. The divide is greatest for children whose home language is not the same as the language of school instruction.
- Ensure smooth transition from ECCE to primary school through different strategies (such as training ECCE and primary school educators together, integrated curricula and options that bridge ECCE programmes with primary schools)
- Teachers must know how to teach young children and have the resources to do so.

In general, the dimension of ready schools includes the overall quality of the school environment evidenced in such characteristics as sufficient class time devoted to learning; adequate supply of learning materials such as age-appropriate books and teaching aids; and effective teaching, pedagogic practices and teachers' competencies.

- f. The '**ready families**' aspect focuses on parental and caregiver attitudes and involvement in their children's early learning, development and transition to school.
- Supportive parenting and stimulating home environment are one of the strongest predictors of school performance during primary years and beyond. In the ECCE programmes, home based/ centre-based stimulation for mother and child is imperative to bring in parental involvement, address their beliefs, attitudes and commitment.
 - Enable parents and family members to undertake reading books, playing games, singing and narrating stories and conversing with children.
 - Ensure parental commitment to enroll their children at the right time for getting timely intervention.

School readiness is linked to learning, school completion, later skill development and the acquisition of academic competencies and lifelong success¹⁸. **Children who enter school 'ready to learn' are more likely to succeed at school, stay in school and learn.** Academic achievement involves building upon existing skills and mastering new ones. In the school readiness phase, the targeted children, through a structured and planned curriculum for developing literacy and cognitive skills required for learning of mathematics and appropriate play-based activities for the overall development of the child should be implemented.

¹⁸ Arnold, Caroline, 'Positioning ECCD in the 21st Century', Coordinators' Notebook, no. 28, Consultative Group on Early Childhood Care and Development, 2004, pp. 1–34.

In order to conceptualize a strong foundational learning programme, DoSE&L and MoWCD have jointly stressed upon Co-location of Anganwadi Centres within the primary school premises for ensuring continuity and transition from one to the other.

A joint letter from the Department of School Education and Literacy, MoE and Mo WCD was issued to States and UTs in 2017 to examine the possibility of co-locating Anganwadi Centres to ensure transition to school as well as preparedness of children for going to school.

8.2 School Preparation Module for Class I students

A School Preparation Module (SPM) is essentially around 12 weeks of developmentally appropriate instruction **at the beginning of Class I** designed to bolster a child's pre-literacy, pre-numeracy, cognitive and social skills. Evidence from Ethiopia and Cambodia suggests that such accelerated school readiness programs can be effective in cases where ECE is not universalised. A UNICEF report on the Ethiopia programme states that ".... students in ASR performed better on mathematics, literacy, and environmental science in Grade 1 than other students¹⁹." A study focusing on the Cambodia programme found that "Overall, the findings show that children who received the SRP intervention performed significantly higher than children who did not receive the intervention in both school readiness skills and achievement of formal curriculum²⁰"

Some learning's from these programs are summarised below:

- **Clearly defined Outcomes:** Maximum gains can be seen in a short program by choosing a few extremely specific outcome metrics / skills sets and reinforcing them continuously throughout the program.
- **Activity based Integrated Pedagogy:** The activities that are conducted in the classroom should focus on major aspects including – pre-literacy skills (e.g., letter recognition and correlation to letter sounds), pre-numeracy skills (e.g., number counting and comparison), cognitive skills (e.g., pattern recognition, classification etc) and other key skills like social skills, etc.

¹⁹ <https://www.unicef.org/evaluation/media/901/file/Accelerated%20School%20Readiness%20Programme.pdf>

²⁰ Impact of school readiness program interventions on children's learning in Cambodia, Nonoyama-Tarumi et al, 2008

- **Support to Teachers:** Teachers should be provided necessary teaching-learning material as well as few exemplars of daily lesson plan. However, the focus would be to empower and encourage teachers to make their own TLMs and Lesson plans. Capacity building of teachers for the same may be given priority.
- **Integration with Class I curriculum:** A specific best practice for SPMs would be to neatly integrate it with existing Class I programmes or syllabus. The integration will be beneficial to achieve the desired outcome of making children ready for grade I.

NEP 2020 also suggested two-pronged approach to make children school ready for entering grade I

UNIVERSAL PROVISIONING OF QUALITY ECCE

- Universal provisioning of quality early childhood development, care, and education must thus be achieved as soon as possible, and no later than 2030, to ensure that all students entering Grade 1 are school ready.
- In order to achieve this objective, it is envisaged that prior to the age of 5 every child will move to a "Preparatory Class" or "Balvatika" (that is, before Class 1), which has an ECCE-qualified teacher.
- The learning in the Preparatory Class shall be based primarily on play-based learning with a focus on developing cognitive, affective, and psychomotor abilities and early literacy and numeracy.

SCHOOL PREPARATION MODULE

- Over the next decade, while we universalise quality ECE, we need to explore mechanisms to ensure that children entering Grade I do not fall behind rapidly due to their lack of school readiness.
- One such mechanism is the 'School Preparation Module' (SPM) suggested by the NEP.
- "...to ensure that all students are school ready, an interim 3-month play-based 'school preparation module' for all Grade 1 students, consisting of activities and workbooks around the learning of alphabets, sounds, words, colours, shapes, and numbers, and involving collaborations with peers and parents, will be developed by NCERT and SCERTs."



Introduction of Balvatika:

As envisioned in NEP 2020 that prior to the age of 5 every child will move to a “Preparatory Class” or “Balvatika” (that is, before Class 1). Provisions are required to be made by States and UTs for introduction of 1 year of Balvatika in existing Aanganwadis/Pre schools/Primary schools, requirement of teaching-learning material, additional Classrooms (ACR), Toilets, drinking water facility, etc. Balvatika will consist of flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles, and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music, and movement. It also includes a focus on developing social capacities, sensitivity, good behaviour, courtesy, ethics, personal and public cleanliness, teamwork, and cooperation. The learning in these Preparatory Class to be based primarily on ECCE framework to be prepared by the NCERT consisting of play-based learning with a focus on developing cognitive, affective, and psychomotor abilities and early literacy and numeracy.

School Preparation Module:

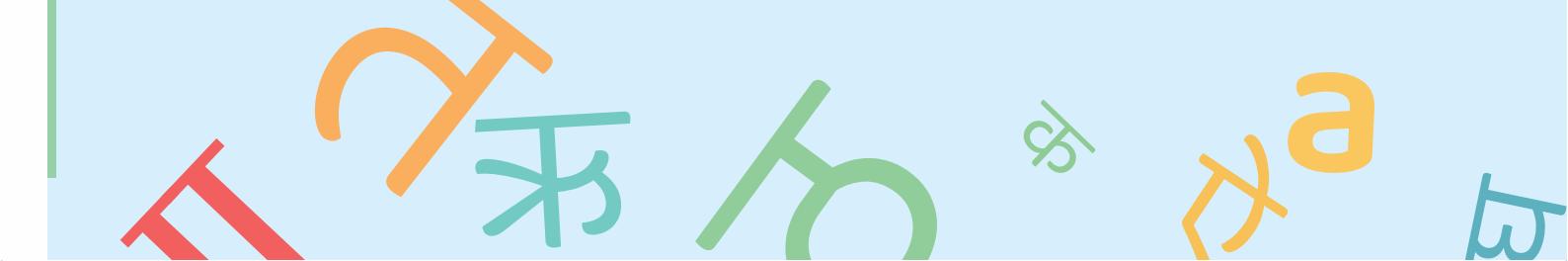
NEP-2020 has recommended the development of ‘3-month play-based ‘school preparation module’ for all Grade 1 Students’ with and without preschool education by the NCERT’, as an interim measure to ensure that all children are grade 1 ready till universal provisioning of quality preschool education is achieved. It is expected that this module would consist of the activities and workbooks around the learning of alphabets, sounds, words, colours, shapes, and numbers, and involving collaborations with peers and parents. Accordingly, the NCERT has developed a 3 Months Play Based ‘School Preparation Module’ that can be adapted or adopted by States and UTs as per their need.

Objectives of 3 Months Play Based ‘School Preparation Module’

1. To provide age and developmentally appropriate early learning experiences to all children coming from diverse settings.
2. To promote strong foundation for development and learning of all children with focus on foundational literacy and numeracy.
3. To ensure a smooth transition to class 1 and getting children acquainted with school routine.

Main Features of the Module:

The module is essentially around 12 weeks of developmentally appropriate instruction at the beginning of Grade 1 designed to bolster a child’s pre-literacy, pre-numeracy, cognitive and



social skills. It emphasizes on three broad developmental goals, key skills, and concepts to be developed, pedagogical processes in the form of activities and worksheets to be used by the teachers and early learning outcomes to be achieved by the children at the end of three months.

Pedagogical practices on the three developmental goals offer joyful and meaningful play-based activities/experiences where all children develop healthy social connections with their peers and adults in the classroom. It is important to keep in mind that there are three essential elements of pedagogy at the foundational stage –

- **Play:** Children love to play, and play should be the medium of learning as it provides opportunities to interact with the environment and construct knowledge. Opportunities for both free and guided play should be provided.
- **Interactions:** Adults, peers, older children, siblings are important and integral part of learning process. Interaction with peer, material and adult leads to learning and development.
- **Environment:** Children learn by interacting with the environment, manipulating objects, asking questions, making predictions, and developing generalization. Children develop age and developmentally appropriate early reading skills, math and early science skills, art through play, interaction and by interacting with environment. The activities are planned in such a way that children learn to work independently as well as in groups.

PART B

ADMINISTRATIVE ASPECTS



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Chapter 9

NATIONAL MISSION: ASPECTS AND APPROACHES



This chapter discusses the

- Vision and objectives of the National Mission
- Administrative and Management structure for implementation
- Roles and responsibilities of various stakeholders i.e., National Mission, National Steering Committee, State Mission, District Mission, Block/Cluster Resource Centre, School Management Committee etc.
- Process to initiate Fund Release, Management of Accounts and Auditing
- Major components and activities to be undertaken by the FLN Mission and their mapping with existing Samagra Shiksha interventions

HIGHLIGHTS

9.1 National Mission: The Context

In accordance with the foregoing discussions in this document, systematic and focussed efforts through a National Mission as also recommended by the NEP 2020 would be a firm step in establishing Foundational Literacy and Numeracy at the centre of whole education system. Conceptual understanding, critical thinking, creativity and innovativeness through experiential learning and play, discovery and activity-based pedagogy at the early grades will ensure prolific and lifelong learning for the students.

As already mentioned earlier, under 'AtmaNirbhar Bharat' campaign it has been announced to set up a National Foundational Literacy and Numeracy Mission, for ensuring that every child in the country necessarily attains foundational literacy and numeracy in Grade 3 by 2026-27.

9.2 Vision:

The vision of the Mission is **to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy, so that by 2026-27 every child achieves the desired learning competencies in reading, writing and numeracy at the end of Grade 3.** Learning will be Holistic, Integrated, Inclusive, Enjoyable, and Engaging. The mission will cater to the needs of children of age group of 3 to 9 and will cover stages from ECCE to Grade 3. All children will have access to an equitable and inclusive classroom environment which takes care of their diverse background, multilingual needs and different academic abilities and makes them active participants in learning process as envisaged in the NEP 2020.

9.3 Aims and Objectives:

The National Mission on Foundational Literacy and Numeracy aims to **achieve universal foundational literacy and numeracy** in primary classes by 2026-27 and to ensure that all children attain grade level competencies in reading, writing and numeracy.

The major objectives based on the recommendations of NEP 2020 are as follows:

- To enable children to become motivated, independent, and engaged readers and writers with comprehension **possessing sustainable reading and writing skills**.
- To make children understand the reasoning in the domains of number, measurement, and shapes; and enable them to become independent in problem solving by way of **numeracy and spatial understanding skills**.
- To ensure availability and effective usage of **high-quality and culturally responsive teaching learning material** in children's familiar/home/mother language(s).
- To focus on **continuous capacity building of teachers**, head teachers, academic resource persons and education administrators.
- To actively **engage with all stakeholders** i.e., Teachers, Parents, Students and Community, policy makers for building a strong foundation of lifelong learning.
- To ensure **assessment 'as, of and for' learning** through portfolios, group and collaborative work, project work, quizzes, role plays, games, oral presentations, short tests, etc.
- To ensure tracking of learning levels of all students.
- To ensure **an equitable and inclusive classroom environment by incorporating play, discovery, and activity-based pedagogies**, linking it to the daily life situations of the children and **formal inclusion of children's home languages**.

9.4 Scope

The mission will cover the learning needs of children in the age group of 3 to 9 years. With the aim to establish strong linkage and smooth transition between pre-school stage and Grade I, ECCE Curricular framework developed by NCERT will be

ECCE is a broad umbrella aiming at holistic development of children 3-9 years of age. Foundational Literacy and Numeracy starts from age 3 within the framework for ECCE.



followed by both Anganwadis and Pre-primary schools to ensure smooth transition to grade I. ECCE framework would include flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colours, shapes, indoor and outdoor play, puzzles, and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music, and movement. It may also include specific focus on developing social capacities, sensitivity, good behaviour, courtesy, ethics, personal and public cleanliness, teamwork, and cooperation. **Further, before entering Grade I, every child will undergo an interim three-month school preparation module which will be an integral component of the FLN mission.** The framework of FLN will include a vibrant curricular framework, measurable subject-wise codified learning outcomes at each grade, various pedagogical approaches, teaching learning materials- both offline and online, specific training to enhance the capacity of teachers, learning assessment, IT based tracking etc.

9.5 Significance of Foundational Learning as part of ECCE

ECCE envisages ensuring the holistic development of a child's social, emotional, cognitive, and physical needs and helps build a foundation for lifelong learning and well-being. Early childhood care and education comprises of two main aspects: 'Care' and 'Education'. Care is a comprehensive term which includes proper nutrition, immunization, safety, and security along with emotional support. It is

crucial for growth in early years and is an area that deserves equal attention during school years as well. The education component of childhood development includes pre-school education aimed at the age group of 3 to 6-years and extends to early classes of the primary school. The focus among older children in pre-school shifts to developing foundational skills in language and literacy and cognitive skills required for learning of mathematics, as children would transition to early primary classes from here.

Focal point of Foundational Literacy is to enable children to become independent and engaged readers and writers who are able to transition from 'learning to read' to 'reading to learn' and from 'learning to write' to 'writing for academic success and pleasure'

All children, when supported appropriately, can develop strong foundational skills for language, literacy, and mathematics by the end of Class 3 and become confident learners with high self-esteem. The focus of a holistic FLN should be on all-round development of the child in preschool and early primary years.

FLN skills are not only foundational for learning but are correlated with greater quality of life and personal well-being is critical for better educational outcomes in later years. Strong literacy and numeracy help children to learn, experiment, reason and create, to be active and informed citizens, and to contribute socially, culturally, and economically.

Focus of ECCE to be on holistic development of the child. All children in the class should be happy, confident, thinking, learning, and attaining foundational literacy and numeracy skills.

9.6 Administrative Structure of the Mission

A five-tier implementation mechanism for the Mission will be set up at the NATIONAL-STATE-DISTRICT-BLOCK-SCHOOL level as given below:



9.7 National Mission - Role and Functions

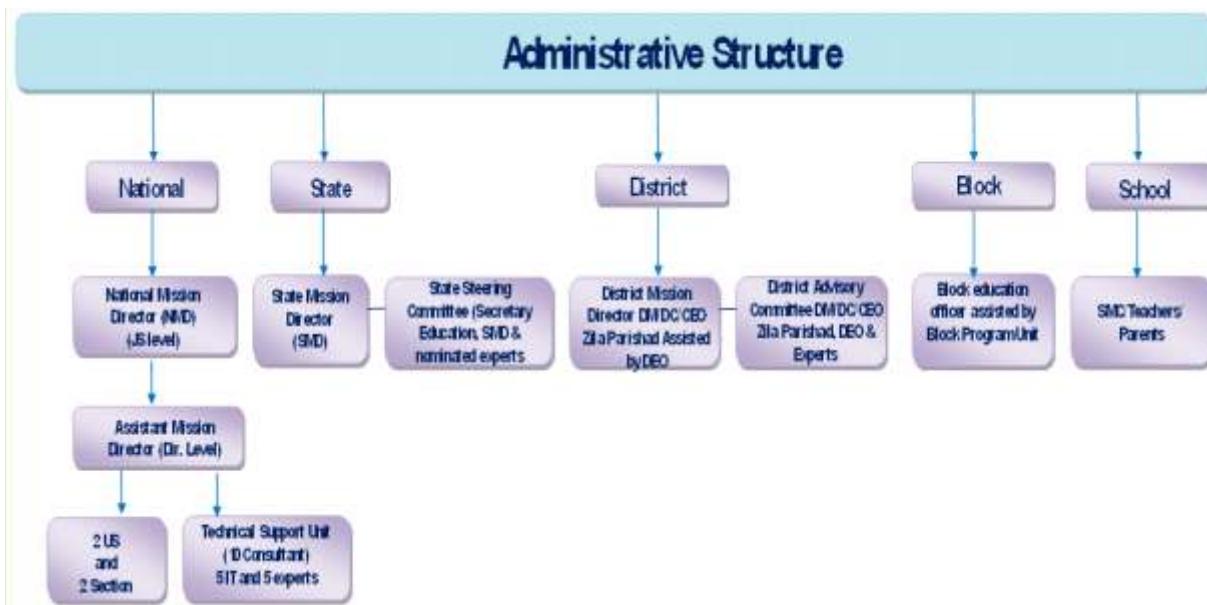
To lay emphasis and prioritise foundational learning, the programme will be implemented in the mission mode, with the use and strengthening of the existing mainstream structures. The Department of School Education and Literacy, Ministry of Education (MoE) will be the implementing agency at the national level and will be headed by a Mission Director. The National Mission shall have the following roles and responsibilities:

- (i) To **prepare Mission's Strategy document** and framework to achieve the target of attaining Foundational Learning by 2026-27 in mission mode with clear goals, outcomes, milestones, and timelines in consonance with NEP.
- (ii) To **implement the framework for FLN** for undertaking Learning Outcome based teaching and learning in classrooms.
- (iii) **Preparation of learning matrix** of simple measurable learning outcomes grade-wise and subject-wise and **preparation of tool kits for measurement** of proficiency levels.
- (iv) **Identification of learning gaps**, probable reasons and various strategies keeping in view local circumstances and diversity of the country, and help States and UTs set annual and overall Mission targets at state, district, block, and school levels.
- (v) To associate reading and maths with the experience of joy and real-life situations and encourage **innovative pedagogies** to make teaching learning process interesting and enjoyable.
- (vi) To plan and undertake **capacity building of teachers** to deliver the goals of the Mission.
- (vii) To **ensure community and parental engagement** in supporting and actively participating in helping the child achieve the foundational learning goals, through intensive awareness drives at national, state, district/block level.
- (viii) To create **robust IT based solutions to monitor and track the progress** of each child at national and State/UT levels including district wise, school wise, grade wise, and literacy and numeracy wise - progress.
- (ix) To create a **common platform for developing strategies** in consultation with all stakeholders including Ministries/Departments of Central Government, State/UT Government, Expert Bodies, NGOs etc.
- (x) To design and encourage **States/UTs to adopt IT based solutions/MIS/e-governance** for school related administration work to reduce the burden of this work on teachers.
- (xi) To **enable cross learning among states** through national and regional workshops and exchange of best practises amongst States/UTs.

9.8 Structure of Foundational Learning Mission

National Steering Committee

Headed by Secretary (SE&L) and comprising of National Mission Director, representatives from MoWCD, Ministry of Tribal Affairs, Ministry of Health, Panchayati Raj, NCERT, NIEPA, representatives of states and nominated experts from NGOs/Civil Society and various fields such as Neuroscience, child psychology and pedagogy etc.)



9.9 National Mission: Management Structure

The Management Structure at the National Level is given below along with the broad Roles and Responsibilities:

Administrative Unit	Administrative Head	Role and responsibility
National Steering Committee	Secretary SE&L	To provide policy direction and facilitate the implementation of action plans.
Project Approval Board	Secretary SE&L	Full financial powers to approve plans and sanction budget and implement the programme.
National Mission	National Mission Director (SE&L)	Appraise, evaluate, finance, and supervise national, state and district level planned interventions.
NCERT	Director	Provide necessary technical and academic support
NIEPA	Vice Chancellor	Provide technical and professional support, with focus on capacity building for promoting decentralised strategic planning at district and institutional levels; leadership development; effective monitoring and evaluation of programme outcomes, including school evaluation
PMU	National Mission Director (SE&L)	To provide support and technical assistance to the National Mission

9.9.1 Role and Responsibility: National Steering Committee (NSC)

- To **oversee the progress** of National Mission on FLN and **provide guidance** on policy issues.
- To arrive at the **target to be achieved nationally in 2026-27**.
- To disseminate tools for measurement of yearly progress in the form of guidelines.
- To **prepare and approve a National Action Plan** (based on the State's Action Plan) with KRAs for every State/UT vis-à-vis factors attributable for the gaps (i.e., lack of Fund, Vacancies, Teachers, Demography, Local issues, Need of Training for teachers, Curriculum & pedagogy related).

- To review programmatic and financial norms periodically to ensure they are synchronised with targets to be achieved.
- To develop methodology of assessment to analyse the progress and provide feedback to states/UTs.

9.9.2 Role and Responsibility: Project Approval Board (PAB)

The Project Approval Board constituted at the National Level for Samagra Shiksha under the Chairmanship of Secretary (SE&L) will be responsible for planning process of the mission. This will have following functions:-

- Discuss and approve the Annual work Plan and Budget of the States/UTs.
- Provide clarifications and instructions regarding norms and implementation procedures.
- Discuss, formulate, and recommend changes in programmatic norms, and implementation to the Governing Council.
- Review the implementation of Scheme through half-yearly meetings with Education Secretaries/State Project Directors of each State/UT and /or other mechanisms.
- Documentation of best practices and sharing of learning.

9.9.3 Role and Responsibility: National Mission Director

- Overall tracking, monitoring, and supervision of the mission to ensure that it achieves the desired goals within the given timeframe.
- Organisation of meetings of National Steering Committee from time to time.
- Chalking-out a clear-cut yearly roadmap to ensure tracking of the progress.
- Holding periodic review meetings with all states and UTs to track the progress.
- Organising Annual work plan and Budget meetings for giving approvals of funds to the States and Uts.
- Create mechanisms for grading the performance of states and Uts.
- Raising awareness on the critical importance of using children's home language formally for education and developing a national plan for multilingual education.
- Strengthening of existing monitoring/inspection mechanism.
- Ensure independent, transparent, and reliable assessment to monitor quality and measure progress.
- Support and undertake capacity building of teachers to deliver the goals of the mission
- Create robust IT based solutions to monitor and track the progress of each child
- Development of a common platform for developing strategies in consultation with all stakeholders including Ministries/Departments of Central Government, State/UT Government, Expert Bodies, NGOs etc.

- Prepare plan of action to motivate communities, Parents, Teachers and Students to attain the goal of FLN through **intensive awareness drives** at national, state, district/block, and cluster level.

9.9.4 Role and Responsibility: Assistant Mission Director

- To assist National Mission Director in the above-mentioned work.
- **Monitor the Progress of the implementation** of the programme in all States and UTs in terms of child-wise tracking, quality, and funding.
- **Pre- Appraisal of the Annual work plan** as submitted by the States and Uts.
- Coordination with various institutions/organisations such as NCERT, NIEPA, CBSE etc.
- **Budget, Planning and Release of funds to the States.**
- Assist Mission Director in **framing Guidelines and other documents.**
- Coordinate regarding **development of technology enabled monitoring tools.**
- Parliamentary work related to the Mission.
- Any other work as decided by the Mission Director.

9.9.5 Role and Responsibility: National Project Management Unit (PMU)

The Project Management Unit (PMU) would be established to provide support at the national level for designing, implementing the programme, and monitoring of the mission. The role of PMU would include providing technical inputs on various aspects of the mission including designing the framework for a holistic annual State Action Plan, appraising the State implementation, detailed design of teachers' professional development plan and academic support staff, development, and quality control of all TLM, sampling of baseline, regular monitoring of the programme etc.

There will be 10 consultants for monitoring of the states and UTs zone wise. 5 consultants would be from IT field and 5 from relevant fields (pedagogical aspects of language and literacy and mathematics including learning assessments and communication expert). Additional staff can be engaged as per requirement with the approval of National Steering Committee. The PMU will undertake the following functions:

- Create a national 5-year roadmap and annual roadmaps for the FLN Mission and provide guidance for the annual Implementation Plans for the States and Uts.
- Set actionable goals for the State PMU based on national level goals.
- Coordinate with states to conduct a time bound situation analysis of FLN for informed planning.
- Develop and execute well defined IEC plan for all mass communication activities (ad films, radio ads, newspaper ads, OOH, etc.)

- Provide clear procurement guidelines for TLM resources to ensure that “best in class” category of materials is available for States and UTs. Monitor budgeting, disbursement, utilization, and audit of grants provided for TLM resources and Libraries.
- Create a monitoring framework to highlight key success metrics for each mission component.
- Work with the State PMUs to develop robust data collection frameworks, dashboards and create standard frameworks for validating and reporting data.
- Promote cross learning and sharing among states, through national and regional workshops.

9.10 State Mission

A State mission on FLN would be set up at the State/UT level under the aegis of the Department of School Education. While States may decide on an appropriate structure, there should be a State Steering Committee including SCERT as an integral part at the State level to guide and advise the State Mission. This Committee would be headed by the Secretary (School Education). The committee would approve the plan for the state which will be submitted to national mission for appraisal and approval by the National Mission.

Role of the State Mission: The State Mission on FLN would be headed by a designated senior State level official/ SPD Samagra Shiksha with a dedicated PMU under him and shall supervise implementation of the mission in the State. It will also ensure preparation of the Annual Implementation Plan (AIP) for each district as per requirement, consolidate the same into the AIP of the State, share and discuss the same with the National Mission, receive Grant-in-aid from Centre and disburse to the District project office/other specified agency as per requirement. States shall provide adequate administrative, technical and support staff for the State Mission. Mission can engage technical experts /consultants/Interns as a part of the PMU at state, and district level for which funds will be provided under Samagra Shiksha. State may engage organizations of repute, good track record and experience in social sectors using a fair and transparent process to support implementation of the programme.

At State level, emphasis must be given on multilingual education which will be critical for the success of FLN Mission. States and UTs need to focus on Linguistic mapping to identify language situations for designing appropriate education interventions, continuous capacity building of the education system on language of instruction issues, developing simple guidelines and strategies for using children’s home language or multilingual approach, research, and advocacy, and so on.

9.10.1 Functions of State Project Management Unit

- Develop annual roadmap for the Mission and annual Implementation Plans for the State and Districts by assisting districts in creating a District Action Plan.



- Set actionable goals for the State and District PMU based on national level goals.
- **Awareness and capacity building of all stakeholders** including teachers, head teachers, SCERTs, DIETs, education administrators on multilingual education.
- To ensure **availability of print rich material in the classrooms**, child friendly infrastructure in the schools and digital resources to support teachers.
- To associate reading and maths with the experience of joy and real-life situation and encourage **innovative pedagogies** to make teaching learning process interesting and enjoyable.
- Coordinate with SCERT and develop state specific targets for Oral Reading Frequency and learning outcomes achievement.
- To design **IT based solutions/MIS/e-governance** for school related administration work to reduce the burden of this work on teachers.
- Based on the IEC guidelines set by the National Mission, create a comprehensive communication plan for the State.
- To motivate communities, Parents, Teachers and Students to attain the goal of Foundational Literacy and Numeracy through **intensive awareness drives** at state, district/block level.
- To promote cross learning among districts through workshops and **exchange of best practises** amongst Districts, Blocks, Clusters and Schools.
- Design and implementation of Independent Assessments, Summative Assessments and Formative Assessments based on guidelines received from National Mission.
- Assist District PMUs to conduct a need assessment exercise for Teacher Learning Material (TLM) and Teacher Professional Development (TPD). Using this information, liaison with the District PMU to ensure that requisite grant is made available for meeting requirements.
- Based on the data collection and reporting frameworks provided by the National PMU, the State PMU will develop a district wise strategy for data collection and reporting.
- State PMU should also build district wise dashboards to allow for data-based decision making.

9.11 District Mission

Role of the District Mission: As the line departments such as Women and Child Development, Panchayati Raj, urban local-self Government, etc. will play catalytic role in implementation of the programme, the role of the District Collector/Magistrate/CEO Zila Panchayat shall be pivotal. A District Steering Committee for FLN is to be constituted headed by the District Magistrate/Deputy Commissioner of the district and its members would be



CEO/AEO of the Zila Parishad; District Education Officer/District Primary Education Officer, DIET, District Officer for Health, Panchayati Raj, Social Welfare, ICDS, Information and Public Relations, representatives of urban local self-government, etc. The District Steering Committee shall meet at least once a quarter and would be responsible for monitoring and tracking the implementation of annual plan as approved by the National Mission.

A District Mission on FLN is to be formed at the district level for implementing the programme, with suitable changes in the existing District Project Office. While States may decide on an appropriate mechanism, **the suggested composition of District Mission on FLN is as follows:**

- It may be headed by /District Magistrate/Deputy Commissioner//CEO ZilaPanchayat and assisted by the District Education Officer/District primary Education officer who would be Deputy Director of this mission at District level.
- NGOs can be identified by the District mission and co-opted into the Mission as members.
- An officer/ Principal DIET as approved by the District Steering Committee shall be the Member Secretary.
- The District Mission shall be responsible for implementing the FLN mission. The District Mission shall be supported by a District Project Management Unit.
- DIETs along with the District PMU to be given the responsibility of teacher capacity building, monitoring of schools, supporting teachers in adopting new pedagogical practices, research, documentation of good practices, awareness generation, dissemination of the goals of the national mission etc.

9.11.1 Functions of District Project Management Unit

- To create a detailed 1-year District Action Plan (DAP) considering all activities to be taken up at the district and the block level.
- To play a key role in Planning, Design and conducting primary research for various needs assessment surveys.
- To ensure availability of print rich material, child friendly infrastructure and digital resources to support teachers.
- To provide on ground support for conducting Independent Assessments and Summative Assessments.
- To work with DIETs in preparation of plans and monitoring and in the conduct of teacher trainings.
- To ensure regular training of the teachers/school heads, SMC/SMDC members, BRCs, CRCs and other stakeholders in the aspects specified by the FLN mission.
- To implement **IT based solutions/MIS/e-governance** for school related administration work.
- District PMU should also maintain district wise dashboards to allow data-based



decision making.

- Monitoring of Key Performance Indicators (KPIs) related to learning outcomes including those used in Achievement Surveys.
- To conduct review meetings with teachers, DIET and block/cluster staff at the block and district level. The meetings will aim to provide support to teachers in designing classroom strategy and reviewing assessments.
- To mobilize community through street theatre, reading sessions at local level, community LED vans, rallies, etc. They will also help coordinate door-to-door outreach sessions with mothers/parents/ SHGs etc.
- To periodically monitor the progress of the mission through regular classroom visits.
- To conduct a need assessment exercise for Teacher Learning Material (TLM) and Teacher Professional Development (TPD) and to ensure that requisite grant is made available for meeting requirements.
- Design strategic interventions at the district, sub-district, and institutional levels to address gaps in Learning Outcomes.

9.12 Block/Cluster Resource Centre

The role of Block Education Officer and Block Resource Persons/Cluster Resource persons for implementation of FLN framework is to be significantly strengthened to provide guidance, support, and monitor progress school wise. The Block level is the ideal unit for providing support to a school or a group of schools. States should finalise the Block level arrangements as per requirements.

Ideally, State may set up a Block Programme Management Unit (BPMU) at Block Resource Centre. The BPMU shall work as a bridge between the district and the Schools, and provide continuous support in terms of academic requirements, awareness generation, motivation, mobilization, training and handholding of teachers and SMCs. The BPMU could serve as an extended delivery arm of the District Mission in terms of software support and act as a link between District Mission and the School/ village communities.

Role of BRC/CRC: States can utilise and rationalize Cluster Resource Centres (CRCs) in places where there are many GPs in a Block. The CRCs will be responsible for the following among others for monitoring the progress of Foundational Literacy and Numeracy:

- Regular academic inspection visits to schools,
- Providing training and on-site support to schools and teachers,
- Monitoring the number of hours of teaching by teachers in a week
- Ensuring introduction and sustenance of innovative pedagogies in schools (playbased/art-integrated/sport-integrated/activity-based/experiential/story-telling-based/ICT-integrated learning, etc.),

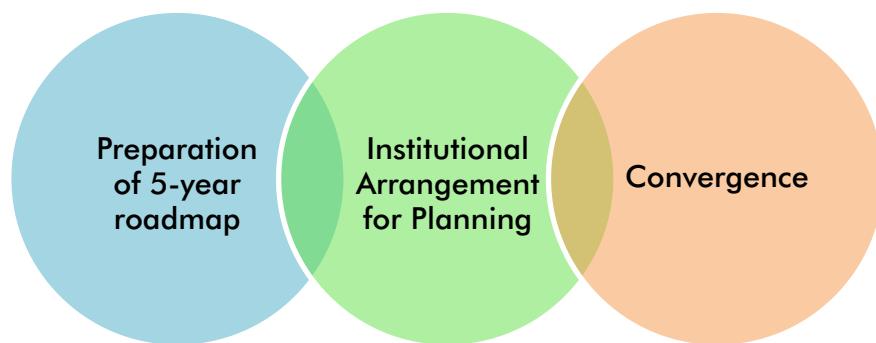
- Ensuring effective use of all TLM provided to schools
- Facilitating and guiding preparation of no cost or low-cost teaching aids/tools by school teachers
- Ensuring continuous and effective integration of ICT through efficient use of ICT equipment and ICT based educational resources
- Ensuring learning enhancement activities/learning enrichment activities in school,
- Ensuring individualized support for CWSN and slow learners,
- Ensuring 50 hours of CPD for all teachers and head teachers,
- Ensuring all directions, circulars, information, etc. percolates down to the last teacher in the last school,
- Ensuring constructive parental/volunteer engagement by schools,
- Ensuring schools are undertaking safety audit
- Ensuring timely and correct reporting on KPIs by schools,
- Ensuring timely and correct reporting by BRC/CRC to district/state level,

The reporting by CRC/BRC should preferably be App based, hence States/UTs may prepare Apps for reporting in the local language.

9.13 School Management Committee and Community Participation

The Success of the Mission on FLN will be dependent on its implementation at last mile i.e., at school level. In this scenario, the role of School Management Committee, Parents and Community will be pivotal in achieving the desired outcomes. Training of SMC members, awareness drives for parents and community will be essential to make them understand the desired level of achievement of grade-wise/subject-wise learning outcomes and monitor the progress of students accordingly. Their active participation in teaching learning process will also inculcate the much-desired element of accountability and sustainability in the entire school education system.

9.14 Planning Process





9.14.1 Preparation of 5-year roadmap for FLN Mission:

The State Government (including Samagra Shiksha Implementation Society, SCERT and Directorate of Education) should make a long-term commitment to implement and support early learning programmes for all children. In line with this, states need to prepare a roadmap (2021-26) with mid-year and end-year targets based on a clear vision of the change expected to be seen in the teaching-learning process and children's learning outcomes. This long-term plan should be further translated into annual implementation plans for districts and states.

9.14.2 Institutional Arrangement for Planning:

Need based planning and successful implementation of the programme require several institutional reforms. Therefore, reforms in educational administration including transparency in teacher recruitment/deployment/transfers, regular assessment, modernization /e-governance, and decentralization are highly necessitated for effective, efficient, and better programme implementation. In this regard, institutional involvement in planning & plan preparation is essential.

9.14.3 Convergence:

In addition, focus is also required on convergence of resources/activities and coordination with various other Departments. **In this respect, all States/UTs may put in place an institutional mechanism for ensuring convergence & coordination with the different Ministries/Departments like Tribal Affairs, Youth Affair and Sports, Science and Technology, Women and Child Development, Health and Family Welfare, Panchayati Raj, Finance and Planning.**

9.14.4 Role of Educational Institutions

A systematic and comprehensive approach is urgently needed to identify and effectively use the synergies that exist among the existing institutions in the States and UTs. In view of improving planning & implementation of the mission, academic as well as other resource institutes like NCERT including RIEs, SCERTs, DIETs, etc. that exist in the State/UT and at national level in general will play vital role in enhancing and enlightening the State/UT educational strategies in the following key areas:

- Plan formulation process
- Codification of grade wise learning outcomes, their contextualization and translation in local languages
- Development of e-resources for explaining the learning outcomes in simple terms.
- Development of teachers training modules and other modules.
- Development of SMCs training modules and Training of SMCs
- Capacity building of district and state functionaries

- Curriculum revision
- Academic Monitoring & Supervision and Research
- Assessment of students & teachers' performance
- Planning for innovative interventions etc.

9.14.5 Need based Planning.

Approach and strategy towards planning and implementation needs to be more holistic and result oriented. Any strategy to address a gap under this mission must be holistic, learner centric, inclusive, and equitable. The learning gap analysis and designing of interventions accordingly will definitely lead to 'Outcome Oriented Interventions'. Need identification is to be started right from the community level in respect of equitable Access, Infrastructure gaps, Equity, Quality in terms of teachers, teachers training, Curriculum etc., Civil Works and other components including coverage of Special focus group should be identified by the community itself after intensive interaction with the headmasters/principals and teachers. The Proposals and issues related to the above components need to be streamlined and verified at the district level before these are finally consolidated at the state level. Analysis of the data and a write-up on the result outcomes of the plan is also an important planning strategy.

9.14.6 Evidence Based Planning

The objective of planning exercise is to ensure rational allocation and the optimum utilization of resources. Hence, focus of planning will be less on issues pertaining to the allocation of resources rather it is more on making the best use of the available resources. Planning is not to be initiated as a onetime exercise; it is a continuous process and unfolds itself in the process of implementation. Further, it also focuses on operational details to ensure achievement of the targets. Strengthening educational process at the local level is the major focus of the micro-planning exercise to ensure an integrated approach. Henceforth, it should be a regular feature and should be with the active participation of stakeholders at every stage and level. For this the UDISE+ database will be strengthened to help in identifying deficiencies in existing primary/upper primary/composite schools, identifying upper primary schools for up-gradation, plan of action for physical facilities etc.

9.14.7 Unit of Planning

One of the first steps in initiating holistic planning is to select a suitable unit for planning. The major consideration for the selection of the unit is the feasibility of initiating and preparing a local plan with the active participation and support of the community. It needs to be noted that realistic planning envisages close interaction between community and school. The basic plan framework is to be generated at the school level through micro planning process where SMCs/SMDCs, PRI members and other stakeholders are involved. Thus, the plan is to be developed at the school and habitation level.

9.14.8 Plan Preparation

The '**State Action plan**' should be prepared in the form of AWP&B for the State that should be certainly aimed at addressing the following key components of holistic education:

- Physical access to school and ensuring equitable access including for special category of students/ location as identified by the State as disadvantaged category in the State/ district.
- Improving quality of school education - teachers in place, learning / achievement of students, overall outcomes, and empirical regular assessments.
- Bridging Gender & Equity gaps in terms of enrolment, retention, and quality
- Improving governance- institutional strengthening.
- Improving convergence & linkages with existing institutions/departments/ organizations etc.

Preparation of AWP&B



A single state consolidated plan is to be developed at the state level therefore state should prepare an AWP&B after appraising and consolidating the District level plans.



The district and block planning team, in turn, will appraise all the SDPs, prioritize them and consolidate them so as to finalize the 'District School Education Annual Work Plan & Budget'.

9.15 Fund Release, Accounts and Auditing

National Mission on foundational literacy and numeracy will be funded under Samagra Shiksha. Funds will be specifically earmarked for FLN and a sub-component for FLN would be created to monitor the progress of expenditure. The focus of National Mission on FLN will be on identifying and filling the learning gap of children at foundational stage. Therefore, the programmatic and financial norms of this mission will have more focus on child-centric interventions, capacity building of teachers, monitoring and mentoring of schools and learning assessment. The provision of infrastructure and other non-recurring interventions are already available under Samagra Shiksha and States and UTs may accordingly prioritise their AWP&B for improving the overall condition of primary schools. The interventions designed are recurring in nature to ensure the focus on student related activities and avoid any duplicity of funds provided under other components of Samagra Shiksha.

To ensure effective implementation and achieving the objectives of the mission in each timeframe, separate annual implementation plans will be prepared by the States and UTs which will be appraised by the mission and separate approval will be given for the plan. Separate sanctions and utilisation certificates on the line of Samagra Shiksha will be followed by the National Mission. Separate funding for Management, Media, Monitoring, and Evaluation & Research (MMMER) will be provided based on overall estimates of respective States and UTs. Fund release mechanism, Accounting and Auditing procedure as laid down for Samagra Shiksha will be followed.

9.16 Components and Activities of Mission

The major Components and activities to be undertaken by Mission on FL&N and related Samagra Shiksha interventions are given at Annexure-II.

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Chapter 10

STRATEGIC PLANNING OF THE MISSION



HIGHLIGHTS

This chapter discusses the

- Lakshya/Targets for Foundational Literacy and Numeracy: Balvatika or Age 5-6; Class I or Age 6-7; Class II or Age 7-8; Class III or Age 8-9;
- Pedagogical Aspects and Curriculum as per the National Education Policy 2020
- Extensive Capacity Building to implement Foundational Learning in mission mode
- Teaching Learning Materials and Classroom Practices to achieve the FLN Goals
- Learning Assessments of the progress and achievements by students
- Stakeholders Engagement and IEC for generating greater awareness
- Robust IT System embedded with big data analytics: At National and State level; At State level going down to the School level; At School level
- Strategic Planning for States and UTs: Critical Enablers & Annual Implementation Plan with specific emphasis on SEDG areas, SEZs and Aspirational Districts

10.1 National Level

The programme will be implemented in a mission mode, it will be outcome-oriented where each outcome is measurable, and it will serve the goal of attaining foundational literacy and numeracy for all children by Grade 3. The Department of School Education and Literacy, Ministry of Education (MoE) will be the implementing agency at the national level.

The Mission at the national level will be responsible for setting national and state-level targets till 2026-27, independently measuring progress against them, providing funding to States under Samagra Shiksha and providing technical and advisory support to the States and UTs, including creation of public goods and resources. States would be responsible for creating multi-year Action plans to achieve their respective FLN targets and identifying and working with appropriate partners for achieving foundational literacy and numeracy by grade III by 2026-27. The Strategic planning will include the following broad focus areas for the mission.





10.1.1 Goal Setting

The National Mission will **declare the overall national targets** in achieving learning outcomes, including year wise outcomes to be achieved by the year 2026-27 by each State/UT. **National Achievement Surveys and State Achievement Surveys** will be held in alternate years (NAS in 2021, 2024 and 2027; 2022 and 2025 for Grade I, 2023 and 2026 for Grade II) to track progress. **NAS** will be conducted by NCERT/PARAKH in collaboration with CBSE and States/UTs. The NAS sample survey of students in 2021 will create a database of 'as is' situation in **grade level proficiency for Class III and will become the base for tracking future progress.**

Although, the overall aim is to achieve the desired learning outcomes by the end of grade 3, however, in order to generate awareness among the parents, community, volunteers etc. the Lakshyas have been developed from Balvatika to Grade 3. The Lakshyas are mostly based on the learning outcomes developed by the NCERT and international research and ORF studies. NCERT will undertake ORF study for Indian Languages and based on the findings of the study, these Lakshyas would be updated. The Lakshyas start from Balvatika as before it would be difficult to assess the young children. The learning outcomes though are starting from age 3 onwards.

LAKSHYA/TARGETS FOR FOUNDATIONAL LITERACY AND NUMERACY

Balvatika or Age 5-6	
Oral Language	<ol style="list-style-type: none">1. Talks to friends and teachers2. Sings rhymes/poems with understanding
Reading	<ol style="list-style-type: none">1. Looks at books and attempts reading the story with the help of pictures2. Begins to point out and recognize some familiar repeated words (sight words or words on containers/food wrappers)3. Recognises letters and corresponding sounds4. Reads simple words comprising of at least 2 to 3 alphabets.
Writing	<ol style="list-style-type: none">1. Imitates act of writing during play2. Scribbles/draws and paints for self-expression.3. Uses a pencil and holds it properly to form recognizable letters4. Recognizes and writes his/her own first name
Numeracy	<ol style="list-style-type: none">1. Counts objects and correlates numerals up to 10.2. Recognizes and reads numerals up to 10.3. Compares two groups in terms of number of objects and uses words like more than/less than/equal to etc.4. Arranges numbers/objects/shapes/occurrence of events in a sequence5. Classifies objects based on their observable characteristics and communicates the criteria of classification6. Uses vocabulary for comparative words like longer, longest, taller, tallest, shorter, shortest, heavier than, lighter than etc. in the context of different objects around him/her.



Class I or age 6-7	
Oral Language	<ol style="list-style-type: none"> Converses with friends and class teacher about her needs, surroundings. Talks about the print available in the classroom. Recites rhymes/poems/songs with action.
Reading	<ol style="list-style-type: none"> Participates during read aloud/story telling session in an active way and answers questions during and after story session; acts out familiar story with props and puppets Uses sound symbol correspondence to write words with invented spellings. Reads small sentences consisting of at least 4-5 simple words in an age appropriate unknown text.
Writing	<ol style="list-style-type: none"> Develops familiarity with matras in the words occurring in familiar contexts (story/poems/ environment print etc.) Writes, draws, and /or make things to convey meaning and represent names on her/his worksheet, greeting messages, draws pictures that are recognizable objects/people
Numeracy	<ol style="list-style-type: none"> Counts objects up to 20 Reads and writes numbers up to 99 Using addition and subtraction of numbers up to 9 in daily life situations. Observes and describes physical properties of 3D shapes (solid shapes) around him/her like round/flat surfaces, number of corners and edges etc. Estimates and verifies length using non-standard non-uniform units like hand span, footstep, fingers etc. and capacity using non-standard uniform units like cup, spoon, mug etc. Creates and recites short poems and stories using shapes and numbers

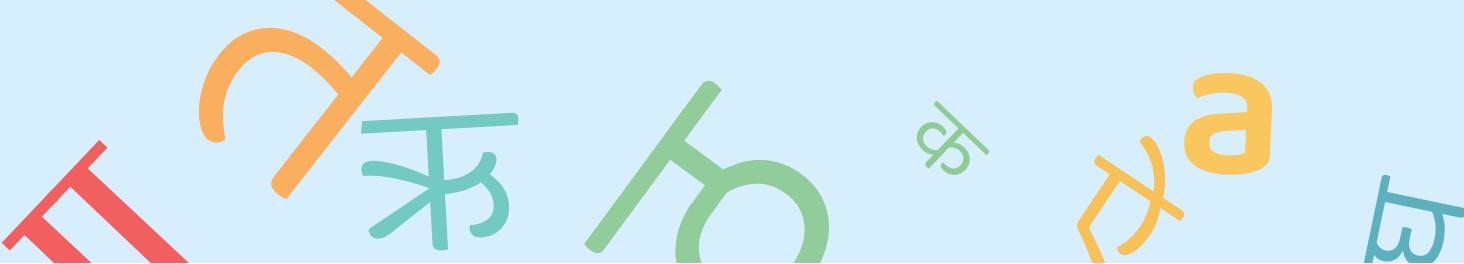
Class II or age 7-8	
Oral Language	<ol style="list-style-type: none"> Converses and talks about the print available in the classroom. Engages in conversation to ask questions and listens to others. Recites songs/ poems. Repeats familiar words occurring in stories/poems/print etc.
Reading	<ol style="list-style-type: none"> Reads and narrates/re-tells the stories from children's literature/textbook. Makes new words from the letters of a given word Reads age appropriate unknown text of 8-10 sentences with simple words with appropriate speed (approximately 45to 60 words per minute correctly) comprehension, and clarity.
Writing	<ol style="list-style-type: none"> Writes short/simple sentences correctly to express herself. Recognizes naming words, action words and punctuation marks.
Numeracy	<ol style="list-style-type: none"> Reads and writes numbers up to 999 Uses addition and subtraction of numbers up to 99, sum not exceeding 99 in daily life situations. Performs multiplication as repeated addition and division as equal distribution/sharing and constructs multiplication facts (tables) of 2, 3 and 4x Estimates and measures length/distance/capacity using non-standard uniform units like rod, pencil, thread, cup, spoon, mug etc. and compares weight using simple balance Identifies and describes 2-D shapes like rectangle, triangle, circle, oval etc. Uses spatial vocabulary like far/near, in/out, above/below, left/right, front/behind, top/bottom etc. Creates and solves simple riddles using numbers and shapes



Class III or age 8-9	
Oral Language	<ol style="list-style-type: none"> Converses with clarity using suitable vocabulary in home/ school language. Talks about the print available in the classroom. Engages in conversation to ask questions, narrate experiences, listens to others, and respond. Recites poems individually and in group with intonation and modulation of voice.
Reading	<ol style="list-style-type: none"> Finds information in familiar books/textbooks. Reads atleast60 words per minute correctly and with comprehension depending on the language and with correct pronunciation from an age appropriate unknown text. Reads and follows instructions given in the text Can answer at least 3 out of 4 questions based on reading of an age appropriate unknown story/paragraph of 8-10 sentences.
Writing	<ol style="list-style-type: none"> Writes short messages for different purposes. Uses action words, naming words and punctuation marks for writing. Writes grammatically correct sentences. Writes short paragraph and short stories on her/his own with grammatically correct sentences.
Numeracy	<ol style="list-style-type: none"> Reads and writes numbers up to 9999 Solves daily life problems using addition and subtraction of numbers up to 999, sum not exceeding 999 Constructs and uses multiplication facts (tables) of numbers 2 to 10 and uses division facts Estimates and measures length/distance, weight and capacity using standard units like m, km, g, kg, litres etc. Identifies and relates basic 2D shapes with 3D shapes (solid shapes) and describes their properties like faces, number of edges and corners etc. Identifies a particular date and corresponding day on a calendar; reads time on a clock in hours and half-hours Identifies half, one-fourth, three-fourth of a whole and in a collection of objects Identifies, extends, and communicates rules for simple patterns on numbers, events, and shapes

10.1.2 Pedagogical Aspects and Curriculum

The new National Curriculum Framework guided by the vision of National Education Policy, 2020 will be woven around core principles of human, moral, and Constitutional values indigenous knowledge, cultures, and practices. It will aim to strengthen multilingualism, use of innovative pedagogies, variety of teaching learning material and technology in education. It will also give a way forward for teaching-learning in mother tongue in the foundational years, wherever possible. It will incorporate curriculum and pedagogy rooted in Indian ethos, languages, art, and culture, that will prepare learners to address the challenges of 21st century with indigenous knowledge, experience, skills, and courage.



Some of the focus areas are summarized below:

- Pedagogy to include 21st century learning skills: Critical thinking, Communication, Collaboration, and creativity.
- Socio-emotional-ethical development, cultural/artistic development, and the development of early language, literacy, and numeracy.
- Joyful and experiential learning through art, stories, poetry, games, songs, activities in Home Language/Mother tongue focusing on rich local traditions. (Integrating art, sport, ICT, storytelling, toys, games, puzzles, etc.).
- Early identification of disability and learning difficulty in students with special needs so that they are provided suitable guidance at an early stage.
- Emphasis on diversity, flexibility, and quality.
- Classroom transactions based on Lesson Plans integrating real-life situations keeping in view inter/multi-disciplinary learning for the student to be able to attain competency in each area.
- Children will also be encouraged to read books and print material beyond regular syllabus to promote the habit and joy of reading.
- Identification of life skills to be acquired at each stage, and their integration with learning matrix and classroom transactions through innovative teaching learning processes.

10.1.3 Capacity Building

Internal Stakeholders: Extensive capacity building of Teachers/Heads of Schools/Principals/Education Administrators will be undertaken to implement Foundational Learning in mission mode. Keeping in view the multi grade-teaching environment in Government Schools, all ECCE and Primary grade teachers will be imparted training on foundational literacy and numeracy. The capacity building will aim to shift focus from a teacher-led process to learner-led activity and experience-based learning process, where the learning of concepts and topics is considered complete only if the learner is able to demonstrate its application to solve problems in real-life situations.

External Partnerships: Partnerships with experts and Civil Society organisations will be encouraged for development of resources and capacity building. There will be an emphasis on strengthening the implementing agencies, that is, SCERT, DIETs, BRC, CRC, etc., to roll out the programme in a time-bound manner, build teacher capacities and to measure collective outcomes. Some of the focus areas under this head will include:

- Training of all Teachers/Heads of Schools/Principals/Education Administrators on Foundational Literacy and Numeracy.



- Head teachers to take the lead as Pedagogical leaders, in addition to their role as administrative Head of school. (States/UTs may like to refer to this link: http://cbseacademic.nic.in/web_material/Manuals/Principals_Handbook.pdf)
- Teachers to be trained specifically on pedagogical techniques required for teaching foundational skills of literacy and numeracy. (States/UTs may like to refer to these links: http://cbseacademic.nic.in/web_material/Manuals/Art_Integration.pdf, and http://cbseacademic.nic.in/web_material/Manuals/ExperientialLearning.pdf)
- Teacher Manuals, online resources to be prepared for teachers from ECCE to primary grade.
- Teachers shall be empowered to develop their own innovative teaching aids and tools with local resources for making their classroom transactions engaging and joyful.
- **A NISHTHA programme for FLN in blended mode** (including classroom-based activities) will be launched for capacity building of teachers, school heads, CRCs, BRCs, DIETs and SCERTs.
- Schools to also focus on building specific capacity of teachers for preparing Lesson Plans.
- At State level, SCERT will develop extensive online teacher training modules and other resources for teachers in local language.

10.1.4 Teaching Learning Materials and Classroom Practices

Content Development: Aside from core learning material (that is, textbooks aligned to learning outcomes), NCERT, CBSE, KVS and SCERTs to develop highly engaging, joyful, and innovative additional learning resources for foundational stage. For example, for languages, additional material could include jokes and proverbs, short stories and anecdotes, cartoons and caricatures, even simple newspaper articles, television programmes and films, online resources, podcasts, rap songs, concepts set to music, etc. if they are designed for instructional purposes.

To achieve the FLN goals, classroom transactions shall include:

- Creation of TLM in all languages, including mother tongue/home languages by states/UTs.
- Toys, Games, Sports, Puzzles, Quizzes, Worksheets/workbooks, and Story books etc. to be used extensively for teaching through play/discovery/game/art/activity-based pedagogy.
- School/public libraries/digital libraries/toy libraries will be made integral part of teaching learning process and will be made available after school hours also to the students. Classroom spaces to be used for having meaningful reading and learning materials for children.

- Preparation of stage-wise and subject-wise learning matrix of simple measurable learning outcomes and their codification which can be used by teachers to benchmark levels of achievement by each child.
- Mapping of Learning Outcomes to the curriculum.
- All defined Learning Outcomes/goals that are to be achieved by the class in all subjects – should be exhibited in the class through simple charts / posters. Charts on LOs to be displayed in common spaces in school for parents so that they can read and understand.
- Inclusion is the key to imparting several Life Skills; it shall be the responsibility of the Teacher to ensure it.
- Teaching and learning should be such that it is linked to the daily life situations of the children and their environment/area/culture/language/ethnicity/gender/etc. for example, children should be encouraged to read the written word, wherever it is available, school name board, bus stand name and number, advertisements, hoardings, wall slogans, writings on packaged goods, newspapers, TV programmes, etc.
- Teaching and learning should not only focus on the child acquiring knowledge, but also on the child acquiring life skills, learning skills, values, etc.
- Customized eLearning content for FLN (Mathematics and Reading Literacy) to be created for students with learning disabilities.

10.1.5 Learning Assessments

Purpose of Assessments: The prime objective of assessment is to decipher the learning needs of children to allow them to build on their strengths, and support them to overcome the gaps in learning, if any. Assessment needs to be multiple evidence based which requires tapping different sources to collect information using a range of activities that the child participates in, both inside and outside the classroom, on different aspects of learning, i.e., knowledge, skills, interests, attitude/disposition, and motivation.

Although independent third-party periodic assessment (NAS and SAS) will be carried out to find unbiased gaps in learning of the students, school-based assessments (SBA) will be embedded in the teaching learning process to ensure a non-threatening, stress free, participatory, conducive learning environment in the school.

Assessment during the foundational stage can be broadly categorized into two major areas, namely:

- **School based Assessments**, including portfolios, projects, game-based learning, Holistic Progress Cards, Group work, oral presentations, etc. (States/UTs may like to see CBSE Handbook for teachers at the following link).
- **Large-scale achievement survey:** for assessment of the processes and functioning of the educational systems (such as NAS, SAS, and Third-Party Assessments).



Holistic Progress Card: For school-based assessment of FLN, a Holistic Progress Card will be designed by CBSE in consultation with NCERT and SCERT which would be a 360-degree, multidimensional report of progress, that reflects in detail the progress as well as the uniqueness of each learner in the cognitive, affective, socio-emotional, and psychomotor domains as well as in acquiring of life and learning skills, and values. This progress report will be based on self, peer, teacher and parent assessment of various skills and competencies acquired by the child.

10.1.6 Stakeholders Engagement and IEC (Information, Education and Communication):

For generating greater awareness and to garner support of the community, following kind of **IEC material** will need to be prepared among others:

- Infographics on need for FLN, Learning Outcomes and targets to be achieved at various levels, etc.
- School to parent communication material, State/UT to teachers/school's communication material, etc., will be designed in simple formats in regional languages by States/UTs and disseminated as letters, social media messages, Radio and TV talks, etc.
- Social Media platforms will be utilised as an important tool to create awareness among all stakeholders.

The objectives behind this awareness programme include:

- Schools, School Heads and Teachers to be clear about the Outcomes of Learning to be achieved through their classroom transactions in each of their grades/subjects, and the mechanisms for achieving it.
- Periodic feedback from self/peers/parents through questionnaires to gauge the level of parental involvement in their child's progress and to indicate the areas that require more focus.
- States/UTs/SCERTs/DIETs/BRC/CRC/Students/Parents/PTAs/SMCs/PRIs/etc. to be clear on the level of desired proficiency at each grade for students to achieve.

The following activities could also be adopted for effective participation of parents, SMCs and for community mobilization:

- To enable all parents to provide learning support to children at home, technology-based and in person models can be deployed. Every household can be provided with easy to do, fun based DIY (Do It Yourself) activities and workbooks. To ensure regular engagement, automated reminders and instructions through pre-recorded calls and videos can also be sent to parents.

- The SMC/SDMCs could provide community level support to parents regularly.
- Community/Local Self-government can participate in and get involved in monitoring achievement of learning outcomes. The Local Self-government can declare its targets/goals to be achieved and follow up.
- Workshops/Lectures/Programmes for creating Awareness can be held and bite-sized videos can be circulated on objectives and the need to achieve Learning Outcomes etc.
- A Media Plan can be prepared and implemented for publicity of the objectives of the mission
- Capacity building and Support to SMCs.
- Various community level events including school readiness mela, book fairs, reading events, story mela, maths mela to be conducted.

10.1.7 Robust IT system

A robust IT (Information Technology) system embedded with big data analytics will be an integral part of the Mission. It will not only be a critical enabler but also an important tool to ensure the success of the Mission. The design of the IT system will have three components:

- **National and State/UT Level:** Use of IT for enhancing capabilities of different stakeholders i.e., teachers, students, educational administrators, SMCs, Parents, Community etc. The existing digital platform such as DIKSHA will play an important role in enhancing the capacities at each level. A National level IT based monitoring tool will be developed to capture aggregated progress of the state/UT. A dashboard at national, state and districts level will also be developed to capture the annual progress of the mission. Close monitoring will be done of Aspirational districts, tribal areas, Educationally Backward Blocks, etc.
- **State/UT level till school level:** States and UTs will map and create database of each child enrolled in foundational grades in each school, for individual tracking of progress of each child in achieving grade level proficiency in learning outcomes and this will be linked to the National IT platform (NDEAR). A monitoring tool to track and get a drilled down picture of the progress of each child subject wise, class wise, school wise, block wise, district wise and state wise will need to be developed by states/UTs. In addition, States and UTs will use Information Technology for early detection and supporting children with disabilities including learning disabilities. States and UTs will also provide in anonymized form, aggregated data on progress of the FLN mission within the periodicity specified on the national monitoring platform.
- **At school level:** IT as a tool for assessment. Information Technology has a vital role to play in effective and efficient assessment of learning. Contemporary technologies

offer a variety of new tools that can be used in the classroom. Technology can help teachers assess their students' learning as well as their performance in the classroom, reporting of student assessment tasks, responses, feedback and analysing the data. Technology embedded assessment can recreate learning situations which require critical thinking, problem-solving and teamwork strategies. Further, ICT based assessment can use a multitude of formats, including text documents or portable document formats, multimedia formats etc.

10.2 Strategic Planning for States and UTs:

10.2.1 Critical Enabling Processes at State/UT level

For the success of the mission, a holistic set of reforms –combination of administrative and academic - are required to be undertaken simultaneously. While academic reforms are generally well understood, administrative reforms tend to get missed out, although they are crucial for supporting implementation of academic reforms. **Therefore, administrative reforms in the form of critical enablers are required to be undertaken by the States/UTs as pre-requisites for achieving the goals envisaged for foundational stage.**The critical enablers are as follows:

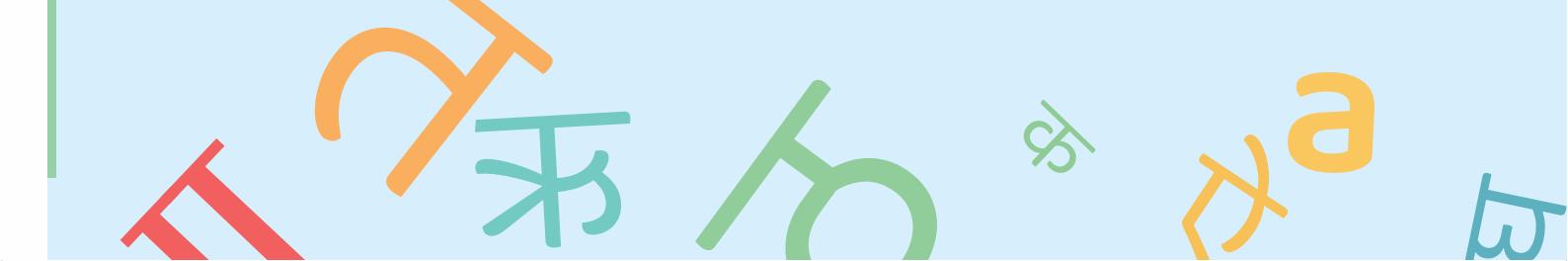
10.2.2 Annual Implementation Plan

An Implementation Framework consisting of roadmaps and action plans for implementation of activities covering all the focus areas of FLN Mission will be prepared by each State and UT. Based on the long-term Implementation Framework of each State and UT, the Annual Implementation Plans will be prepared by the States and UTs.

Implementation Procedure: The main objective of the **Annual Implementation Plan (AIP)** is to provide a definite direction to attain the objectives of the mission in a time bound manner. It will become the basis for monthly and quarterly monitoring of physical and financial progress during the financial year vis-à-vis the planned activities. Achievements against the AIPs may also be used to incentivize States who perform well. The State AIPs should include detailed sections on the planning, implementation, and sustainability phases.

The following shall be required in the AIP:

- For achieving the State targets, prepare State-wise, District-wise, Category-wise (Govt, Aided, Private), Stage-wise (Primary, Middle, Secondary) Fact Sheets to identify critical areas for improvement. Identify the gaps, associated causal factors, and formulate State specific strategies to achieve the specified goals by allocating resources and taking state-specific actions.
- The stage-wise-targets-will consider gaps identified in the base line survey/NAS. The yearly targets developed by States/UTs (based on national target for 2026-27) will be measured by tools developed at central level.

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- ## Critical Enablers
- **Availability of adequate number of trained Teachers** at the Foundational stages in each school from pre-primary to grade 3, through a transparent, robust and preferably online system of teacher's recruitment and transfer.
 - Regular **teacher attendance and reduction in their administrative burden** and deployment in non-teaching activities.
 - **Delivery of textbooks and uniforms** to students before the start of academic session.
 - **Basic facilities at every primary school:** Basic facilities include – separate functional toilets for boys and girls, potable drinking water, hygienic and clean environs, safe school infrastructure and environment, spacious classrooms with requisite logistics, etc.
 - **Ensuring RTE norms** for each school covering all aspects.
 - **A pool of mentors identified by** States/UTs to render academic support to teachers teaching the foundational years. Mentors could be selected from amongst Teacher Educators, Senior/retired teachers, faculty from Higher Education Institutions/etc.
 - **Adequate learning time** for children for language and literacy and mathematics.
 - **Strengthened SCERTs, DIETs, BRC, CRCs** for providing onsite academic support and mentorship to teachers.
 - **Community engagement**/making the Mission a Jan Andolan.
 - **Social mobilization on language-in-education**, issues including children's languages in foundational learning.
 - **Adequate budget provision** for TLM and children's books including home language and school/classroom libraries.

- A plan of activities with physical and financial estimates under each component of the mission for the financial year with agreed timelines along with monthly/quarterly projected targets, to be able to monitor progress.
- A summary of district level Plans is to be provided. The AIPs for the District should be prepared by consolidating, consulting the plans of the Blocks/Clusters. The State Mission Authority will suitably consolidate the District Implementation Plans as the State Implementation Plan.
- Plans to ensure sustainability of the interventions made.
- Details of plans for monitoring and evaluation to be carried out at the State level.
- Write-up/documentation of success stories, best practices, and innovations introduced, new technologies used etc. will be published on an annual basis by all states/UTs.

- States/UTs shall also plan for augmenting the capacity of SCERTs, DIETs, principals, and teachers to enable them to provide academic support so that the AIP can be implemented and learning outcomes of students can be improved.
- States and UTs to plan for various aspects including filling of vacancies, engaging of Counsellors, and rationalising and strengthening of schools/school infrastructure/teachers/resources to achieve the targets in a phased manner.

Specific emphasis will be given on availability of teachers in disadvantaged or SEDG²¹ areas, Special Education Zones (SEZ) and Aspirational districts.

- In disadvantaged or SEDG areas, SEZ and Aspirational districts, States and UTs will assess teachers' vacancy specifically and take up PTR rationalisation on priority for these areas. States and UTs will fill teacher vacancy in a time bound manner; with qualified teachers including local teachers, who are qualified.
- Teachers from SEDG areas, SEZ and Aspirational districts will be trained on priority, specifically on how to bridge the gaps of language spoken by child and that used as medium of instruction. Teachers in these areas will be encouraged and supported for imparting foundational literacy and numeracy in primary schools through various mechanisms to be adopted by States/UTs.
- States and UTs will also include following steps to implement multilingual education:
 - Conduct simple linguistic surveys to determine the gap between home and school language and plan for appropriate intervention strategies.
 - Develop awareness and capacity of all stakeholders i.e., education administrators and teachers on MLE approach.
 - Develop culturally responsive and high-quality teaching learning material in children's home languages and develop simple guidelines for using them.
 - With the help of well-oriented BRCs/CRCs, provide consistent academic monitoring and academic support to teachers for using children's home languages systematically and effectively in day-to-day teaching learning.
 - Develop effective strategies for inclusion of children's home languages and approaches of MLE, while also documenting the best practices of teachers.

Performance of State/Districts/Blocks in achieving the goals of this mission will be measured and linked with incentives.

Useful Resources

Abadzi, Helen. 2006. Efficient Learning for the Poor: Insights from the Frontier of Cognitive Neuroscience. Washington, DC: World Bank. ©World Bank. <https://openknowledge.worldbank.org/handle/10986/7023> License: CC BY 3.0 IGO

National Education Policy, 2020. Ministry of Education

²¹ Socio-economically disadvantaged groups as mentioned in NEP 2020

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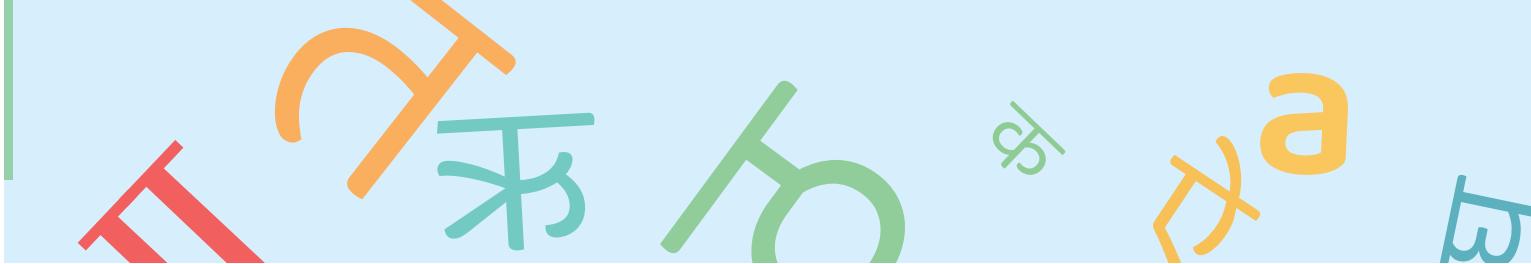
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Chapter 11

ROLE OF VARIOUS STAKEHOLDERS IN THE MISSION IMPLEMENTATION





HIGHLIGHTS

This chapter discusses the Roles of Various Stakeholders in achieving the goal of Foundational Literacy and Numeracy by 2026-27, in mission mode.

11.1 Department of School Education and Literacy, MoE

The Department of School Education and Literacy, Ministry of Education (MoE) will be the implementing agency of the FLN Mission at the national level. First and foremost, the National FLN Mission will declare in 2021 the overall targets with year wise outcomes to be achieved by the year 2026-27. Towards this end, to ensure effective implementation, the Department will develop an online monitoring system for the Mission. Thus, a National level IT based monitoring tool with dashboards will be developed by the Department for this purpose, which will have aggregated data from the national, state, district, and block level. The existing digital platform such as DIKSHA will also play an important role in enhancing the capacities at each level. Additionally, the Mission will provide technical and advisory support to the States and UTs, including creation of public goods and resources and develop a Learning Outcome Quality Measurement App for student engagement, retention, and academic achievement for foundational stage. The Ministry of Education will also provide funding support to the states and UTs under the Samagra Shiksha scheme.

11.2 Role of States and UTs

States and UTs have a critical role to play to achieve the goal of foundational literacy and numeracy by 2026-27, in mission mode. For this, States and UTs would also need to ensure the following activities (illustrative) for effective conduct of the FLN Mission:

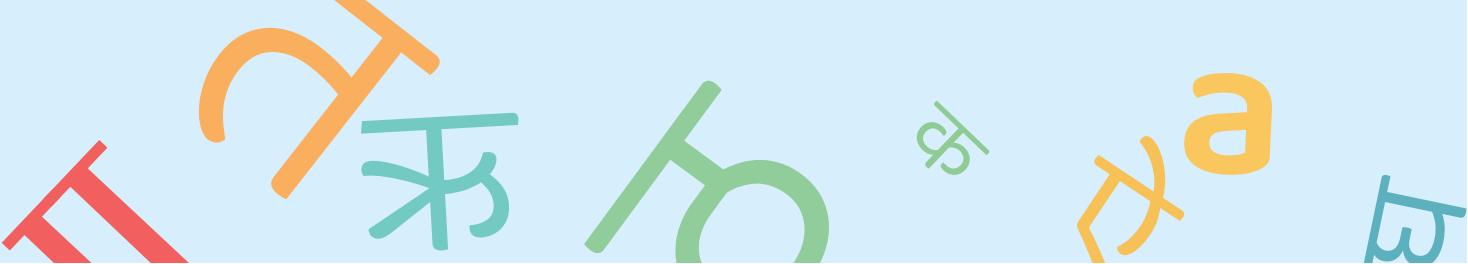
- The first step in this direction would be creating multi-year Action plans to achieve their respective FLN targets. Thus, an Implementation Framework consisting of roadmaps and annual action plans for implementing of activities covering all the focus areas of the FLN Mission would need to be prepared.
- Work out yearly targets (based on national target for 2026-27) and adapt tools developed at central level for measurement of yearly progress. For achieving these targets, State-wise, District-wise, Category-wise (Govt., Private), Stage-wise (Primary, Middle, Secondary) Fact Sheets, would be prepared to identify critical areas for improvement.
- Furthermore, States and UTs will contextualise the National Mission by preparing state specific Stage-wise Action Plan based on gaps identified in NAS envisaged to be conducted in 2021

- Planning to ensure availability of adequate number of Teachers in each school at each grade from pre-primary to grade 3, especially in aspirational districts, SEZs and undertaking extensive capacity building of teachers for implementing FLN in mission mode.
- Database of each child enrolled in foundational grades would be mapped and created for individual tracking of progress of each child in achieving grade level proficiency in learning outcomes.
- Mapping of the requirements and ensuring basic facilities at primary schools.
- Ensuring delivery of textbooks and uniforms to students before the start of academic session.
- Prepare a plan of activities with physical and financial estimates under each component of the mission for the financial year with agreed timelines.
- Identify a pool of mentors to render academic support to teachers who will be delivering the FLN mission objectives.
- Teachers from SEDG areas, SEZ and Aspirational districts will be trained on priority, specifically on how to bridge the gaps of language spoken by child and that used as medium of instruction.
- School/public libraries will be made integral part of teaching learning process and will be made available after school hours to community, and particularly to parents.
- Write-up/documentation of success stories, best practices, innovations introduced, new technologies used etc.
- Training of SMC members, awareness drives for parents and community to make them understand the desired level of learning outcome achievement grade-wise/subject-wise and monitor the progress of students accordingly.

11.3 Role of NCERT:

The NCERT, as the leading academic institution in the country for school education will play an important role in fulfilling and achieving this national objective of attaining foundational literacy and numeracy. The priority would be developing a Curriculum and Pedagogical Framework focusing on FLN with learner-centric pedagogy in collaboration with other experts for foundational stage, as a continuum of the ECE framework, which includes curriculum and classroom materials, teacher training, and desired learning outcomes.

Also, the NCERT will prepare a special capacity building package for foundational stage teachers and develop appropriate Learning Enrichment programme. Another important task



would be analysing gaps through assessments and developing tools and indices to prioritize Foundational Learning. In this regard, a template for conduct of baseline survey for grades 1 to 3 will be developed to ascertain their present learning stage so that proper interventions can be provided, and progress can be measured later.

To further supplement the objective of the FLN Mission, a 3-month play based school preparation module for students entering to grade I will be developed to make sure that all students that are joining school in grade 1 are school-ready.

The following actions will also be taken up by the NCERT to ensure effective implementation of the LO based approach to teaching and learning:

- Infographics/posters/presentations explaining each of the Learning Outcomes for each subject for foundational stage that communicates to all stakeholders (student, teacher, parent, community) in a simple manner.
- Online Teacher training modules for teachers of each grade (from ECCE up to primary level), explaining their subject wise learning outcomes, in byte sized videos.
- Extra resources based on LOs such as workbooks/worksheets/quizzes/etc. for foundational stage.
- At least 10 items each at minimum two different proficiency levels, to measure each Learning Outcome of each subject for each grade.
- Each Learning Outcome in every grade (up to grade III), in every subject, may have a backward linkage to another LO in the same grade or in lower grades. That a child may not be able to attain a given LO, unless he has attained proficiency in an LO in the previous grade. It is essential to establish these backward and forward linkages between LOs. NCERT shall delineate this for foundational grades, that is, ECCE to grade III.
- Based on NAS, 2017, hard spots have been identified by NCERT. Posters/material/infographics/presentation/resources will be prepared for explaining the teaching and learning of each of the hard spots. This material should be in two formats teacher facing and student facing. This can be combined with the resources at serial (i) above.

Further, in pursuance of the goal of foundational literacy and numeracy, the NCERT will also conduct the following activities:

- Develop online and blended teacher training modules and content as exemplar.
- Aside from textbooks, highly engaging, joyful, and innovative additional learning material for foundational stage will be developed.

- Design a Holistic Progress Card which would be holistic, 360-degree, multidimensional report that reflects in detail the progress as well as the uniqueness of each learner in the cognitive, affective, socio-emotional, and psychomotor domains.
- E-content will be prepared and uploaded on DIKSHA for Mathematics and Reading Literacy in English and Hindi for FLN.

11.4 Role of CBSE:

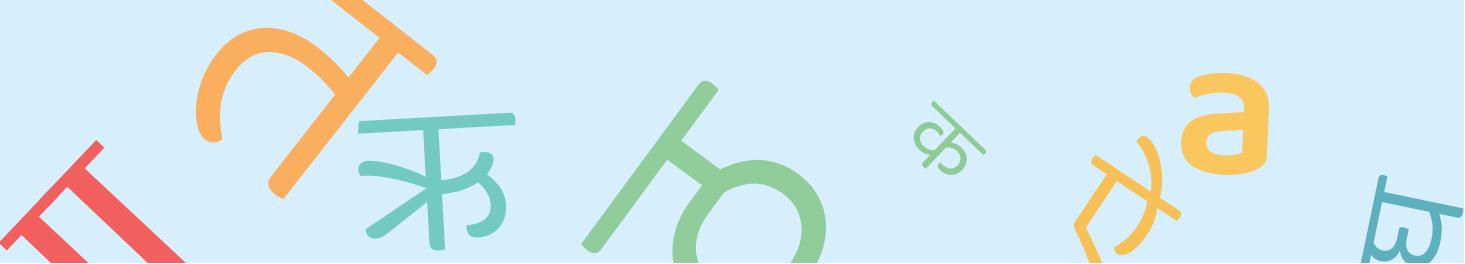
As an important collaborator of the national FLN Mission, the CBSE will introduce the concept of competency-based education in CBSE affiliated Schools, following the learning outcome metrics for foundational literacy and numeracy, while at the same time monitoring and reporting the same to DoSEL. CBSE will work together with NCERT to develop codification and metrics for learning outcome for primary level and play a pivotal role in capacity building of ECCE and Primary teachers for Foundational Literacy and Numeracy. For this purpose, CBSE along with NCERT will identify a pool of outstanding teachers at primary level who could mentor and guide Government Primary Teachers and develop e-content to support teachers at foundational stage including lesson plans, use of innovative pedagogies, item banks etc.

11.5 Role of Kendriya Vidyalaya Sangathan

KVS schools will be developed as model schools for attainment of Foundational Literacy and Numeracy by all students by Grade 3, in mission mode. To facilitate this, KVS shall be pioneers in introducing competency-based education at primary level and adoption of learning outcome metrics as developed by the CBSE and NCERT. Hence, demonstration classes will be provided in KVS for Government Primary Schools, wherever possible and all Primary teachers of KVS may be trained for Foundational Literacy and Numeracy and various pedagogies. Thus, all efforts will be made to ensure that all children attain Foundational Literacy and Numeracy by 2026-27 through a robust monitoring mechanism to track the progress of each child and maintaining close coordination with CBSE and NCERT.

11.6 Role of SCERTs:

Under the FLN Mission, the SCERTs will be entrusted with the responsibilities of designing and development/adaptation of curriculum, instructional designs, capacity building of teachers and academic resource persons, developing locally contextualized teaching learning materials, extensive capacity building of teachers, development of training modules and other resources for teachers in local language. At the same time, additional learning material for foundational stage, that is engaging, joyful and innovative, would also need to be



developed with special emphasis on local context by involving local experts. For school-based assessment of FLN, a student progress card will be designed by NCERT (for KVS/JNV/CTSA/CBSE schools) and SCERTs will adopt/adapt the same for their states/UTs. Further, SCERTs will continuously develop item banks for foundational stage that are related to the measurement or achievement of each learning outcome, including standardised criterion referenced tests (at least 500 items per grade, per subject). These should be administered by the school teachers to the children at a pre-defined periodicity in a non-threatening environment to give them adequate exposure.

11.7 Role of DIETs:

Role of DIETs will be extremely crucial in effective implementation of the FLN Mission for which DIETs are to be encouraged to emerge as an autonomous institution at the district level with flexibility to function to meet district-specific needs. Each DIET can develop an Academic Resource Pool specifically for FLN, comprising of teachers, teacher educators, district education planners and faculty from University Department of Education. The SCERT in conjunction with the DIETs and other institutions at the State, District and Sub-district levels need to play complementary and coordinated roles so that the needs of schools and teachers are met through establishment of an effective onsite support and mentoring mechanism.

11.8 Role of DEOs and BEOs

The DEOs and BEOs, as part of the District and Block Mission have a key role to play for attaining universal foundational literacy and numeracy. In addition to effective supervision, mentoring and inspection of schools in their jurisdiction, a major role of the DEOs and BEOs under the FLN Mission is ensuring timely distribution of Free Textbooks, Uniforms, Teaching Learning Materials, and any other resources provided to schools by the respective State Government/UT Administration. Another vital function would be keeping track of the different training programmes on FLN and ensuring capacity building of primary teachers in their jurisdiction. It is envisaged that there will be a competitive spirit amongst the districts and blocks to achieve the FLN targets before time, for which they will be incentivised.

11.9 Role of BRCs and CRCs

The BRCs and CRCs would function as vital centres for providing academic resource support to the primary schools by supporting teachers in adopting new pedagogical practices for foundational learning. Both BRCs and CRCs would be the key agency for monitoring and supervision of the progress of activities against the goals of the FLN mission at the Block and Cluster level. Consequently, they can design a comprehensive quality improvement plan for



FLN, which can also provide a framework for overall coordination and convergence across institutions and implement it in a time bound manner and consult with school management committee, community members and local authority for formulating school development plans from the perspective of FLN.

11.10 Role of Head Teachers and Teachers

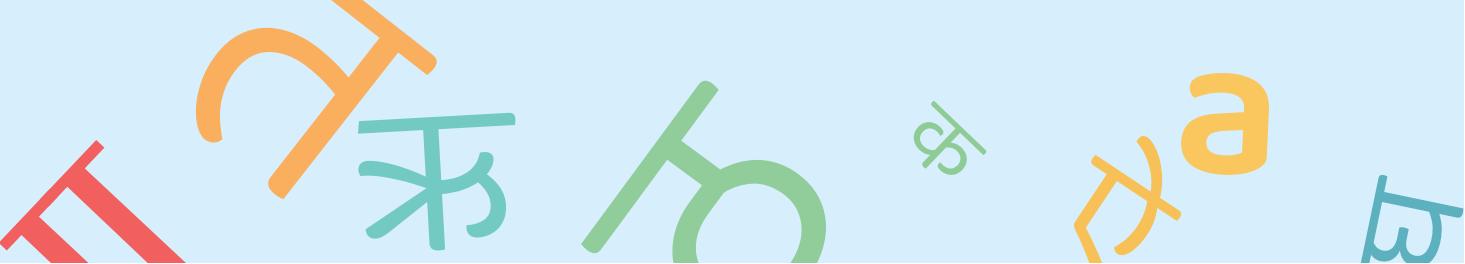
Teachers play vital roles in the lives of the students in their classrooms, especially in the foundational years. Teachers are the managers of their classrooms and would require build a warm, **inclusive learning environment**, mentor, and nurture students, become counselor, and listen and look for any symptom or sign of stress, anxiety other behavioural problems in students. With foundational stage learners, teachers need to create situations which replicate their day-to-day life and then implement their plan of learning. An important step towards achieving the goal of foundational literacy and numeracy for all children will be extensive capacity building of Teachers. Consequently, Head teachers would need to take the lead as Pedagogy leaders while Teachers would need to be clear about the Outcomes of Learning to be achieved through their classroom transactions in each of their grades/subjects. Head Teachers and Teachers also have a significant role to play as a key partner in planning and implementing community participation strategies for the FLN Mission.

11.11 Role of NGOs/ CSOs

Civil Society Organisations have had a long history of involvement in the education sector to which they have significantly contributed in a variety of ways. There are also several examples of effective partnership and collaboration between government and civil society. For the FLN Mission to be effectively implemented, the space for genuine long-term partnerships based on mutual respect must be evolved, ensuring comprehensive and systemic engagement of civil society.

Also, for achieving their respective FLN targets, States and UTs will be encouraged to work with NGOs/CSOs specializing in Foundational Literacy and Numeracy. In fact, there are some areas, where NGOs and other civil society organizations could play a substantial role. These are:

- Capacity building and development of resources for Foundational Literacy and Numeracy.
- Sustained mobilization and awareness building about the Foundational Literacy and Numeracy Mission.
- Facilitate a process of social audit with community involvement. Social Audit would facilitate in maintaining transparency, participation, and accountability in programme implementation.



11.12 Role of SMCs, Community and Parents

For the success of the mission, involvement of community and parents is essential. Parents would need to play an active role in school in monitoring the implementation of the Foundational Literacy and Numeracy Mission. Also, empowered and technically equipped SMCs would be crucial for anchoring community awareness and participation efforts. The active participation of the SMCs, Community and Parents in teaching learning process will also inculcate the much-desired element of accountability and sustainability in the entire school education system. Consequently, Parents and SMCs will be clear on the level of desired proficiency at each grade for students to achieve. Further, the SMCs and community will ensure all school children undergo regular health check-ups and the nutrition and health of children are addressed through provision of healthy meals. Also, parents and community role will be vital in ensuring that children attend school regularly and their home environment provides enough opportunities for children to progress in their learning through different activities.

11.13 Role of Volunteers

States and UTs shall prepare their own guidelines for engaging peer groups and other local volunteers in contributing towards the goal of achieving Foundational literacy and Numeracy for all grade 3 students by 2026-27. For this purpose, Volunteers can take up one on one tutoring to ensure that students studying in each grade up to grade 3 are able to achieve the desired goals. States may consider establishing innovative models to foster such peer-tutoring and volunteer activities, as well as launch other programmes to support learners, in this nationwide mission to promote foundational literacy and numeracy. In other words, if every literate member of the community could commit to teaching one child how to read, it would change the country's education landscape very quickly.

11.14 Role of Private Schools:

Private Schools are an important stakeholder in the successful implementation of the National FLN Mission. As per UDISE (2019), nearly 50% of all students (120 million) in India are enrolled today in the 4.5 lakh privately managed schools across the country. The National FLN Mission lays a tremendous focus on improving quality, hence it is imperative that the private school sector participates as an important stakeholder to make FLN mission a success and ensure that FLN goals are achieved for all children in India. The NEP 2020 also states that "Public and private schools (except the schools that are managed/ aided/ controlled by the central government) will be assessed and accredited on the same criteria, benchmarks,

and processes, emphasizing online and offline public disclosure and transparency rather than mandates by the SSSA, so as to ensure that public-spirited private schools are encouraged and not stifled in any way". It has, therefore, become even more important that private schools participate in achieving the goals and objectives of FLN mission at key stage assessments that test basic competencies and application of concepts. Similarly, it would also be crucial to include private schools in communications aimed towards increasing awareness on the importance of foundational learning and its impact on children's learning outcomes.



Chapter 12

ACADEMIC SUPPORT THROUGH SCERTs and DIETs



HIGHLIGHTS

This chapter discusses the

- Strengthening of SCERTs and DIETs as vital agents for Onsite Support and Mentorship
- Monitoring and Supervision by the Block and Cluster Resource Centres
- Capacity Building of Academic Resource Persons through constant skill enhancement
- Periodic Monitoring and Mentoring of Schools for the FLN Mission

12.1 Strengthening of SCERTs and DIETs for providing onsite support and mentorship to schools

Role of SCERTs: State Institutes of Education (SIEs) were established in mid-60s for qualitative improvement of elementary education. Subsequently, as the number of institutions meant for providing academic support to the school system increased, all such existing institutions merged into a single organization in 1973, to be called the State Council of Education Research and Training (SCERT). Over a period of time, SCERTs have been mandated to perform a variety of functions such as: in-service education, development of curriculum, instructional material, textbooks, supplementary materials as well as undertaking research program guidance, support and assistance to the state department of education, functioning as state resource institutions to provide academic support at all stages of education, co-ordination of all academic matters relating to school education and to maintain appropriate linkages with other educational organizations and supervision and support to the district and sub-district level institutions. After the implementation of RTE Act 2009, SCERTs have been appointed as an academic authority to lay down the curriculum and evaluation procedure which would be followed by all schools in the elementary level. The SCERTs, therefore, will play a vital role in formulating an implementation plan for attaining universal foundational literacy and numeracy for all learners in primary schools, as per the FLN Mission.

Role of DIETs: Likewise, DIETs were envisioned in the National Policy of Education, 1986, and were created in the early 1990s to strengthen elementary education and support the decentralization of education to the district level, under the Centrally Sponsored Scheme on Teacher Education (CSSTE). The vision for the DIETs was for a strong district institution that would support Pre-service and In-service work with teachers at the elementary education level. Consequently, the core institutional focus of a DIET is continuous teacher professional development, which would directly/indirectly impact on school improvement programmes. Further, the design of the Samagra Shiksha scheme, with the outreach activities that take place through the Block and Cluster Resource Centres, requires a District Institution that can



strengthen and oversee in-service work with teachers and give overall direction and support to Block level school improvement initiatives for the FLN Mission.

Under the FLN Mission, the SCERT will be entrusted with the responsibilities of developing extensive teacher training modules and other resources for teachers, including in local language. At the same time, additional learning material for grades ECCE to Grade III, that are engaging, joyful and innovative, would also need to be developed for this purpose. On the other hand, each DIET can develop an Academic Resource Pool specifically for FLN, comprising of teachers, teacher educators, district education planners and faculty from University Department of Education.

Henceforth, for strengthening the SCERTs and DIETs for the FLN Mission, the following are some critical enablers, which States and UTs would need to take up on priority:

- i) Enhanced scope for faculty development opportunities and avenues for professional development, including seminars, advanced and blended courses and fellowships, cross institutional deployment of teachers and collaborative teaching and research.
- ii) Augmenting the capacity of SCERTs and DIETs to enable them to provide academic support so that learning outcomes of students can be improved. Under this structured support can be provided by actively increasing the rigor and consistency of capacity building programmes for SCERT faculty and by creating opportunities for SCERT to work with international experts.
- iii) Identify National Institutions/Universities for mentoring of SCERT and DIET faculty to develop expertise in FLN.
- iv) Develop a culture of sharing of ideas and experiences through exposure visits for sharing of best practices between and within states.
- v) Faculty exchange and interaction should be enabled with other Teacher Education and Higher Education Institutions working in the sector.
- vi) Ensure capacity building of faculty so that over time faculty acquires appropriate expertise in subject areas of relevance to teacher professional development and school improvement.
- vii) Explore possibilities of collaboration with reputed National and International Organizations on specific programmes for the FLN Mission.
- viii) Streamline the idea of continuous professional development through identification of training needs, demand based as well as deriving from research into classroom practices and impact of trainings imparted earlier.

12.1.1 Role of SCERTs and DIETs:

The SCERT in conjunction with the DIETs and other institutions at the State, District and Sub-district levels need to play complementary and coordinated roles so that the needs of schools and teachers are met through establishment of an effective onsite support and mentoring mechanism. **Thus, for effective implementation of the FLN Mission, the following major roles have been envisaged for the SCERT and DIETs:**

- i) SCERT as the nodal academic authority for FLN for establishing proper coordination and collaboration with various stakeholders.
- ii) DIETs to be encouraged to emerge as an autonomous institution at the district level with flexibility to function and be structured to meet district-specific needs.
- iii) Develop extensive teacher training modules and other resources for teachers in local language.
- iv) Aside from textbooks, develop highly engaging, joyful, and innovative additional learning material for grades ECCE to grade III.
- v) Develop state-curriculum specific e-content in all languages that are used as medium of instruction in the state.
- vi) E-content uploaded on DIKSHA for Mathematics and Reading Literacy in English and Hindi for FLN by NCERT (based on NCERT curriculum) will be translated into local languages and context.
- vii) Areas specific to the capacities required by teachers to implement the FLN Mission will be identified, and a comprehensive in-service annual teacher training plan will be prepared.
- viii) Professional training modules and handbooks shall be prepared in collaboration with the NCERT for building capacities of teachers.
- ix) Assessment of progress and achievements by students and schools in FL&N through the Holistic Progress Card (HPC).
- x) Develop formal Induction Programmes with a focus on FLN for newly recruited teachers.
- xi) Each DIET can develop an Academic Resource Pool specifically for FLN, comprising of teachers, teacher educators, district education planners and faculty from University Department of Education.
- xii) Carrying out action research to solve problems faced at class/ school/ cluster/ block level which affect quality of Foundational Literacy and Numeracy

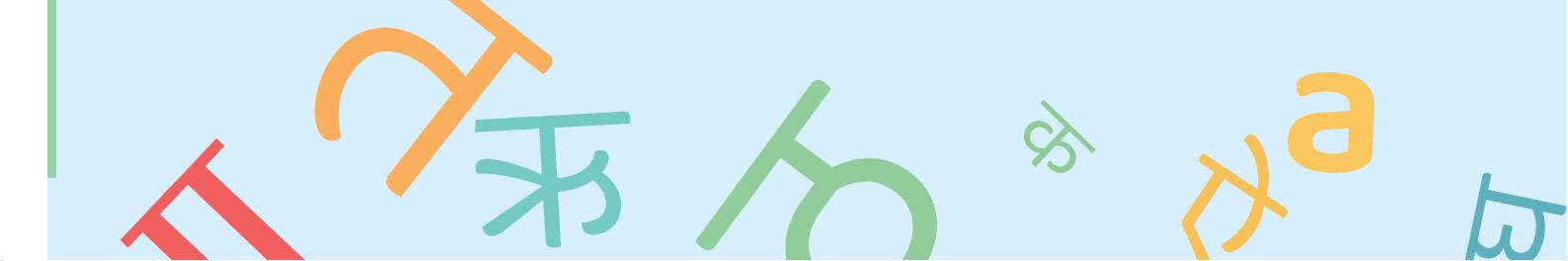


12.2 Monitoring and Supervision by BRCs and CRCs

Role of SCERTS for Supporting BRCs/CRCs: In response to teachers' need of ongoing professional support in negotiating the challenges of curriculum transaction and class management, Block Resource Centres at block level and Cluster Resource Centres at cluster level were established as satellite institutions of DIETs to provide regular support to primary school teachers since it was not possible for a single institution i.e., DIET at the district level, to reach out to all the school teachers. Presently, the BRC Coordinator is academic coordinator/facilitator at block level responsible for in-service training of teachers, onsite support to schools, etc., and providing guidance to the CRC Coordinators. The tasks of CRC coordinators include providing constant support to the teachers, monitoring their performance, identifying their needs both in formal schools and alternative education centres and liaising with the community and Civil Society organisations working around education. Thus, the BRCs and CRCs would function as vital centres for providing academic resource support to the primary schools for the FLN Mission.

With the renewed focus on Foundational Literacy and Numeracy as a prerequisite to learning, there is an urgent need for establishing alignment of BRCs and CRCs with DIETs and to work under their supervision for monitoring the quality of schools and teaching and designing interventions for direct support to schools. Consequently, the BRCs and CRCs would be the key agency for monitoring and supervision of the progress of activities against the goals of the Foundational Literacy and Numeracy Mission (FLN). For this purpose, one of the 6 Subject Specific Resource Persons supported at the Block Resource Centre under Samagra Shiksha scheme would be designated as the nodal person for FLN. The role of this nodal person for FLN in addition to periodic inspection of schools, would encompass providing support to school and teachers through teachers' training, teacher mentoring for their professional growth, strengthening community-school linkage, providing resource support, etc. To further facilitate effective implementation of the FLN mission, the BRCs and CRCs would function as a repository of academic resources and maintain and constantly update database of education experts from nearby Teacher Education institutions, Civil Society Organisations, Colleges/Universities who could participate in Resource Groups for FLN.

To ensure effective monitoring and supervision, the following measures may be adopted:

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- i) Strengthening of DIETs as strong academic support structures for BRCs and CRCs.
 - ii) Monitoring and Mentoring of Schools in close coordination with DIETs.
 - iii) Organize in-service teacher training based on teacher needs as observed during school visits.
 - iv) Participate in meetings to be organized periodically at the district, block, and cluster level to discuss academic issues/concerns and to design strategies for better school performance.
 - v) Design a comprehensive district level quality improvement plan for FLN, which can also provide a framework for overall coordination and convergence across institutions and implement it in a time bound manner.
 - vi) Consult with school management committee, community members and local authority for formulating school development plans from the perspective of FLN.

12.3 Capacity Building of Academic Resource Persons

Given the significance of the BRCs and CRCs as academic resource structures, States & UTs would need to focus on strengthening and streamlining the roles and functions of the BRCs and CRCs and the first step in this direction is an improved selection criterion for the coordinators of BRC and CRCs. The selection criteria should take into consideration experience, qualifications and aptitude for training and research. Moreover, the work of the CRPs and BRPs should complement those of the teachers and school heads, to facilitate further enhancement of school effectiveness. So, even though majority of the Block Resource Persons and Cluster Resource Coordinators are experienced teachers, still their role requires additional knowledge and skills.

At the district level, since DIETs are meant to mentor and supervise the BRCs and CRCs for onsite support to schools and school effectiveness, functional linkage, and work integration between BRC and CRCs with DIETs and district level resource groups would need to be **strengthened. States/UTs would also need to provide for constant skill enhancement of BRC and CRC coordinators through the following measures:**

- i) Monitor and Mentor the conduct of school visits and onsite support to schools by BRCs and CRCs.
- ii) Conduct specialized trainings for FLN and make provision for lending of Master Trainers to BRCs and CRCs, if required.



- iii) Develop an induction program/refresher training course for Nodal Person at the BRCs and CRCs, providing them orientation on job profile and empowering them to accomplish the goals of the FLN Mission.
- iv) Develop a professional mentor linkage with DIETs for the academic capacity building in school improvement, skills related to training design, management and implementation, and knowledge of mentoring.
- v) Encourage access and use of quality resources from online platforms such as DIKSHA, E-Pathshala and SWAYAM.
- vi) Coordinate between BRCs/CRCs and Civil Society organisations in the District who are contributing to the area of FLN.
- vii) Access to adequate academic expertise at the block level through creation of a pool of experts at the district level.
- viii) Collaborate in the development of School Development Plan and matters relating to teacher professional development.
- ix) Provide a professional forum for meeting and discussing academic issues/concerns and providing requisite feedback/suggestions.

12.4 Regular and Periodic Monitoring and Mentoring of Schools

One of the major academic roles of the BRCs and CRCs under the erstwhile SSA and now SamagraShikshais regular school visits for addressing emerging pedagogic issues and issues related to school development. In fact, School improvement is considered an integral part of the work of the BRCs and CRCs. Therefore, it is important to ensure regular and periodic monitoring and mentoring of teachers through on the spot academic support and guidance. Under this, BRPs and CRPs are expected to frequently visit schools to conduct observations, follow up on trainings, check records, have discussions with teachers to clear ‘hard spots’ and provide model lessons. This periodic monitoring and mentoring of schools are not just a mechanism of accountability but it is also as much about improvement through change. Hence, a critical indicator of the functioning of BRC and CRC under the FLN Mission would be the nature and extent of contact they have with the stakeholders of the programme. In this respect, the

Nodal person to be nominated at the BRC level who would act as a supportive and vigilant supervisor for all dimensions of activities with respect to FLN

frequency of visits made by the functionaries to schools and meetings held with stakeholders should provide some indication of not only the extent of academic inputs provided but also effectiveness of the monitoring and supervision activities.

Therefore, to ensure effective monitoring and mentoring of schools by BRCs and CRCs for the FLN Mission, the following points may be kept in perspective:

- i) School visits must be planned and decided in advance to facilitate systematic and effective coverage of schools.
- ii) Schools' visits to include actual activities with children and discussion with Teachers. During the visit, parents may also be invited or interacted to discuss the progress of FLN.
- iii) The nodal person at the BRC should act as a supportive and vigilant supervisor for all activities with respect to FLN.
- iv) Classroom observation should focus on usage of engaging, joyful, and innovative TLMs and teaching methods being adopted in the classrooms.
- v) While conducting classroom observation, the nodal person and CRP should be familiar with the lesson plan.
- vi) Develop a specific criterion for observation and providing feedback, in the form of a checklist keeping in view the goals of FLN.
- vii) Observations and specific feedback should be shared and discussed on the day of the visit itself.

NIPUN Pocket of Learning Excellence (NIPUN POLE)

- To be declared at district level
- Schools who feel they have achieved the targets/goals may declare themselves and invite school visit from BRC/CRC and FLN block level nodal person to verify and suggest improvements.

Chapter 13

LEVERAGING DIKSHA/NDEAR: REPOSITORY OF DIGITAL RESOURCES



HIGHLIGHTS

This chapter discusses the

- Concept of DIKSHA as the one nation, one digital platform for School Education
- Using DIKSHA to enable Student Learning: Energized Textbooks, Learn@Home, Quiz
- Expanding the Scope and Use of DIKSHA for FLN
- Using DIKSHA to enable Teacher Professional Development: Defining Training Objectives, Stitching together Courses, Onboarding of Teachers, Training & Communication and Outreach
- Digital Contents: For Literacy & Mathematics, Question banks for School Based Assessments

13.1 Understanding the Concept of DIKSHA

DIKSHA (Digital Infrastructure for Knowledge Sharing) is the national digital platform for school education in India, an initiative of National Council for Education Research and Training (NCERT) and Ministry of Education. DIKSHA was launched on 5th September 2017 and has since been adopted by 35 States and UTs as well as CBSE and NCERT and by crores of learners and teachers. DIKSHA aims to democratize access to digital learning for students and teachers irrespective of their socio-economic backgrounds. It is in the form of a free mobile application and web portal available for use anywhere, anytime and for anyone.



One DIKSHA, multiple Central and State programmes



As part of PM eVidya announced under the AtmaNirbhar Bharat programme, DIKSHA is the ‘one nation: one digital platform’ for school education in India. DIKSHA is a platform for diverse and rich curriculum linked e-content for all states/UTs accessible across digital devices (laptop/mobile/desktop/tablets, TV, and radio) to have coherence of access and learning experience. At the same time, DIKSHA is designed to inherently support states/UTs to exercise autonomy, independence and choice to craft and run learning programs to suit their needs and achieve their goals, by using solutions, tools, and data on the platform. This is now running various programs like e-contents, energized textbooks, and teacher professional development on DIKSHA for students and teachers. Under DIKSHA, a separate vertical for FLN resources will be developed to assist and mentor States/UTs and teachers.

13.2 Using DIKSHA to Enable Student Learning

Some examples of the programs adopted for student learning are:

13.2.1 Energized Textbooks

Energized Textbooks (ETB) are textbooks embedded with QR codes. These QR codes are linked to digital resources curated and/or created by the state/UT. On scanning these QR codes with the DIKSHA app, corresponding content linked to the same, shows up. These digital resources can range from explanation videos, interactive assessment items, worksheets, reading materials, etc. More than 50 crore textbooks across the country have been embedded with QR codes.

13.2.2 Learn@Home

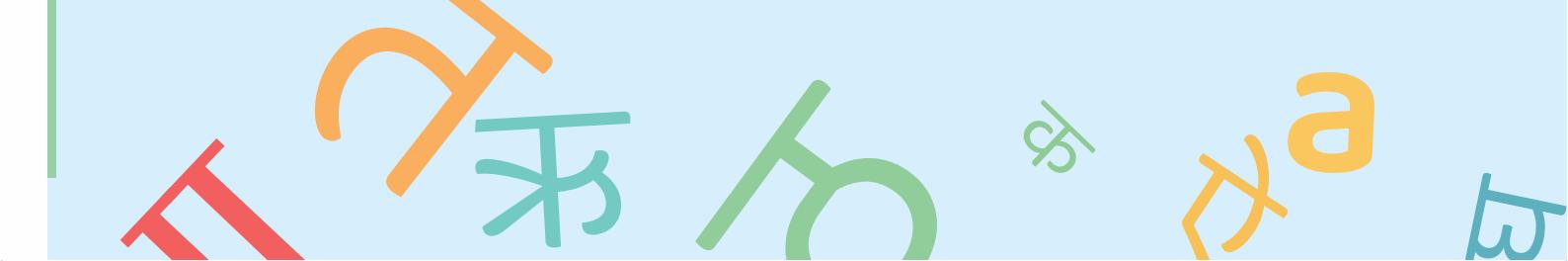
Learn@Homesuite of programs are designed for targeted interventions based on the needs of the state/UT. The objective is to assist student learning at home via content packages curated by experts that are bite-sized, continuous, and sequenced as per the school calendar.

13.2.3 Quiz

These programs leverage the assessment functionality on DIKSHA to stitch together quiz series based on the objective of a state/UT.

13.3 Expanding the Scope and Use of DIKSHA for FLN

DIKSHA portal shall be integrated with the new Curriculum Framework by the States/UTs, by focusing on teaching-learning e-content in local language/s on FLN with learner-centric,



outcome-centric pedagogy. Access to technology will contribute to equity and will help standardize the learning levels of the nation. States/UTs would be required to make efforts to bring use of technology to every primary school. For learners, high quality content will be prepared and uploaded on DIKSHA for Mathematics and Reading Literacy in English and Hindi by NCERT (based on NCERT curriculum) and in local languages and context by SCERTs along with standardized items at least 500 per subject, per grade to measure each Learning Outcome of each subject of each grade and thereby assessing grade level of proficiency in each of these areas.

Availability of teaching-learning materials:

- A variety of learning resources and play Materials will be made available including instructional materials, like big books, conversation charts, posters of poems, letter cards and akshara grids, dice, word cards, simple decodable texts and reading cards for language and number cards, ganit- mala, blocks, calendar, etc. for mathematics. Most importantly, primary classrooms need to have simple, illustrated and graded storybooks for children to read at different stages of their reading development.
- Various teacher training resources including training modules, supportive materials for the training sessions, like handouts, videos, reading resources, QR coded/energized teaching-learning materials to demonstrate and use for practising the instructional strategies, teacher handbook, activity booklets etc. will also be made available.
- SCERTs will develop the same content in local languages and context.

13.4 Using DIKSHA to Enable Teacher Professional Development

DIKSHA has a ‘Courses’ functionality for Teacher Professional Development. The Courses functionality enables any state to design and stitch together online courses for their teachers, roll it out to their registered teachers, provide certificates on completion of the same and get data for each teacher. The following stages are involved in conducting a successful Teacher Professional Development program on DIKSHA:

- a. **Defining Training Objectives** - This helps a state identify the objectives based on the analysis of the training needs of the teachers.
- b. **Stitching Together Courses on DIKSHA** - Leveraging the ‘Course Creation’ feature, the state team of course creators can string together published individual



digital resources on DIKSHA like videos, PDFs, assessment items, to create a course.

c. **Onboarding of Teachers** -

Onboarding of teachers is crucial to leverage the Courses functionality. Only onboarded/registered teachers can enrol in courses opened by the state and will be eligible to get certificates post course completion.

There are two methods of onboarding teachers by a state depending on their digital infrastructure. If the state has an active teacher management portal with logins, a Single Sign On can be established. This will enable teachers to use the same username and password for signing into DIKSHA as their teacher management portal. The other method is for a teacher to self-signup onto DIKSHA.

d. **Training the State Support Teams** - Once the courses are stitched together and the teacher onboarding plan is in place, a support team is trained in the state to become the first level of contact in case of any queries and issues. This team is trained on the course objective, structure, content, and how to handle queries and issues coming from teachers.

e. **Communication and Outreach** - Consistent communication efforts are required to address specific issues coming from teachers from the field and increase awareness and reach around the programs.

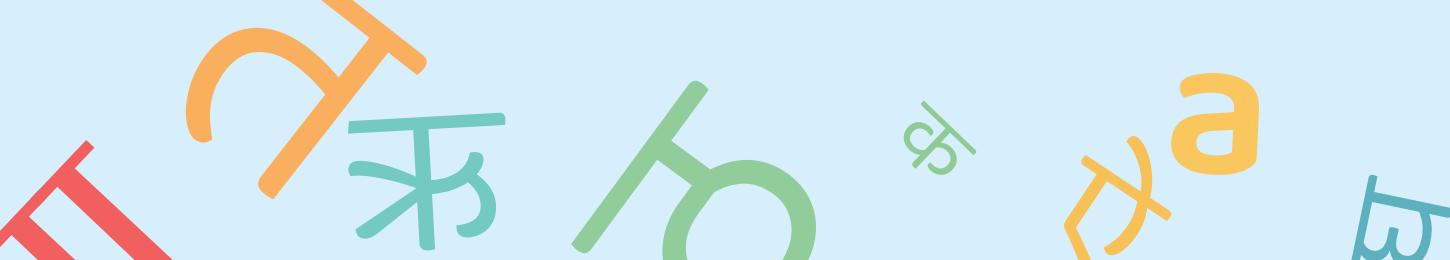
Digital Lesson for Teachers

In addition to content for students, DIKSHA can also be used to house digital lesson plans for teachers. These lesson plans can be easily accessed by teachers via the DIKSHA mobile application. It is important that the lessons be activity-based and have examples which are relatable for the children

13.5 Digital Content for Literacy

To support achievement of foundational literacy, the following types of content can be used on DIKSHA -

1. **Read Along Type** – A curriculum text can be converted into digital read along material. The student can read along with the text highlighter. This is useful for primary grades where reading fluency is the focus area.
2. **Reading Comprehension Type** – A passage can be selected from the curriculum text and questions can be asked on the same to test the student's comprehension abilities.
3. **Grammar Question Bank** – Based on the grade and corresponding skills, interactive grammar questions can be linked to ETBs on DIKSHA with an immediate



feedback option.

4. **Availability of children's literature:** A variety of learning resources including story books, magazines and comics published by NCERT, National Book Trust (NBT), Central Institute of Indian Languages (CIIL), SCERT and other Central and State Government agencies as impeccably sourced and curated from other sources may be uploaded on DIKSHA. States and UTs are encouraged to develop their own story books including local lore and folk tales through SCERTs and DIETs by involving teachers, parents, and others.

13.6 Digital Content for Mathematics

To support achievement of foundational numeracy, it is important to build a holistic package for mathematics digital content so that it helps students understand a concept and its applicability in its entirety. Below are certain types that can be leveraged:

- a. **Explanation Video Type** - Short videos-based explanation content for concepts and hard spots.
- b. **Misconception Video Type** - Short videos elaborating on the misconceptions that students generally have in a specific topic or domain.
- c. **Real World Example Videos** - Short videos showcasing application of Mathematical concepts in real life scenarios.
- d. **Assessment Banks** - Scaffolded assessment items on specific topics for students to build the habit of practice. These can be created as objective interactive questions on DIKSHA.

Based on data on DIKSHA, these digital content types can have the following attributes:

- a. Should be linked to Learning Outcomes or hard spots.
- b. Videos should not be longer than 5-6 minutes.
- c. All content types should be linked to ETBs on DIKSHA for easy consumption.
- d. Assessment items can be of various types. Items can be created on DIKSHA in the following formats - match the following, fill in the blanks, multiple choice questions.

DIKSHA and NDEAR tools can be used for following areas to contribute to efficiency and effectiveness of various interventions towards holistic development of child and capacity building of teachers/school leaders to help achieve the outcomes:

- a. For developing and using of School, teacher and children registries which becomes the backbone of all systems including School based assessment and national assessment systems
- b. Credentialling systems that will be used for credentialling achievements including training achievement by teachers and school leaders.
- c. For managing national/state/school level outcome achievement towards Holistic development of children
- d. For periodic assessment, semester assessment analysis, Holistic progress card data management - Analytics, visualization and insight dissemination
- e. For school accreditation, school improvement framework, school leadership development and school management tools

Diksha and NDEAR tools and frameworks also enable for ecosystem participants including CSO/NGOs and market players to effectively participate in the FLN mission.

Asad had been struggling to explain the water cycle to his niece Saira. She was all of 5 and so many of the other children seemed to understand it. She did not even seem to care. That is when someone shared a movie clip with him where it showed how individuals and communities suffer hugely when the cycle is broken. Saira was always a sensitive child with a strong social conscience and she immediately related to the movie. She wanted to better understand how water makes its way back to the earth. That is when Asad used a simulation he found on the web where you could play with different elements of the water cycle and see its impact. Saira loved playing with the model. Soon enough she was the most vocal in class when it came to the water cycle!

Useful Resources

Guidelines for the development of eContent for schools and teacher education
<https://ciet.nic.in/upload/GuidelinesforeContent3.pdf>

PRAGYATA guidelines for digital education
https://ncert.nic.in/pdf/announcement/PRAGYATA_Guidelines_English.pdf

Guidelines for the Development of e-Content for Children with Disabilities
https://ciet.nic.in/upload/CWSN_eContent_Guidelines_MoE.pdf

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Chapter 14

PARENTAL AND COMMUNITY ENGAGEMENT



HIGHLIGHTS

This chapter discusses the

- Various ways of engaging Families and Communities: Campaigns & Events
- Roles and Responsibilities, Monitoring and Incentives
- Public disclosure of assessment information to focus on better Learning Outcomes.
- Home Based Learning Support: Content delivery, Activity completion, Activity submission and verification, tracking progress & Ensuring sustained motivation.

- a. **Engaging Civil Society:** Community participation would be a central and overarching factor in planning, implementation and monitoring the interventions of FLN mission. The National Mission on FLN would work towards enhancing participation of the community, parents, teachers, and children. To facilitate such a massive mobilisation and solicit active participation, state and district FLN PMUs/offices would need to join hands with experienced and active civil society organisations. Civil society organisations have had a long history of involvement in the education sector to which they have significantly contributed to variety of ways. For FLN mission to be effectively implemented, the space for genuine long-term partnerships based on mutual respect must be evolved. Critical to ensuring this would be to legitimise and institutionalise the role of civil society organisations within the institutional and other mechanisms that will be put in place. In other words, the engagement of civil society needs to be systemic and not project driven. Partnerships should be comprehensive clearly defining the scope for civil society organisations for ensuring implementation of the Mission.
- b. **The need for Community and Parent Participation in Student Learning:** In India, the school system's capacity is low due to problems like high absenteeism that makes the involvement of parents and community even more critical to provide extended academic support. Even after entering the formal schooling system, family and community continues to be the place where major learning takes place as children spend more than 80% of their time at home. Additionally, ensuring effective community involvement, especially in early years can make local context, culture, and language an integral part of a child's education that positively influences learning levels. Despite this critical importance, limited systemic interventions to strengthen this element are evident in the country today. The COVID-19 pandemic has demonstrated, even more clearly, the limitations of the formal schooling system. The time is ripe to involve parents and the community members as active stakeholders in children's education.



14.1 Various ways of engagement

There are many ways of engaging families and communities:

- Periodic events in the school or community
- Ongoing interactions in class (for example, one day a month for grandparents to visit children in school)
- Regular activities that can be done in the community (libraries, wall writing, display of children's work, Chaupal reading demonstrations) and Home activities
- Home visits
- Arrange workshops on parenting.
- Constantly send information about the activities in the school, and child's progress to Parent.
- Inform the parents about the expected learning outcomes, portfolios, home assignments, etc.
- Send portfolios every week/periodically to the parents for review and feedback.
- Inform parents about what kind of assistance the child needs at home for learning.
- Wherever possible, Newsletters, e-mails, memos etc. can be a regular feature.
- Develop a list of parents who are ready to volunteer and take the benefit of their service for various activities of the school, such as for playing games, taking children for field visits, sports/art exhibitions, annual function, etc.
- Consider having a parent representative for your class, who can help you with the PTMs and activities in class.
- Consider having specific events only for parents.
- Involve willing parents in the community outreach work, mainstreaming Out of School children/drop outs undertaken by the school

Campaigns, events, home based support will increase parent/ community involvement in learning

- Awareness campaigns on importance of FLN, behavioural change in parents and community.
- Explore varied ways: Tech-based – Mass Media, Radio, TV, SMS, IVRS etc.
- To be conducted by School Education Departments involving Teachers, Head Teachers through reading events, parent teacher meetings
- Involvement of School Management Committee, Gram panchayat, Mothers Groups, Anganwadis.

- Involvement of Professional Learning Community (PLC) for Language and Maths at Districts Level.

How to involve the whole community: An Example of Jharkhand

To understand the learning experience of children in the early years, and the causes of school dropouts, a team was formed and named Mother-tongue based Active Language Learning (M-TALL) in the State of Jharkhand.

- Community Resource Groups²² (CRG) were constituted with the help of BRC/CRC and DIET in each school/cluster/block/district by involving storytellers, singers, dancers, musicians, riddle makers, toymakers, comedians, etc.
- The CRG visit schools and conduct various activities in collaboration with teachers, bringing a new dimension to the pedagogical processes.
- With their rich skills, the community resource persons may find a scope to demonstrate their knowledge and skills in guiding children towards the learning goals of the class. This community-based approach enriches the school's pedagogical processes significantly.
- Meetings between schools and the CRG- linking textbooks with the roles of the resource persons in facilitating pedagogical processes in different subjects.
- Schools may develop an academic calendar indicating which group would visit a particular school with necessary preparations to work with children and enable them to acquire desired knowledge and skills.

14.2 How to conduct Campaigns and Events

Many beliefs continue to persist among parents and communities that act as barriers to their involvement in child's education for e.g., that they do not have a role to play in education if they themselves are not literate, or that their role ends at sending their child to school. Such widespread misconceptions can be tackled by an effective and sustained campaign to encourage communities and parents to believe that their engagement outside the school can significantly impact the learning levels and socio-cognitive skills of children.

²² Concept of CRG retrieved from 'Learning in a Multilingual Context' by Binay Pattanayak article published in 'Learning Curve', 2019 Azim Premji University. Jharkhand is a multilingual state, home to more than thirty-two indigenous communities who use around nineteen indigenous and regional languages.

'School Readiness Mela'

(for mothers of children entering Std I)

This event may be organized in the village or community a few months before enrolment into Std I and once again once at the time when Std I classes begins. In the community based mela, children and mothers participate in different activities (walking on crooked lines, jumping rope, folding paper, categorizing objects, arranging objects by size, colouring, counting, recognizing colours, shapes, numbers and letters). Such activities span a range of cognitive and developmentally appropriate foundation skills. The demonstrations and active participation of mothers helps everyone in families and in the community to see that school readiness is based on a breadth of skills. Mothers and other family members also practice such activities.

Children's progress is visible in the second mela. Anganwadi workers, Std I teachers and mothers participate actively in such events.

Concept source: PRATHAM

The mission can draw learnings from the past similar large scale community mobilization initiatives. One of such is 'Swachh Bharat Mission' (SBM). A study conducted by Gates Foundation mentioned that on an average, every rural Indian was reached by SBM-Grameen messages at least 3,000 times in the last five years. Led personally by the Prime Minister, SBM ultimately succeeded because the people of the country adopted and made this program a Jan Andolan or people's movement.

The FLN mission can succeed by promoting a sense of ownership at all levels such that households and the communities can be empowered to act as an extension to school-based education. To sustain this engagement, a variety of events can be planned at regular frequency with participation from every stakeholder in the ecosystem including, government and private schools, local elected bodies, village, parents, and the child.

Awareness activities	Frequency	What	Who	Participants
FLN week: To be celebrated for one week from the day that the schools begin for first time school goers entering Balavatika and/or Grade 1.	Annually SMCs/SDMCs	Community event: community based mela, children and mothers participate in different activities (walking on crooked lines, jumping rope, folding paper, categorizing objects, arranging objects by size, colouring, counting, recognizing colours, shapes, numbers and letters)	Gram Panchayat/ Urban local bodies	Parents, children, grandparents, family and community members
		Shiksha Samvad: Awareness event		
		Parents, children, family and community and elected members		
Awareness messaging & Summer camp	Fortnightly/ monthly/ Annually	Reading/Numeracy fun activities	Schools State education department DIET students/ Volunteers	Parents, children and teachers
		Messaging through Radio, IVRS, SMS		Parents and Children
		Activity based fun FLN instruction Other activities		

Some learning's across the country: Gram Panchayats may undertake various activities such as: paint walls with learning topics/illustrations, toys and easy-to-read book libraries, blackboards in public spaces in the community to write stories for children or for children to draw, space for displaying children's work etc.

How to build parent engagement:

- Mothers' Groups: For each grade, in each hamlet or Mohalla, mothers' groups can be formed for children who are in the foundational stage. These groups may meet periodically to do various learning activities (basic reading and arithmetic activities) together along with the children. They are also a platform on which teachers or Anganwadi workers can provide guidance in the community for building connections.



- Smooth Transition of students: To ensure smooth transition from Anganwadis/pre-school to Std I, in the months preceding enrolment into Std I, Anganwadis teachers and Std I teacher must meet and visit each other's location. If possible, all children who will be entering Std I in the coming months can visit Std I school, a few months prior to enrolment. Suggested guidelines for Anganwadis instruction and Std I teacher for collaboration can be outlined by States, UTs and SCERTs.
- Role for PRI (Panchayati Raj Institutions): PRIs to play an active role in creating awareness among the parents and community. At block level, interested sarpanch/ward members can reach out to FLN nodal person for organizing FLN event i.e., reading together, learning together, and conducting various activities together.
- In addition to this, the community can help the children learn new things as part of FLN:
 - Reading and Telling Stories to the children at schools/Chaulal where grandparents and youth can play an active role in this.
 - Orienting children on different types of skills and work (exposure): Carpenter, Shopkeeper, Tailor, Doctor, etc. in the village can invite or address the children and explain what he or she does.

14.3 Roles and Responsibilities, Monitoring and Incentives

Execution	Monitoring	Incentives
1. FLN week: GP + SMCs/SDMCs + School (teachers/HMs)	Gram Panchayat/ Urban local bodies (ULB)	<ul style="list-style-type: none">School education department: MoE can recognize and showcase States with most impactful and innovative parent engagement awareness campaigns, States can do the same for Districts/Blocks/Clusters/Schools.
2. Awareness messaging: School education department	School education department	<ul style="list-style-type: none">Funding for organizing community events; best GP/ULB can be recognized at the district level by DM.
3. Summer camp: DIET students + Volunteers	Teachers	<ul style="list-style-type: none">DIET students, Volunteers: Grade hike, certificate of appreciation
4. Reading promotion events	Gram Panchayat/ Urban local bodies	



14.4 Public disclosure of aggregated assessment information

To focus on better learning outcomes, communities and parents should be made aware of the learning levels of children. This can be a step towards initiating a healthy interaction between parents and teachers about learning levels of children. To this end, one community awareness mela for all elementary school going children can be organised annually during the FLN week or any other date as decided by the State. All schools including government and private schools in the area should be invited to participate in this mela. The mela/event can be organised and spearheaded by the Gram Panchayat/ULBs, in presence of parents and the community members/SMCs/SDMCs. The progress of the overall performance of schools, including new pedagogies, activities undertaken, children's feedback, improvements undertaken in TLM, etc. should be showcased or publicly displayed with the help of attractive documents/portfolios/photographs/films/audios/shows by students/etc. Care must be taken to ensure that individual progress of children must not be on public display. Organising this in the presence of parents can ensure reliability of the assessment data, as parents are better aligned to know the accurate learning levels of their children.

14.5 Home Based Learning Support

To enable all parents to provide home based learning support to children, technology based and in person models can be deployed. Every household can be provided with easy to do fun based activities and workbooks. To ensure regular engagement, automated reminders and instructions through pre-recorded calls and videos can also be sent to parents. Additionally, community level support by the SMCs/SDMCs can be provided to parents regularly. As stated in the New Education Policy (NEP) 'It will be made far easier for trained volunteers - from both the local community and beyond - to participate in this large-scale mission. If every literate member of the community could commit to teaching, it would change the country's landscape very quickly'. The dedicated FLN time in schools can be supplemented at the household level, where parents can be motivated to invest time, daily or weekly to do activities with children.

14.5.1 Content delivery

Initially, home based activities and worksheets can be sent to every household to enable healthy and sustained engagement between parent-child. Both technology-based and in-person delivery mode can be deployed by the school authority to deliver the activity kits. Parents can receive content through DIKSHA Energised schooling, smart phones, TV, IVRS



and radio. Children who do not have access to such mediums at home can receive a physical hard copy of the activity kit at school.

14.5.2 Activity completion

To ensure that the children complete all the activities on a regular basis, interesting engagement strategies can be deployed. For example, home-based engagement can be packaged as the ‘teach your parent’ concept, where children teach new concepts to parents through fun activities at home. This is intended to increase the household’s ownership towards education which by extension may also increase the confidence of parents to engage with the child’s education. If need based support is required at home to complete the activities, parents may contact the village committee to get assistance.

14.5.3 Activity submission and verification

Parents opting for technology-based delivery can simply upload the picture of the activity on WhatsApp/any other platform. Further, videos of fun home-based activities can also be uploaded on the group. The underlying assumption is two-fold: at one level, parents who normally would not have taken part in a similar activity, may feel inspired by seeing other parents engaging actively; secondly, children can see and learn, how their peers are performing and do peer verification by learning and doing from others.

Parents who have not opted for a technology-based model, can be actively nudged to take part in the monthly parent group meetings that can be conducted by the SMCs/SDMCs. The objectives of the monthly parent group meetings are as follows:

- a. Sharing the activity completion status and progress made by children.
- b. Supporting parents by resolving their challenges and helping them engage effectively at home.
- c. Sharing best practices and approaches adopted by parents at home to ensure peer motivation and learning.

14.5.4 Tracking progress

Regular tracking of activity completion and academic progress by parents can act as a great diagnostic exercise to know the strengths and weaknesses of the child. To this end, multiple ways can be deployed to track progress. For technology-based model, an automated monthly report card can be sent on the WhatsApp group to allow for convenient tracking. Alternatively, a parent tracker could be made available as part of the activity toolkit for parents to easily track the performance on a regular basis.



Parents can be motivated to share the ‘tracking progress’ report of their children at the monthly parent group meetings. This may induce healthy competition and nudge parents to share learning’s at the community level.

14.5.5 Ensuring sustained motivation

SMCs/SDMCs can choose most active parents who can be awarded (certificates, medals etc.) by the gram panchayat. The criteria of this award could be activity completion rate, accuracy status, enthusiasm shown by parents/child etc. The family that gets this award by the Gram Panchayat can be called as ‘NIPUN Parivar’. This can be contextualised to the local language and culture.

The panchayat in Lakhimpur Village wanted to understand the reading levels of the young children in their village. They found a tool which helped them ask a few simple questions - asking a child to recognise a letter, read simple words, read sentences, and read a small paragraph. They realised that most of the children in age group of 5 to 8 were in the same lower level. The Lady Sarpanch Zunidevi decided that something was needed to be done about this on priority. She announced a 100-day challenge for the village - every household would create a reading wall in their house. Every family had to commit to work together and do one activity a day. She worked with the local school teachers and came up with game ideas and announced one game idea a day - this was announced at 6pm every evening. Once the activity would be completed - the family would have to tick the completion on the reading wall. With this level of involvement of the whole Gram Panchayat, there was no way that the children would not outshine in their Literacy skills.

Useful Resources

Abadzi, Helen. 2006. Efficient Learning for the Poor: Insights from the Frontier of Cognitive Neuroscience. Washington, DC: World Bank. ©World Bank. <https://openknowledge.worldbank.org/handle/10986/7023> License: CC BY 3.0 IGO

Guidelines for Parent participation in Home-Based Learning During School Closure And Beyond, 2021, Ministry of Education

https://dsele.education.gov.in/sites/default/files/update/MoE_Home_Learning_Guidelines.pdf
Pattanayak Binay, Learning in a Multilingual Context, Learning Curve, August 2020, https://archive.azimpremjiuniversity.edu.in/SitePages/pdf/Publications/Learning-Curve/Issue_7/Binay_Pattanayak.pdf

Chapter 15

MONITORING AND INFORMATION TECHNOLOGY FRAMEWORK



HIGHLIGHTS

This chapter discusses the

- Monitoring Framework for the National Mission on FLN
- Key Performance Indicators (KPIs) along with Indicative Data Points
- National Digital Education Architecture-NDEAR & Applying NDEAR to FLN
- Framework and Architecture for FLN Data Collection and Management

15.1 Monitoring of activities under the Mission

The Department of School Education and Literacy will develop an online monitoring system for the mission. Effective monitoring of outcomes will be a prime focus to be measured at all levels from National to School. The Mission at the National level, State Level and district level will monitor Mission activities through IT based solutions which shall include field level child wise monitoring.

The monitoring framework proposed will essentially be of two types:

- i) **Annual Monitoring Survey:** This shall be conducted through National Assessment Centre PARAKH/NCERT at the national level through third party surveys, focusing on monitoring of progress across the country.
- ii) **Concurrent Monitoring:** There shall be a concurrent monitoring of the implementation of the Programme. This should ideally use Information and Communications Technology (ICT) to feed data into the national MIS.

15.2 National Digital Education Architecture- NDEAR

15.2.1 An Overview:

NDEAR has been conceptualised as a National Digital Education Architecture with a vision to create a “Unifying national digital infrastructure to energise and catalyse the education ecosystem”. Essentially, it is a technological framework that would aim to enable existing systems to upgrade and become interoperable, while at the same time making available building blocks for the creation of new tools and solutions. In a sense, NDEAR is about energising creating a digital ecosystem for education - essentially an ecosystem which “is a distributed, adaptive and open socio-technical system with the properties of self-organization, scalability and sustainability”.



Vision Statement of NDEAR

"A globally pioneering effort in education - A unifying national digital infrastructure to energise and catalyse the education ecosystem"

NDEAR is federated, unbundled, interoperable, inclusive, accessible, evolving; which aims to create and deliver diverse, relevant, contextual, innovative solutions that benefit students, teachers, parents, communities, administrators and result in timely implementation of policy goals.

15.2.2 Applying NDEAR to FLN

The priorities for FLN are stated in the goals and these can be achieved by leveraging the existing building blocks such as DIKSHA and UDISE++, which may be enhanced by leveraging open-source tools and solutions for registries and identities while at the same time following the principles and standards set down by NDEAR. The following process may be followed:

1. An assessment may be made of existing building blocks that maybe upgraded and leveraged for the sake of FLN.
2. The missing building blocks required maybe developed to serve the policy goals while following NDEAR principles.
3. The NDEAR institutional framework led by MoE may identify the areas where standards, specifications and policies need to be put in place to achieve the above-mentioned policy goals - namely open data policies; data protection and children's data privacy and protection policies; data sharing policies; standards for the development of interoperable registries among others; policies for ecosystem engagement.

15.3 Framework and Architecture for the FLN Data Collection and Measurement

- The data architecture needs to include the following.
 - Easy and automated ways of capturing data digitally from schools
 - Automated upload of the data to state/national systems
 - Emission of such data from the state systems in a standard format amenable to analysis
 - Generation of actionable metrics and visualizations by an analytics system
 - Automated dissemination of analysis to stakeholders within the education hierarchy to enable timely action.

- System should enable automatic data collection and collation from multiple sources and at different frequencies and levels without need for special collection drives, pulling of data from different systems, synchronization, manual uploading etc.

15.4 Data Sources

The data required for tracking the progress of children will be generated through two kinds of assessments:

- School based Assessments through Holistic Progress Cards
- Large Scale Assessment (including State level assessment through SAS, Third party assessments by State and National level surveys or NAS)
- For school-based assessment of FL&N, a student progress card will be designed by NCERT and SCERTs which would be holistic, 360-degree, multidimensional report of progress, that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, socio-emotional, and psychomotor domains as well as in acquiring of life and learning skills, and values. This progress report will be based on self, peer, teacher and parent assessment of various skills and competencies acquired by the child.
- Child wise data would be required which would be aggregated and visible through appropriate dashboards at school, block, district, state, and national level.
- An App based Rubrics is required for Holistic Progress Card to focus on Knowledge, Competencies/Skills, Attitudes, Values, etc. and AI based analysis. This will utilise the national level HPC prepared by CBSE and NCERT as the basis of developing the State and UT level HPC in the local language.
- HPC should be such that the teacher must fill it up at least twice/thrice in a year.
- In addition to school-based assessment, there will also be sample based National Achievement Surveys and State Achievement Surveys which will be held in alternate years (NAS in 2021, 2024 and 2027; 2022 and 2025 for Grade I, 2023 and 2026 for Grade II). These surveys would assess the improvement in learning outcomes and would also corroborate the data received from school-based assessment.
- Further, for SAS, third party assessment and NAS, school wise data will be required which can be aggregated through dashboards at district, state, and national level.
- The activities envisaged and their Key Performance Indicators along with indicative list of data points are mentioned at Annexure II which may be taken into consideration while preparing the building block of NDEAR for FLN.

Chapter 16

SUSTAINABILITY OF THE MISSION



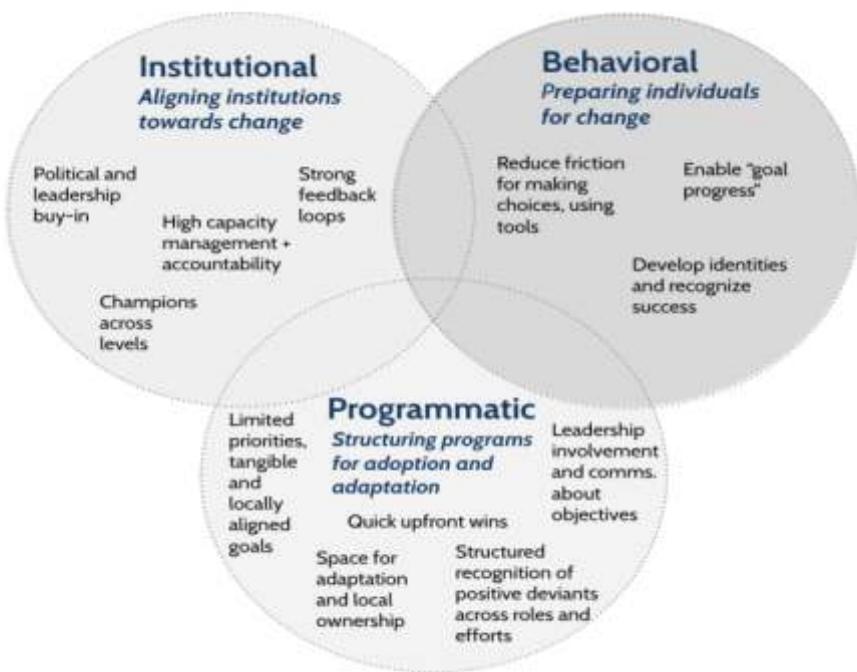
HIGHLIGHTS

This chapter discusses the Sustainability of the National Mission on FLN, including Sustainable and Successful Government Programs and the Risks and Potential Mitigation Strategies involved.

Policy typically introduces change by mandate and structural reform. However, policy adoption and sustainability rely on change coming from the bottom up - through changed attitudes, knowledge, and behaviours among frontline workers like teachers, administrators, and communities. Even after receiving training or information, behaviour science shows that people do not always find motivation to act, or do not follow through on intent with action. Strategies to drive sustainable change in a program may include persuasion to address individual biases, social support, and norm-building among a group, reducing friction in decision making, and improving the motivation of key stakeholders.²³

Behaviour change interventions based on these strategies have successfully been applied in national health and sanitation schemes, e.g., Swachh Bharat, Poshan Abhiyaan as well as in COVID-19 advisories on “Navigating the New Normal” developed by NITI Aayog. However, for a program/mission to be sustainable, alongside behavior change interventions, they need change management - organizational or institutional systems that track, support, and innovate to produce change at scale (see **Figure** below).

Types of change needed for mission sustainability



²³ Datta and Mullainathan, 2014. Behavioural Design: A New Approach to Development Policy.



A behavioural lens is particularly needed in education because various obstacles to change may exist within the system:²⁴

- i) Foundational learning outcomes in education can take time to meaningfully change
- ii) Change makers in education may also be relatively isolated in traditional settings, with teachers alone with their classrooms and parents with their children outside of trainings or community meetings. This may create barriers to norm- and motivation-driven change.
- iii) Education is a generational experience that most stakeholders have a direct experience of, creating implicit consensus to maintain status quo because of shared tradition
- iv) Existing barriers in mindset& beliefs:
 - o Teachers and parents may both believe that the early years are not critical to education
 - o Teachers may believe certain students cannot learn because of their circumstances
 - o Transfer of responsibility is common, with teachers citing limited support from parents.
 - o Low income and low literacy caregivers may feel limited self-efficacy

Given these factors, behavioural interventions at scale may be critical in supporting the achievement of acquiring foundational learning skills. Even with the best information and resources available, the uptake of the National Mission's ideas and its sustainability depend on the extent to which key stakeholders regard the mission's goals as their own and change entrenched behaviours.

16.1 Sustainable and Successful Government Programs

16.1.1. Polio Eradication

The Global Polio Eradication Initiative considered India to be the most difficult region of the world in which to eliminate Wild Polio Virus (WPV). Against significant odds, India was declared polio-free in 2014. Challenges included high population density, rampant malnutrition and diarrhoea, population mobility and difficult to reach areas, and high rate of WPV circulation in some states.

²⁴ RTI International, Managing Change in Education

Key Program Elements

To combat WPV, India committed to eradicate polio in 1988. The National Immunization Day program, also known as the Pulse Polio Immunization Program, was launched in 1995. In 2004, the government redoubled efforts to eradicate polio, including additional activities like up to 10 supplementary polio immunizations drives per year, which led to every child being successfully tracked and vaccinated. Drivers of the program's success included a range of activities across the 3S framework²⁵:

a. Salient and Simple:

- i) Community organizations and religious figures mobilized to spread awareness and educate against misconceptions around the vaccine through awareness camps. Film industry figures also roped in.
- ii) Simple measures to ensure targeting: use of bindis to count # of children under 5 in a household, mapping missing children, new-born tracking all increased coverage significantly.,

b. Supported to Succeed:

- i) Deep ownership in the government, starting from the PMO office, which directly supervised and periodically reviewed program performance
- ii) Formation of Expert advisory Group, including private sector participants such as representatives of civil society organizations, academics, and independent polio experts
- iii) Chief Ministers and Cabinet Secretaries directly reviewing progress through monthly video conferences with District Authorities
- iv) District Task Forces led by DMs reviewed monthly progress on polio eradication

c. Shared and Sustained:

- i) Award from Rotary International to PM and CMs known as "Polio Eradication Champion Award" drove recognition for high level stakeholders who achieved goals

16.1.2 Swachh Bharat Mission

The Swachh Bharat Mission was launched in 2014, with the objective of making India open defecation free by 2019. The mission also aimed to end manual scavenging, and effect behaviour change around cleanliness and sanitation. It is billed as the world's largest behaviour change program.

²⁵ Thacker, Thacker and Vashisht. "Polio Eradication in India: The Lessons Learned".



Key Program Elements

- I. Going into "Mission Mode" in the Ministry of Drinking Water and Sanitation
- ii Activating the PM-CM-DM-VM Framework
- iii. Creating a ground task force
- iv. Building Salience through Mass Media
- v. Keeping the Buzz Alive
- vi. Sustaining the Changed Behaviour

Salient and simplified messaging through mass media as well as interpersonal interactions, **support to succeed** by "keeping the buzz alive" through aids to monitoring and progress tracking, and **sustaining change** in the long run through constant recognition, identification of new problem areas, and course correction.

i. **Salient and Simple:**

To build salience, they involved local and national ambassadors, students, young professionals in a "Jan Andolan" to build norms and used constant reminders through new events and collaterals over time. To **simplify**, they used simple, local examples to demonstrate the risk of open defecation to the food chain to mothers, social mapping to identify communities at risk, and street plays to demonstrate how a toilet at home could be maintained.

ii. **Support to succeed:**

To keep the buzz alive and support states to succeed, officials at state, district, and village level were engaged. The institution of frequent, high fidelity monitoring (including through Effluent Monitoring Stations and community monitoring and follow up through NigraniSamitis) provided a framework to take initial momentum towards actual change.

iii. **Sustaining change:**

Finally, to achieve sustained change, it followed a two-pronged strategy. First, there was constant recognition of stakeholders within the scheme. DMs, block officers, and Panchayat officers were recognized through national awards based on their progression to being ODF. Additionally, events and occasions were used to recognize stakeholders, e.g., "Swachhagrahis" or community volunteers on Gandhi Jayanti, women Sarpanch on Women's Day. Simultaneously, to sustain change, a detailed program targeting new gap areas was released, called ODF+ - which lay emphasis on solid and liquid waste management, a critical target after toilet adoption to sustain use.

Insights for FLN Mission

- Leadership engagement is critical. Involvement of PMO, CMs, Education Secretaries and District Collectors in monitoring activities leads to attention and prioritization. Near constant monitoring and ownership is needed.
- Influencer mapping at the community level is necessary for full outreach, combining national figures with local influencers.
- Outcome tracking and measurement at a very granular level led to clarity around vulnerable areas, ability to map distance to goal and innovate to achieve goal.
- Strong focus on salience building around a simple, easily understood goal
- High frequency, and highly engaged monitoring system at every level, from the Prime Minister, Chief Minister, District Magistrate and “Village Motivator” levels.
- Importance of recognizing the efforts of key stakeholders.

16.2 National Mission: Risks and Potential Mitigation Strategies

The Government is committed to launching a holistic National Foundational Literacy and Numeracy (FLN) Mission, NIPUN Bharat, in all States and Union Territories with the goal of ensuring universal acquisition of Foundational Literacy and Numeracy skills by the end of Grade 3 by 2026-27.

To ensure that the mission goals are realized in a time-bound manner and are sustainable, it would be prudent to identify upfront the key risks and challenges. This becomes even more crucial as a conventional one-size fits all approach to FLN Mission design and implementation will neither be effective nor desirable. States will need to be given flexibility and opportunity to adapt and contextualise the broad national FLN Mission framework. The role of the MoE will be crucial in terms of clearly defining the mission goals, holding states accountable to them, and providing them with the necessary tools, technical assistance, and funding. To this end, the MoE would also need to consider measures to ensure inter-ministerial coordination and alignment.



COVID 19 Induced Risk: As the MoE plans to launch the FLN Mission, it would be necessary to account for the impact arising from temporary closure of schools (more than 6months). Studies show that children's achievement scores decline by a month's worth of school-year learning during summer vacation. In addition to substantial learning deficits, children's nutrition and socio-emotional well-being are likely to have been impacted. These affects are likely to be higher for children from disadvantaged socio-economic sections as they have limited access to remote learning devices and are at high risk of dropping out when schools reopen due to involvement in income generation activities. Thus, when schools open, governments must use the first three months to focus on foundational skills across grades and on remediation. The MoE and States should plan and prepare for launching the FLN program in year 2021-22.

Some of the key risk factors, suggested approaches, and the potential role of the MoE are summarised at Annexure-III.

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Chapter 17

NEED FOR RESEARCH, EVALUATION AND DOCUMENTATION



HIGHLIGHTS

This chapter discusses the

- Significance of Research and Evaluation in assessing and monitoring Foundational Learning
- Surveys and Research Studies to assess Foundational Learning
- Conducting Evaluations: Process & Impact Evaluation
- Documentation of Good Practices: International & State level Initiatives

17.1 Significance of Research and Evaluation

Need of Research and Evaluation: Research and evaluation plays an important role in assessing and monitoring the progress in foundational learning. Quality research and evaluation will help to learn what ideas and approaches are most effective for improving the well-being of children which would help in achieving a better understanding of children's contexts and needs. Given the diversity of the country and the different pathways that young children take in the early years, research could play an important role in adapting national guidelines to the contexts of states or districts. Research and evaluation studies will be undertaken at national, state, district level and may also be conducted at the block, cluster, and school level in the form of **Action Research** for providing greater insight into issues and problems faced in implementation of the various aspects of foundational learning at different levels. The findings of research studies would help in more systematic planning of the inputs and strategies for the FLN mission. Apart from evaluation of the inputs and how the programme is being implemented, research would also include evaluation of outcomes and impact of interventions provided for specific purposes under Foundational Learning. The priority areas of research at the state level and district level should be decided by the Resource Groups or Research Advisory Committees at those levels.

Monitoring and Measurement: States would need to give priority to developing and implementing, monitoring systems to measure quality related outcomes, such as students learning outcomes, teacher performance, student and teacher attendance rates by gender and social categories, teaching –learning in classrooms; as also parameters for measuring changes in classroom practices, impact of teacher training, efficacy of textbooks and textual materials, use of children's languages, quality of academic supervision provided by BRCs/ CRCs/ DIETs etc. Classroom observations by teachers, researchers, resource persons will help ensure that the programme is dynamic and responsive to the field situation.

Other Agencies: At the national level, apart from PMU, NCERT, NIEPA, and other Universities, research institutions and NGOs should be involved in research projects

concerned with foundational learning. In the states, involvement of SCERT, DIETs, universities and State Research institutions should be encouraged in conducting research on issues of relevance to foundational learning. It is important that the findings of research are widely disseminated and used in planning and improvement of various interventions.

Data Management Systems: For a system to be self-reliant, it needs mechanisms for collecting and using various data to continually improve on existing activities and identify when there is a need for adaptation. Key stakeholders and institutions should continually collect and use data on student learning outcomes, classroom instruction and pedagogy, teacher-student interaction, teacher knowledge/behaviour, school environments and materials, and access to reading materials etc. By analyzing such data, they learn what strengths and gaps exist from the context of grass-root implementation.

17.2 Surveys and Research Studies

To assess foundational learning impact across the states on education indicators like student learning outcomes, student/ teacher ratio and retention etc. the National Mission of FL&N will commission surveys and research studies. The findings of these surveys and studies help in ascertaining the degree of the mission's success on key indicators and assessment of needs and gaps for course correction and follow-up.

It is important to conduct research studies by identifying priority areas from different perspectives such as linguistics, pedagogy, curriculum, child psychology, etc. Research designs in foundational learning programs should purposefully track early learning experiences, change in classroom practices of teachers, school readiness and early life skills to build the evidence base around impact of investment in early interventions.

Findings and learning from the research studies need to be disseminated widely for teachers and other stakeholders in the system as well as for community members and policy makers.

17.3 Conducting Evaluations

The FLN Mission would at regular time intervals carry out evaluations to understand overall progress. There will be two types of evaluations carried out for the FLN Mission: process evaluation which examines if the processes and activities carried out as part of the FLN Mission are in line with how they were intended, and impact evaluations which measure the extent to which learning outcomes and other key metrics have changed over the course of the FLN Mission's implementation. Decisions around changing any process, inputs, and continuation of FLN Mission should rely on findings of such timely process and impact evaluations.

(i) Process evaluation

Evaluation questions will evolve through the course of the program. Process evaluations shall be commissioned at different points in time of the FLN Mission implementation. Process evaluations are suitable for questions around degree of adherence to envisioned processes and to understand why processes and inputs might be deviating from the plan. By their nature, process evaluations will intersect the monitoring and review activities.

(ii) Impact evaluation

To know if the FLN Mission is meeting the expected learning outcomes and developing subsequent targets, student assessments will be carried out at least at three times - baseline, midline, and end line. Baseline provides a snapshot of learning outcomes at the start of the program, midline (the mid-point of the program implementation) provides a mid-way point of information of shifts in learning outcomes relative to baseline. Finally, end line data provides a snapshot of learning outcomes at the end of the program.

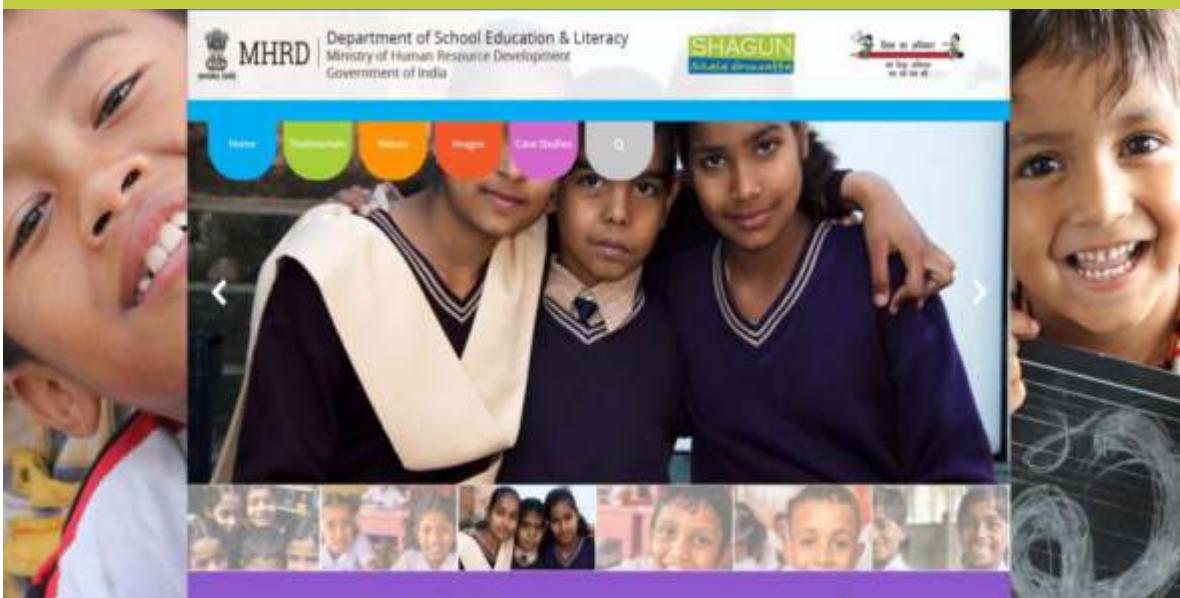
Apart from learning outcomes, to know about shifts in outcome indicators such as teaching-learning process (e.g., active engagement of children, adequate oral language work, reading practice for children, scope for composition in writing), innovative pedagogical practices in the classroom, and support provision to FLN teachers, periodic research studies that measure this nuanced data will be deployed.

Evaluation would be conducted in a representative sample of schools that are selected systematically, using a complete sampling frame. Interviews and focus groups discussions with teachers and other key stakeholders', classroom observations, etc. should also form part of the qualitative process evaluations as they assist with identifying bottlenecks to the smooth implementation of the program and provide an in-depth look into the experiences of children and other stakeholders.

17.4 Documentation of Good Practices

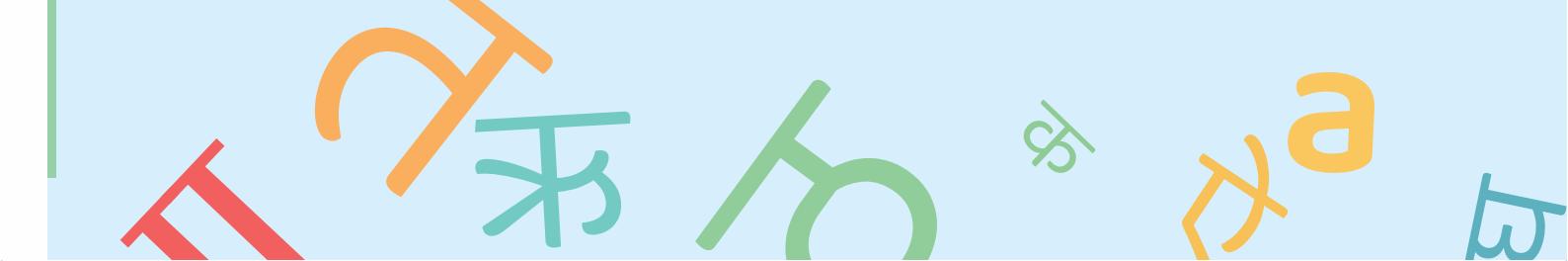
To capture the diversified initiatives during the implementation of the programme, documentation of various processes and practices must be done by covering various innovative and joyful teaching learning practices being adopted in the classrooms, capacity building of teachers and academic resource persons; role of parents and community members, assessing student learning, awareness campaigns etc. While documenting the successes of the programme, it is also important to record what did not work and why, so that learnings from the experience could be gathered for better understanding.

Shagun Repository: An initiative by MoE



The Shagun Repository has been designed to change the narrative on school education by showcasing the multitude of innovative and successful models being implemented by all States & UTs in diverse circumstances. It enables these successful initiatives to be replicated and taken to scale. The name given to the portal is SHAGUN which comes from the words 'Shala' meaning school and 'Gunvatta' meaning quality. Shagun sustains the institutional memory of these initiatives. It encourages all States and UTs to positively compete to carry out and upload best practices.

This repository of good practices focuses on positive stories and developments that are driving performance improvements in school education. These practices portray the individual and collective efforts that have enabled significant changes for the better. The portal is a platform where the States and UTs can see the innovations/best practices pursued



by others and emulate the same to achieve similar results. These innovative practices are documented in the form of case studies, videos, testimonials, and images.

17.5 International Best Practices

Many developing countries have prioritised universal acquisition of foundational skills and have shown rapid progress, i.e., Brazil had launched 'Minas Gerais Mission' to ensure that every child would be reading and writing by the age of 8. South Africa launched 'FundaWande' to train teachers on the specialised skills of teaching reading. Philippines launched 'BasaPilipinas' to strengthen reading skills of children from grade I to grade 3. Kenya in collaboration with USAID and DFID launched 'Tusome' for 7 million children studying in grade I to III. The details of this programme are given at **Annexure-IV**.

17.6 State level Initiatives

Many States in India have also taken a holistic approach for improving early learning such as Gujarat, Uttar Pradesh, Haryana, Odisha, Punjab and Karnataka. Some of the best learnings across the States are:

Mission Prerna is the flagship program of the Uttar Pradesh government to improve the quality of education in 1.6 lakh schools under the Basic Shiksha Department across the state. The program has been launched with a special focus on foundational learning skills. A range of state-wide interventions have been put in motion to translate this vision into tangible results. These interventions cut across pedagogy, capacity building of teachers, infrastructure, administrative reforms, and community engagement. Under initiatives for pedagogy, 'PrernaSoochi' a list of all learning outcomes across grades 1-5 for Hindi and Maths has been created to provide clarity to teacher on outcomes associated with curriculum in each grade. These outcomes are assessed quarterly and reported to parents through a student report card.

Saksham Haryana is an initiative by the Government of Haryana to improve the learning levels of Haryana Government school students. The program was started in June 2017 as the successor to the 3-year-old Quality Improvement Program (2014-17), i.e., QIP. Following framework of interventions which include teacher recruitment, transfer, MIS and Online Service Books, Learning Collateral, competency awareness, teacher enablement, Assessment reforms, Accountability of Outcomes, ground up participation etc. has been undertaken in mission mode since 2017.

Mother Tongue based Multilingual Education Programme (MLE) Program was started in Odisha in 2005, with 70,000 children across 1500 schools in 21 tribal languages. The



program aims to improve tribal students' literacy through use of mother tongue instruction in early grades. MLE aims to address the challenges faced by disadvantaged tribal children using mother tongue in early years of their primary classes and gradually shift from their mother tongue (L1) to State Language (L2) and then to National or International language (L3). The purpose of MLE is to develop appropriate cognitive and reasoning skills enabling children to operate equally in their native, state, and national languages, starting in mother tongue with transition to second (Odia) and third languages (English). An evaluation conducted in 2011 by NCERT found better achievement in language and maths for children in MLE schools compared to similar non MLE schools (where Mol was L2). It also found that the program led to better attendance, participation, and self-confidence of children; greater teacher satisfaction; positive parental feedback and community involvement.

Ganita Kalika Andolan: The State of Karnataka has initiated Ganitha Kalika Andolan (GKA) – a mathematics learning movement program to improve numeracy skills and facilitate classroom teaching of Mathematics among students in Government primary schools. The programme is implemented by provisioning Math Teaching Learning Materials (TLMs) to schools, and by providing training and support to teachers in government primary schools.

Parho Punjab, Parhao Punjab: The State of Punjab has initiated 'Parho Punjab, Parhao Punjab' an initiative for strengthening and improving the quality of education in all the government schools of the state. The Programme, entirely based on child centered target approach, is being implemented in all schools of Punjab. Teachers have been trained to use activity-based teaching learning techniques. The program is implemented at different levels such as Pre-primary level, Language and Mathematics Program for Primary level (Classes: 3 – 5), Language (Punjabi, Hindi and Urdu), Mathematics, Science, English and Social Studies at Upper Primary and Secondary level (Classes: 6-10) and English, Mathematics and Science at Senior Secondary Level (Classes: 11-12).

Best practices on various aspects of foundational learning i.e. Images, Case Studies, good quality Videos and Testimonials to be uploaded regularly on <https://repository.seshagun.nic.in>

Annexure

Codification of learning outcomes

Annexure I

Developmental Goal 1

CHILDREN MAINTAIN GOOD HEALTH AND WELL BEING (HW)

KEY COMPETENCIES:

- Awareness of self
- Development of positive self-concept
- Self-regulation
- Decision-making and problem solving
- Development of pro-social behavior
- Development of healthy habits, hygiene, sanitation and awareness for self-protection
- Development of gross motor skills
- Development of Fine motor skills and eye-hand coordination
- Participation in individual and team games and sports

Hw1 Preschool 1	Hw2 Preschool 2	Hw3 Preschool 3	Hw4 Class 1 (BALVATIKA)	Hw5 Class 2	Hw6 Class 3
HW1.1 Begins to state some physical characteristics about self	HW2.1 Describes self in terms of physical characteristics	HW3.1 Describes self and others in terms of physical characteristics, gender, interests, likes, dislikes	HW4.1 Recognises different body parts and uses various body movements	HW5.1 Maintains correct posture, uses various body movements to participate in games and sports	HW6.1 Participates in games and sports to strengthen and extend gross motor skills
HW1.2 Identifies close family members	HW2.2 Identifies close family members, friends and neighbours	HW3.2 Exhibits understanding of relationship Preschool with extended family members	HW4.2 Demonstrates love and respect for immediate and extended family and neighbours	HW5.2 Demonstrates care and respect for immediate and extended family, friends, neighbours and pets	HW6.2 Demonstrates care and respect for immediate and extended family, friends, neighbours, pets and surroundings
HW1.3 Participates in the activities and takes initiative	HW2.3 Expresses own preferences and interests	HW3.3 Demonstrates independence in activities	HW4.3 Takes part in exercise, play and movements for fun and exercise	HW5.3 Follows rules and enjoys movement and rhythm, participates in play activities	HW6.3 Takes initiative, participates in all group and individual games, follows rules and cooperates in team



HW1.4 Waits for their turn and follows simple instruction with teachers support	HW2.4 Waits for their turn and follows two-line simple instructions	HW3.4 Follows instructions and simple rules at the same time	HW4.4 Follows three to four instructions/rules at a given time	HW5.4 Follows complex instructions/rules; Starts creating their own rules	HW6.4 Follows complex instructions/rules; frames their own rules for invented games and activities
HW1.5 Seeks adult help in adjusting to new environment	HW2.5 Makes adjustment in the classroom and with other children	HW3.5 Shows adaptability to any changes in routine/daily schedule	HW4.5 Shows adaptability to any changes in routine, makes adjustment	HW5.5 Adjusts to any changes in the routine and asks others to follow the same.	HW6.5 Demonstrates leadership qualities and suggest ideas for changes in daily routine
HW1.6 Chooses an activity area and gets engaged in the activity	HW2.6 Shows focus on a self-selected activity or task to completion	HW3.6 Focuses attention to complete tasks/topics assigned by others	HW4.6 Shows increased attention span; chooses and completes an activity started	HW5.6 Shows increased attention span and persistence in tasks	HW6.6 Concentrates on more complex projects and completes tasks even with a few interruptions
HW1.7 Identifies her/his feelings wants and e.g., "I don't want to colour today". "I want to go out".	HW2.7 Describes her/his feelings and their causes e.g., "I am angry because he broke my block tower"	HW3.7 Expresses emotions through verbal and non-verbal modes (gestures, drawings)	HW4.7 Expresses her/his emotions in socially approved ways e.g., "stops crying and explains why s/he was crying / up Preschool et"	HW5.7 Copes with emotions appropriately in varied situations	HW6.7 Manages emotions appropriately in challenging situations
HW1.8 Makes choices and expresses preferences	HW2.8 Expresses own preferences, interests and makes choices	HW3.8 Takes responsibility and makes choices based on own preferences and interests	HW4.8 Plays/participates in activities, makes friends according to their own choice, preference and interest	HW5.8 Selects games/ play equipment according to their own choice, preference, and interest	HW6.8 Chooses and continues playing and practice of games/sports activities of their own choices and interest
HW1.9 Resolves minor conflicts with the help of adults	HW2.9 Suggests solutions to conflicts (with the support of adults)	HW3.9 Suggests solutions to conflicts and makes age-appropriate adjustments.	HW4.9 Deals with minor conflicts that arise during play or activity and suggests solutions	HW5.9 Resolves minor conflicts independently or with the help of teacher or adults	HW6.9 Takes care that conflict does not arise during play or activities, makes rules beforehand, resolves minor conflicts independently or with the help of adults
HW1.10 Expresses joy while working and playing with other children	HW2.10 Plays cooperatively with other children and makes plan for	HW3.10 Demonstrates willingness to include other's ideas during interaction and	HW4.10 Plays or works cooperatively and enjoys playing/ working with others, involves	HW5.10 Enjoys playing with other children, follows rules and demonstrates leadership/	HW6.10 Exhibits pleasure in working, learning and playing together, Observes rules in

	what and how they will play	play	all and takes initiative in framing rules for games or play activities	initiative as and when required	games (individual and group) and other collective tasks
HW1.11 Helps other children, cares, and shares belongings with them	HW2.11 Shows caring behaviour (hugs, pats) and shares belonging with other children	HW3.11 Helps peers who are in need during large and small group activities	HW4.11 Extends help, cares and shares play and learning material	HW5.11 Shows team spirit, teaches games and sports activities to other children in group	HW6.11 Exhibits care, affection for team members, plays with others and cooperates in a team
HW1.12 Begins to understand differences among people (based on ethnicity, culture, and abilities and disabilities) and demonstrates sensitivity to diversity	HW2.12 Demonstrates sensitivity and acceptability towards children from diverse backgrounds including children with special needs	HW3.12 Demonstrates sensitivity and acceptability towards children from diverse backgrounds including children with special needs	HW4.12a Shows cooperation in group activities, HW 4.12b Respect's other rights and culture, diversity, sensitive to special needs	HW5.12 Exhibits acceptance and tolerance towards differences among people and demonstrates sensitivity to diversity	HW6.12 Demonstrates respect for others, their culture, food, festivals , etc., sensitive to others needs, shows tolerance, acceptability, etc.
HW1.13 Communicates immediate needs and follows hygiene and healthy eating practices with adult's guidance	HW2.13 Demonstrates hygiene and sanitation practices and healthy eating practices with adult's guidance	HW3.13 Maintains and displays basic health, hygiene, sanitation practices and healthy eating practices with increased independence	HW4.13a Maintains hygiene and cleanliness and healthy eating practices independently HW4.13b Identifies locally available food items, avoids wastage and understands the importance of food and water as a source of energy for work and play	HW5.13a Demonstrates proper use of toilet, cleanliness after toilet uses and exhibits cleanliness (self and environment), hygiene and healthy eating practices HW5.13b Identifies the locally available, variety and different tastes different tastes shows awareness about seasonal food items, vegetables, fruits, etc.	HW6.13a Maintains cleanliness of classrooms, playground, toilets and bathrooms, home, room, utensils, and proper management of garbage HW6.13b Shows awareness of constituents of food (energy, body building, protection) items, implications of junk food, frequency of taking food
					HW6.13c Demonstrates importance of including a variety of food items in diet and frequently eating balanced diet



HW1.14 Maintains distance from strangers and is aware about good touch and bad touch (guidance from parents and teachers)	HW2.14 Demonstrates awareness about good touch and bad touch (with guidance from parents and teachers)	HW3.14 Demonstrates awareness about good touch and bad touch and maintains distance from strangers	HW4.14 Exhibits awareness about good touch and bad touch and expresses their feelings with trusted adults and maintains distance from strangers	HW5.14 Exhibits awareness and complains about bad touch and maintains distance from the strangers	HW6.14 Demonstrates awareness about personal safety and reports to teacher or others parents and about any bad touch/behavior noticed, maintains distance and tells others to be safe
HW1.15 Recognises common dangers and hazardous objects and places and keep Preschool distance	HW2.15 Recognises common dangers/ hazards and takes safety precautions	HW3.15 Follows basic rules of safety at home, preschool and playground	HW4.15 Identifies common hindrances to safe play or common mishaps at school, playground, road, and home, takes measures to prevent such accidents	HW5.15 Reports to the teacher in the event of injury and/ or sickness in school (classroom/ playground) reports to the elders in the event of injury and/ or sickness	HW6.15 Reflects and report to the responsible adult; Demonstrates supportive behaviors to soothe peers in case of injury/mishap/ sickness
HW1.16 Demonstrates gross motor coordination in play/ routine activities like walking, running, jumping, climbing, dancing, etc.	HW2.16 Demonstrates gross motor coordination and control in play activities involving walking, running, jumping, climbing, etc.	HW3.16 Demonstrates gross motors skills with greater coordination, control and strength for e.g., running, jumping, throwing, kicking, and catching skills, etc.	HW4.16 Displays strength, judgment and decision-making in gross motor skills	HW5.16 Demonstrates eye-hand and neuromuscular coordination and motor fitness and develops strength, judgment and decision-making	HW6.16 Demonstrates neuromuscular coordination, coupling of movements, e.g. Can combine walk and run, sit and stand, run forward and backward running
HW1.17 Explores and participates in music, dance, and creative movements	HW2.17 Explores and participates in music, dance, and creative movements	HW3.17 Explores space and participates actively and creatively in music and movement activities	HW 4.17 Participates actively in music, dance and creative movements like role play, dramatization, etc.	HW5.17 Takes initiative in creative activities, dance, music, drama, role play, mimicry, imitation, etc.	HW6.17 Involves/ Participates/takes initiative/shows leadership in music and movement activities, role play, dramatization, simulation, mimicry, etc.
HW1.18 Exhibits fine motor skills and simple eye-hand coordination in various activities like scribbling, printing, threading,	HW2.18 Exhibits fine motor skills and performs tasks that require more complex eye-hand coordination such as cutting out shapes, free	HW3.18 a Exhibits fine motor skills with precision and control.	HW4.18 a Displays fine motor skills with accuracy and control, engages in art integrated activities/drawing/ colouring, collage making, etc.	HW5.18 a Shows precision in fine motor activities, drawing, colouring, writing, etc.	HW6.18 a Demonstrates precision in fine motor activities, drawing, colouring, writing, etc.



colouring, clay moulding, tearing and pasting, etc.	hand drawing, colouring, threading beads, stringing, copying, tearing, pasting, lacing, etc., with moderate levels of precision and control.	HW3.18 b Uses coordinated movements to complete complex tasks like cutting along a line, pouring, buttoning HW3.18 c Uses a pincer grip (coordination of the index finger and thumb to hold an item) to hold and manipulate tools for drawing painting and writing	HW4.18 b Uses coordinated movements for using scissors, buttoning, shoe lacing, writing, HW4.18 c Grips pencil correctly, uses smooth, controlled finger and hand movements that also require eye-hand coordination (e.g., pours water into a water bottle with a small opening with little spillage, traces shapes)	HW5.18 b Uses coordinated movements while using writing/ colouring tools. HW5.18 c Demonstrate control and appropriate pressure when using writing and drawing tools	HWD6.18 b Uses coordinated movements while using writing/ colouring tools HWD6.18 c Manipulates grade-appropriate tools and intricate materials with control and precision (e.g., cut and handle small pieces of paper to make a mosaic, keyboarding skills)
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Developmental Goal 2

CHILDREN BECOME EFFECTIVE COMMUNICATORS (EC)

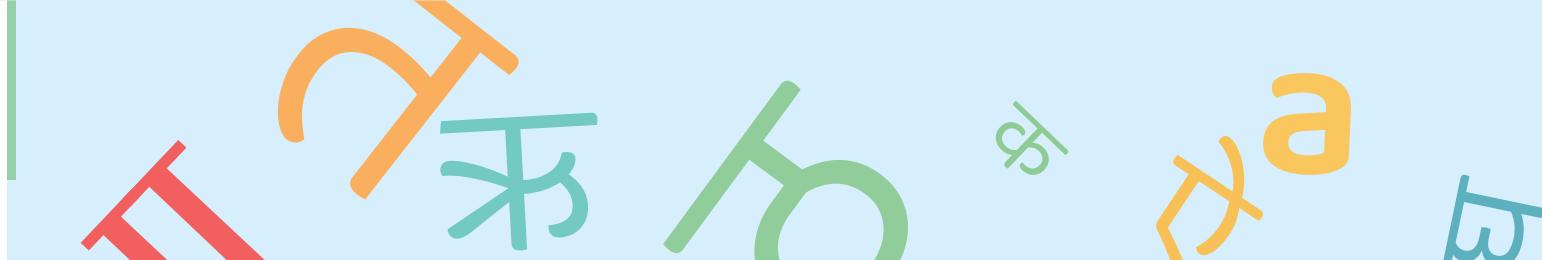
KEY COMPETENCIES²⁶:

Talking and Listening	Reading with comprehension	Writing with purpose
<ul style="list-style-type: none"> Listening with comprehension Creative Self Expression and Conversation Language and Creative thinking Vocabulary Development Conversation and talking skills Meaningful uses of language 	<ul style="list-style-type: none"> Bonding with Books Print Awareness and Meaning Making Pretend Reading Phonological Awareness Sound Symbol Association Prediction and use of previous experiences with knowledge. Independent reading for pleasure and various purposes. 	<ul style="list-style-type: none"> Early literacy skills Writing for self-expression Make use of her/his knowledge of letter and sounds, invents spellings to write. Make efforts to write in conventional ways Response to reading with drawings/words and meaningful sentences Writing of rhyming words Write meaningful sentences using naming words and action words Write messages to express themselves Using mixed language codes Write for different purposes in the classroom's activities and at home, such as making list, writing greeting to grandparents, messages/ invitation to friends, etc.

²⁶*ECL1 –First language- It may be noted that the goals suggested for first language, can be implemented for the mother tongue/first language/regional language of the child. For instance, Tamil, Telugu, Khasi, Gondi languages , etc. could be the first language of the child. The examples are drawn from child's literature and textbooks in Hindi language.

**ECL 2: Exposure to Second Language - Any other Indian language/ English could be the second language of the child, therefore, the goals suggested for the English, may be considered for the second language.

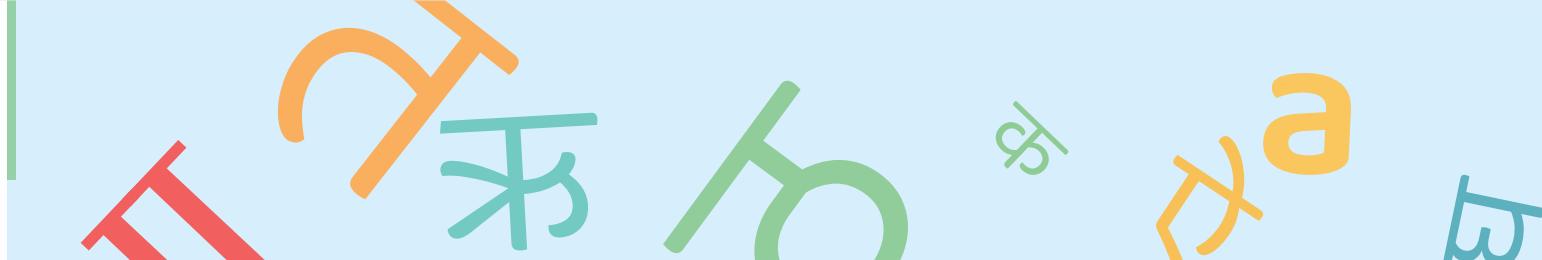
FIRST LANGUAGE					
ECL1 Preschool 1	ECL2 Preschool 2	ECL3 Preschool 3 (BALVATIKA)	ECL4 CLASS 1	ECL5 CLASS 2	ECL6 CLASS 3
ECL1 1.1 a Attempts to engage in conversation/ small talk with known/unknown children/adults in their own language/ home language. ECL1 1.1 b Attempts to understand gestures, signs, expression while talking/interaction.	ECL1 2.1 Attempts to engage in conversation in school and home with unfamiliar teachers, new friends, school staff, other adults, etc.	ECL1 3.1 Engages in conversation in school and home with unfamiliar teachers, new friends, school staff, other adults, etc. in their own language.	ECL1 4.1 Uses own language/school language to express their needs and ask questions to gain information.	ECL1 5.1 Uses school language to express opinion, ask, question for different purposes.	ECL1 6.1 Uses school language/own language to express their likes-dislikes, responses to familiar incidents/events/ radio/ TV programs.



ECL1 1.2 Observes with interest illustrated books/posters with big font.	ECL1 2.2 Observes with interest and talks about available children's literature in class with friends.	ECL1 3.2 Selects book from reading corner/reading area and attempts to understand the story with the help of pictures and can predict the written text.	ECL1 4.2 Selects book from reading corner/reading area and talks about/narrates, story with the help of the pictures.	ECL1 5.2 Talks about the characters from the familiar story. Draws the picture and write, the name of their favourite character.	ECL1 6.2 Extends the story/poem while narrating orally.
ECL1 1.3a Expresses likes-dislikes with gestures/ body language. ECL1 1.3b Expresses fondness/liking for animals/birds in their surroundings- plays and talk with them.	ECL1 2.3 Makes various sounds/words for play- for example using pencil as a train/scooter and makes sounds like an engine/horn.	ECL1 3.3 Expresses their experiences of reading poems/stories in their own language and talks about it and shares it with friends.	ECL1 4.3 a Connects personal experiences with the read/familiar stories in their own language and talks about them.	ECL1 5.3 a Narrates stories and recites poems in their own language using their own style/way.	ECL1 6.3 a Connects familiar material for example poem, story, poster, advertisement in their surrounding with their experiences while conversing.
	ECL1 4.3 b Makes some rules for their favourite games.	ECL1 5.3 b Participates in class/school activities programs , etc.	ECL1 6.3 b Converses, asks questions, expresses opinion about characters, theme, pictures of the familiar texts like- story/poem , etc.		
		ECL1 5.3 c Narrates story/ recites poem of their own choice.	ECL1 6.3 c Talks about the activity like- morning message, conversation with family members etc. and illustrates, writes a few words about their favourite activity in copy/board/ display board		
ECL1 1.4 a Recites repeatedly interesting poem/ songs with actions. Participates in rhythmic activities.	ECL1 2.4 Sings/recites interesting poems with action, participates in rhythmic activity.	ECL1 3.4 a Uses appropriate intonation and modulation of voice while reciting interesting poems/songs in their own language. ECL1 3.4 b Recites with fluency	ECL1 4.4 Identifies rhyming words in familiar poems and songs and creates new rhyming words.	ECL1 5.4 Creates rhyming words and words with similar sounds, orally, in writing from the familiar poems and songs.	ECL1 6.4 a Narrates interesting and humorous story, poem etc. with appropriate modulation of voice, speed, fluency, and style appropriate to the narration. ECL1 6.4 b



rhyming words/ sentences from familiar poems and stories.		with appropriate intonation parts of familiar poems in their own language.			Solves riddles, takes interest in language games, songs while understanding the rhythm.
ECL1 1.5 Picks selected books with curiosity and interest. Flips over pages to make sense of it.	ECL1 2.5 Attempts to understand the flow and directionality of the print during the read aloud sessions.	ECL1 3.5 a Gives their favourite story books to the teacher to narrate the story. ECL1 3.5 b Observes attentively the objects in the pictures, talks about them and write their name by using invented spellings.	ECL1 4.5 Predicts and attempts to make meaning of the text (textbooks and children's literature) by turning over the pages back and forth.	ECL1 5.5 a Predicts and reads textbooks and children's literature in familiar context. ECL1 5.5 b Expresses their responses, likes-dislikes, and asks questions. ECL1 5.5 c Attempts to read familiar and unfamiliar text and talks about it. For example- predicts with the help of print and pictures, sound-symbol association, identifying the words with the use of prior knowledge and experiences.	ECL1 6.5 a Relates unfamiliar words from different texts while reading and understanding the story. ECL1 6.5 b Reads and tells the numbers written on the pages of the books. For example – page no. 45,76,21 ECL1 6.5 c Reads with understanding different texts (newspaper, children's magazine, etc.) and writes about them in brief.
ECL1 1.6 Exhibits skills of early literary and print awareness in the class/home. For example- recognizing/ reading the rapper of their favourite toffee or biscuit.	ECL1 2.6 a Recognizes, labels , etc. for example- sign/symbol of ambulance. ECL1 2.6 b Identifies own name in writing	ECL1 3.6 a Reads with the understanding of print awareness. ECL1 3.6 b Reads the story by understanding/ arranging the pictures in the sequence of events.	ECL1 4.6 Relates the picture with the text to predict and understand.	ECL1 5.6 Understands events and characters in a picture story/story board (story books) and writes about them. (conventional writing)	ECL1 6.6 a Identifies the features of language (naming words, action words, repetition, punctuation marks) in different stories/poems/ texts. ECL1 6.6 b Makes use of naming words, action words, repetition, and punctuation marks while writing. ECL1 6.6 c Reads with appropriate flow, intonation, voice modulation, familiar written texts



					(Mid-day meal chart, class name, title of favourite book, etc.)
ECL1 1.7 Listens attentively and repeats familiar words and their sounds.	ECL1 2.7 Identifies a particular sound in different words for example- 'n' sound in name, mail, net.	ECL1 3.7 Identifies repeated sounds in words occurring in familiar stories/poems.	ECL1 4.7 Talks about birds, animals in their surroundings (home, school, neighbourhood) and writes a few words about them by using invented spelling/conventional writing.	ECL1 5.7 Talks about characters, events based on the stories poems and other texts.	ECL1 6.7 a Participates and converses in the activities like - morning message, and ECL1 6.7 b Illustrates in copy/board/display board (Haripatti) etc. and talks about their favourite activity
ECL1 1.8 Identifies the various familiar sounds in the surroundings for example- sound of the falling rain, chirping of the birds etc.	ECL1 2. 8 Listens and identifies repeatedly occurring events in familiar stories, poems, etc.	ECL1 3. 8 a Identifies repeated sounds, words etc. in stories, poems, songs. ECL1 3. 8 b Predicts about the written text with help of pictures and print, previous experiences and information, letter-sound association, etc.	ECL1 4. 8 Shows awareness of figures of letters and sounds while reading story, poems and make use of it while writing.	ECL1 5. 8 Writes making use of appropriate words/sentences (conventional writing) and different forms of expressions.	ECL1 6.8 Writes about familiar texts in different forms of expressions about themes, events, characters, title, etc.
ECL1 1.9 Attempts to write by drawing lines, scribbling.	ECL1 2.9 Expresses by drawing symbolic pictures, paying attention to figures colours, size, etc. and talks about it.	ECL1 3.9 Takes interest in writing (invented spellings) own name, names of their friends and objects around them.	ECL1 4.9 Labels the self-drawn pictures and the pictures made available to them. (invented spellings)	ECL1 5.9 Extends the story in writing using imagination and creativity.	ECL1 6.9 Writes short messages for example- I have lost my blue cycle. Inform me if someone has seen/found it.



SECOND LANGUAGE					
ECL2 Preschool 1	ECL2 Preschool 2	ECL2 Preschool 3 (BALVATIKA) 5-6 Years	ECL2 CLASS 1	ECL2 CLASS 2	ECL2 CLASS 3
ECL2-1.1 Participates in singing poems, rhymes.	ECL2-2.1 Attends Participates and listens to others during conversation	ECL2-3.1 Introduces himself/herself bilingually.	ECL2-4.1 a Listens to English words, greetings, polite forms of expression, and respond in English/home language like 'how are you?', 'I'm fine; thank you, etc.	ECL2-5.1 a Expresses verbally her or his likes/dislikes about the characters, storyline, etc., in English or home language.	ECL2-6.1 a Asks questions about the story and characters in the story, in English/home language.
			ECL2-4.1 b Talks about the available print in the classroom.	ECL2-5.1 b Follows simple instructions such as 'Shut the door', 'Bring me the book' and such others.	ECL2-6.1 b Develops vocabulary from their classroom and social environment.
ECL2-1.2 Participates in music and movement activities	ECL2-2.2 Sings short poems and rhymes	ECL2-3.2 Sings songs or rhymes with action.	ECL2-4.2 Sings and recites poems rhymes and draws pictures	ECL2-5.2 Sings songs or rhymes with action. forms new rhyming words.	ECL2-6.2 Recites poems individually/in groups with intonation and fluency.
ECL2-1.3 Enjoys listening to stories bilingually	ECL2-2.3 Listens to the picture stories with bilingual text	ECL2-3.3 Flips over the pages of bilingual work in the reading area	ECL2-4.3 Picks the story book from the reading area and tries to read the pictures.	ECL2-5.3 Predicts the story, talks about the characters bilingually.	ECL2-6.3 Talks about his/her favourite story book/character.
ECL2-1.4 a Spends time in reading area/play area. ECL2-1.4 b Looks/explore books, posters/available material	ECL2-2.4 Takes interest in bilingual books and talks about them bilingually	ECL2-3.4 Attempts to respond using familiar words and expressions	ECL2-4.4 Responds orally to questions related to stories/poems bilingually.	ECL2-5.4 Responds to the questions related to stories and poems, in home language or English or sign language, orally and in writing (phrases/ short sentences).	ECL2-6.4 Participates in role play/skit in English/bilingually with appropriate expressions.
ECL2-1.5 Identifies familiar sounds in the environment	ECL2-2.5 Identifies few letters and sounds	ECL2-3.5 Recognises letters and corresponding sounds	ECL2-4.5 Forms letters correctly, uses sound-symbol correspondence to write invented spellings.	ECL2-5.5 Shares orally about events such as festival celebrated in the neighbourhood bilingually.	ECL2-6.5 Writes words/sentences to express his/her feelings. Draws about the same as well.

ECL2-1.6 Spends time in reading area/ play area.	ECL2-2.6 Recognizes labelled objects, names, etc	ECL2-3.6 Attempts to read familiar signs	ECL2-4.6 Recognises familiar signs, logos and labels in the environment.	ECL2-5.6 Recognises and writes/draws frequently occurring word/ picture in a story being read.	ECL2-6.6 Reads print in the classroom/ school environment: poems, posters, charts, etc.
ECL2-1.7 Expresses liking for a few books.	ECL2-2.7 Pick's picture books, talks about posters.	ECL2-3.7 Predicts story with the help of the pictures	ECL2-4.7 Connects text with illustrations while reading the story.	ECL2-5.7 Tries to decode unfamiliar words while reading.	ECL2-6.7 Reads small texts in English.
ECL2-1.8 Explores the reading area and shows interest in books.	ECL2-2.8 Flips over pages of story books and attempts to read on his/her own	ECL2-3.8 Participates in shared reading of the story	ECL2-4.8 Creates her/his own story by writing a few words mixing codes.	ECL2-5.8 Creates a poster on their self-created story.	ECL2-6.8 Narrates the story with the help of the poster.
ECL2-1.9 Pretend plays with toys.	ECL2-2.9 Shares toys with friends and pretend- plays.	ECL2-3.9 Talks about his/ her favourite toy.	ECL2-4.9 Brings the toy and introduce them in the class.	ECL2-5.9 Draws a poster showing his/her s feelings for the toy.	ECL2-6.9 Writes a message for the toy. For ex- you are my best friend.
ECL2-1.10 Sings/hums words/lines/parts of songs and rhymes, in own language/L2.	ECL2-2.10 Identifies rhyming a few words	ECL2-3.10 Enjoys and creates non sensical rhyming words.	ECL2-4.10 Creates rhyming words based on the available text.	ECL2-5.10 Writes selective rhyming words in pair.	ECL2-6.10 Uses rhyming words for writing short sentences.
ECL2-1.11 Scribbles with crayons.	ECL2-2.11 Draws pictures depicting some event/situation / feelings for friend, parents, sibling, etc.	ECL2-3.11 Attempts to scribble/write a few familiar words.	ECL2-4.11 Writes words beginning with the same letter.	ECL2-5.11 Uses words related to size, shape, colour, weight, texture such as 'big', 'small', 'round', 'pink', 'red', 'heavy', 'light', 'soft' etc.	ECL2-6.11 Writes sentences using the familiar words.
ECL2-1.12 Collects objects from their immediate environment e.g., leaves, twigs, pebbles, feather etc. and talks about them bilingually.	ECL2-2.12 Observes and talks about the posters and other print in the classroom.	ECL2-3.12 Identifies objects in their immediate environment	ECL2-4.12 Labels the objects such as furniture /mat/ blackboard/ reading area, etc.	ECL2-5.12 Read texts other than the textbooks such as children's magazine, etc.	ECL2-6.12 Writes short messages bilingually adding drawing, etc.
ECL2-1.13 Watches cartoon/ films for a short duration	ECL2-2.13 Enjoy watching favourite cartoon/films	ECL2-3.13 Enjoy watching age-appropriate cartoon/films	ECL2-4.13 Shares their likes about the cartoon/film.	ECL2-5.13 Writes small sentences about the cartoon/film. Writes small sentences about self-using full stop.	ECL2-6.13 a Writes small sentences using full stop and question marks.



					ECL2-6.13 b Writes briefly about their visit to their hometown /park nearby/ market bilingually.
ECL2-1.14 Participates in singing songs and rhymes	ECL2-2.14 Sings short songs/ rhymes about birds/ trees animals, etc.	ECL2-3.14 Shares feelings for birds/ animals /trees	ECL2-4.14 Describes their thoughts/ feelings for birds/animals/trees, etc. verbally	ECL2-5.14 Draws or writes a few words or short sentence in response to the environment (birds, plants, garden, etc.) poems and stories.	ECL2-6.14 Works in team for the display of the posters.
ECL2-1.145 Talks about friends, school, etc.	ECL2-2.15 Express their thoughts through drawings	ECL2-3.15 Draws pictures to communicate messages	ECL2-4.15 Makes a card for their friend, sending a short message.	ECL2-5.15 Composes and writes simple, short sentences with space between words to express themselves.	ECL2-6.15 Able to develop useful messages for their school premises (classroom, garden, playground, etc.).

Developmental Goal 3

Children become involved learners and connect with their immediate environment (IL)

KEY COMPETENCIES:

Sensory Development • Sight, Sound, Touch, Smell, Taste	Cognitive Skills • Observation, Identification, Memory, Matching, Classification, Patterns, Sequential Thinking, Creative Thinking, Critical Thinking, Problem Solving, Reasoning, Curiosity, Experimentation, Exploration	Concepts related to environment • Natural—animals, fruits, vegetables, food • Physical — water, air, season, sun, moon, day and night • Social — myself, family, transport, festival, community helpers, etc.
Concept Formation • Colours, shapes, distance, measurement, size, length, weight, height, time • Spatial sense • One-to-one correspondence	• Number Sense • Count and tell how many • Numeral recognition • Sense of order (can count ahead of a number up to 10)	Number Operations • Addition • Subtraction • Multiplication • Division
Measurement • (Length, Mass, Volume, Temperature)	• Shapes (2 D Shapes, 3D shapes, Straight Line, Curved Line, Plain and Curved Surfaces)	• Data Handling • Pattern • Calendar Activity • Use of Technology

PRESCHOOL 1	PRESCHOOL 2	PRESCHOOL 3 (BALVATIKA)	CLASS 1	CLASS 2	CLASS 3
IL1.1 Uses all senses to observe and explore the environment	IL2.1 Uses five senses to observe and explore the environment	IL3.1 Uses all senses to observe and explore the environment	IL4.1 Notices and describes finer details of objects such as colours, sounds, their surface, animals, birds in the immediate surroundings	IL5.1 Identifies simple observable features of objects, plants, animals in the immediate surroundings.	IL6.1 Identifies simple observable features of leaves, trunks and bark of plants, animals, and birds in immediate surroundings.
IL1.2 Identifies and names common objects, sounds, people, pictures, animals, birds, events, etc.	IL2.2 Describes common objects, sounds, people, pictures, animals, birds, events, etc.	IL3.2 Notices and describes finer details of common objects, sounds, people, pictures, animals, birds in the immediate environment.	IL4.2 a Identifies common objects, plants, animals, signs on the boards in the immediate neighbourhood	IL5.2 a Identifies objects, signs, places, common activities in the immediate neighbourhood	IL6.2 a Identifies objects, signs, places, activities at home/school/ neighbourhood.



			IL4.2 b Identifies directions with the support of adults and makes sketches of places	IL5.2 b identifies, directions and locates home, schools in the pictures /sketches	IL6.2 b Identifies directions, location of objects/places in simple map (home/classroom/school) using signs/symbols verbally
IL 1.3 a Remembers and recalls 2–3 objects seen at a time	IL 2.3a Remembers and recalls 3–4 objects seen at a time	IL 3.3a Remembers and recalls 4–5 objects seen at a time	IL4.3a Remembers and recalls more than 5–6 objects seen at a time	IL5.3a Remembers and recalls more objects seen at a time and describes a few in his/her own words	IL 6.3 a Remembers and recalls more objects seen at different point of times and describes them
IL 1.3 b Identifies the missing part of a familiar picture	IL 2.3b Identifies 3–5 missing parts of a picture of familiar object	IL 3.3b Identifies 3–5 missing parts of a picture of familiar object	IL4.3b Identifies 4–6 missing parts of a picture of familiar object	IL 5.3b Compares given objects/pictures and identifies similarities and differences	IL 6.3b Compares given objects/pictures and describes similarities and differences
IL 1.4 Places 3–4 objects of two groups in one-to-one correspondence	IL 2.4 Places 4–5 objects of two groups in one-to-one correspondence	IL 3.4 Places 5–6 objects of two groups in one-to-one correspondence	LEADS TO DEVELOPMENT OF NUMBER SENSE (Progression will be seen in Number Sense in Mathematics)		
IL 1.5 Compares two objects based on one observable property, for example—length, weight, or size	IL 2.5 Compares and classifies objects by two factors like shape and color, size and shape, etc. Describes objects using size words like (big/small, tall/Short)	IL 3.5 Compares and classifies objects by three factors like shape, color and size, etc. Correctly uses position words (besides, inside, under) to describe objects	IL 4.5 Compares and classifies objects/pictures based on multiple factors and demonstrates understanding of position	IL 5.5 Compares and classifies objects/pictures based on multiple factors and describes them using properties	IL 6.5 Compares and classifies objects/pictures in different categories and describes the properties used for classification
IL1.6 Seriates / arranges 2–3 objects/ picture cards in a sequence for example- shape, size, occurrence of events.	IL 2.6 Seriates / arranges 3–4 objects/ picture cards in a sequence for example- shape, size, occurrence of events	IL 3.6 Seriates/arranges 4–5 picture cards/ objects in a sequence for example- shape, size, occurrence of events	IL 4.6 Seriates/ arranges more than 5 objects based on criteria	IL 5.6 Applies seriation in ordering numbers, measurement, etc.	IL 6.6 Applies seriation in ordering numbers, ascending -descending number, and number patterns
IL 1.7 Enjoys stories based of occurrence of different events	IL 2.7 Narrates random events of his/her daily life in his own words	IL 3.7 When recited a story, can understand time related events what happened first, who came at night, etc.	IL 4.7 Describes his/her daily routine in sequence using words in the morning, afternoon, evening, and night.	IL 5.7 Sequences the events occurring according to their duration in terms of days; for example, does a child remain in school for a longer period than at home.	IL 6.7 Sequences the events occurring according to their duration in terms of days/ months and hours

IL 1.8a Solves simple day-to-day problems by themselves or with adult's support	IL 2.8 a Provides solutions to simple problems situations	IL 3.8 a Provides solutions to simple problem-solving situations with reasons	IL 4.8 a Provides solutions to simple problem-solving situations with reasons and solves the problem independently	IL 5.8 a Demonstrates problem solving skills in day-to-day simple situations	IL 6.8 a Shows problem solving skills in day-to-day situations and in group
IL 1.8 b Expresses curiosity about the immediate surroundings and asks related questions	IL 2.8 b Expresses curiosity about the immediate surroundings and asks questions (develops related concepts)	IL 3.8 b Engages in investigating and manipulating objects in the environment, asks questions, inquires, discovers, and constructs own ideas and predicts	IL 4.8 b Shows curiosity and interest in exploring environment, takes interest in experimentation and exploration, draws inferences and predicts	IL 5.8 b Shows curiosity and interest in experimentation and exploration and takes initiative in drawing inferences and reasoning	IL 6.8 b Shows curiosity and interest in experimentation and exploration, explains, and demonstrates scientific thinking
IL 1.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - watering plants)	IL 2.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - watering plants, not plucking flower, or do not hurt animals)	IL 3.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - Do not waste water, switching off light when not in use, etc.)	IL 4.8 c Demonstrates awareness and sensitivity towards environmental concerns (example – planting flower plants, watering them regularly, saving water by planting trees, etc.)	IL 5.8 c Demonstrates awareness and sensitivity towards environmental concerns (example - not wasting food, throwing waste in bin, keeping water and food for birds and animals, etc.)	IL 6.8 c Demonstrates awareness and sensitivity towards environmental concerns like showing concern towards pollution of water and air, cutting of trees, hurting animals/birds, etc.
IL 1.9 Counts to three objects	IL 2.9 Counts and perceives objects up to five	IL 3.9 Counts to 10 objects	ILM 4.9 Counts objects up to 20, concretely and pictorially	ILM 5.9 Counts objects up to 100 in group of tens.	ILM 6.9 Counts objects to 1000 in group of tens and hundreds.
IL 1.10 Recites poems/stories based on number names up to 5	IL 2.10 Can count forward and backward from a particular number up to 5	IL 3.10 Can count forward and backward from a particular number up to 9	ILM 4.10 Can count forward and backward from a particular number up to 20	ILM 5.10 Can count forward and backward from a particular number up to 99	ILM 6.10 Can count forward and (backward) from a particular number (up to 999)
L 1.11 Recites poems using numbers of names up to 5 by hand movements showing Like fingers to show numbers	IL 2.11 Identifies numerals with corresponding numbers up to 5	IL 3.11 Identifies numerals with numbers and writes numerals up to 9	ILM 4.11 Identifies numerals with numbers and writes numerals up to 99	ILM 5.11 Reads and writes number names and numerals for numbers up to 999.	ILM 6.11 Reads and writes number names and numerals up to 9999 using place value



	IL 2.12 Develops a sense of presence/absence of objects (example one sweet was on a plate if eaten nothing is left)	IL 3.12 Demonstrates the awareness that things reduce in number and become nil (example 3 birds sitting on a branch of tree flew away one by one at the end no bird is left on the branch)	ILM 4.12 Develops the concept of zero.	ILM 5.12 Uses zero in place value system	ILM 6.12 Applies properties of zero in addition, subtraction, and multiplication of numbers
IL 1.13 Compares two numbers upto 3 and uses vocabulary like more and less	IL 2.13 Compares two numbers up to 5 and uses vocabulary like more than, less than	IL 3.13 Compares two numbers up to 10 and uses vocabulary like more than, less than	ILM 4.13 Compares two numbers up to 20 and uses vocabulary like bigger than or smaller than	ILM 5.13 Compares and forms the greatest and smallest two-digit numbers (with and without repetition of given digits).	ILM 6.13 Compares and forms the greatest and smallest three-digit numbers (with and without repetition of given digits)
	IL 2.14 Combines two groups up to 5 objects and recounts	IL 3.14 Combines two groups up to 9 objects and recounts	ILM 4.14 Construct's addition facts up to 18 by using concrete objects and applies them in daily life.	ILM 5.14 Develops their own strategies to add two numbers (sum not exceeding 99) and applies them to solve simple daily life problems/ situations.	ILM 6.14 Appreciates the standard algorithm for addition of numbers where sum not exceeding 999 and applies it to solve simple daily life problems/ situations.
Competence of addition of numbers starts developing after the age of 4 years i.e., Preschool 2 stage	IL 2.15 Takes out objects from a collection up to 5 objects and recounts	IL 3.15 Takes out objects from a collection up to 9 objects and recounts	ILM 4.15 Construct's subtraction facts up to 9 by using concrete objects and applies them in daily life.	ILM 5.15 Develops her/his own strategies to subtract two numbers upto 99 and applies them to solve simple daily life problems/ situations.	ILM 6.15 Appreciates the standard algorithm for subtraction of numbers up to 999 and applies it to solve simple daily life problems/ situations.
Competence of subtraction starts developing after the age of 4 years i.e., Preschool 2 stage			ILM 4.16 Develops relationship between addition and subtraction of numbers	ILM 5.16 Appreciates and applies relationship between addition and subtraction of numbers	ILM 6.16 Applies the relationship between addition and subtraction in 3-digit numbers
Competence of relating addition and subtraction starts developing after the age of 6 years i.e., Class 1			ILM 4.17 Develops strategies for repeatedly adding numbers up to 10, sum not exceeding 20	ILM 5.17 Develops the idea of multiplication of numbers and constructs and applies multiplication facts (tables) of 2, 3 and 4 in daily life situations	ILM 6.17 Constructs and applies the multiplication facts (tables) of 5 to 10 in daily life situations

<p>Competence of multiplication starts developing after the age of 6 years i.e., Class 1</p>					
<p>Competence of division starts developing after the age of 7 years i.e., Class 2</p>				ILM 5.19 Identifies appropriate operation (addition or subtraction) to solve problems in a familiar situation/context	ILM 6.19 Analyses and applies an appropriate operation (addition and subtraction) to solve problems in a situation/context
IL 1.20 Uses vocabulary related to money using poems and stories	IL 2.20 Identify Indian currency coins	IL 3.20 Identify Indian currency notes	ILM 4.20 Represents an amount up to Rs. 20 using notes/coins	ILM 5.20 Represents an amount up to Rs. 100 using notes and coins	ILM 6.20 Adds and subtracts small amounts (up to Rs. 500) with or without regrouping
IL 1.21 Uses vocabulary to express length through poems, riddles, jokes, and stories	IL 2.21 Compares two objects in terms of their lengths as longer than/ shorter than, taller than/ shorter than	IL 3.21 Compares three objects in terms of their lengths as longest/shortest tallest/shortest	ILM 4.21 Estimates and measures short lengths using non uniform units like a finger, hand span, length of a forearm, footsteps, etc.	ILM 5.21 Estimates and measures length/ distances using uniform non-standard units like a rod/ pencil/ thread, etc.	ILM 6.21 Estimates and measures length and distance using standard units like centimeters or meters and identifies relationships
IL 1.22 Uses vocabulary to express weight through poems, and stories	IL 2.22 Uses vocabulary to express weight through poems, riddles, jokes, and stories	IL 3.22 Compares two objects in terms of their weight as heavier than/ lighter than	ILM 4.22 Compares three objects in terms of their weight as heaviest/lightest	ILM 5.22 Compares objects as heavier than/ lighter than using simple balance.	ILM 6.22 Weighs objects in her daily contexts using standard units— grams and kilograms using simple balance
IL 1.23 Uses vocabulary to express capacities through poems and stories	IL 2.23 Uses vocabulary to express capacities through poems, riddles, jokes, and stories	IL 3.23 Compares capacities of two vessels like bottles, glasses, bucket, etc.	ILM 4.23 Estimates and measures capacities of containers using uniform non-standard units like a cup/ spoon/ mug, etc.	ILM 5.23 Compares the capacity of different containers in terms of non-standard units for example cup/ spoon/ bucket, etc.	ILM 6.23 Estimates and measures capacities of containers in terms of liters like a bucket can be filled up by 15 bottles of 1 litre.



Competence of measuring temperature starts developing after the age of 6 years i.e., Class 1			ILM 4.24 Appropriately uses vocabulary like hot or cold about objects/ weather, etc.	ILM 5.24 Compares objects as hotter than as / colder than by observable properties like condensation / steaming, etc.	ILM 6.24 Measure's temperature using a thermometer
IL 1.25 Identifies, basic shapes like ball, shoe box, birthday cap, ice-cream cone	IL 2.25 Describes the physical features of various solids/ shapes in her own language. For example- a ball rolls and has no corners, a box slides and has corners, etc.	IL 3.25 Identifies the 2-D shapes by tracing the faces of 3-D shapes on a plane surface	ILM 4.25 Identifies and describes 3D shapes with their observable characteristics. For example- a shoe box is a cube and has 6 faces, 8 corners, a ball is sphere with no corner and no flat surface a cap of a pen is a cylinder with a round surface.	ILM 5.25 Identifies and describes basic 2D shapes such as rectangle, triangle, circle, and other shapes around her/ him. For example, the pages of a book are rectangular and has 4 sides, 4 corners, trace of a bangle has no corner.	ILM 6.25 Draws/ represents straight lines in various orientations (vertical, horizontal, slant) by using a straight edge or by free hand.
Skill of using fractions starts developing after the age of 5 years i.e., Preschool 3 stage		IL 3.26 Uses vocabulary like half roti / half glass of water, etc. in daily context	ILM 4.26 Identifies the relationship between half and whole using paper folding, daily life context like folding of roti/ sandwich, etc. and clothes (bedsheets, handkerchief, etc.).	ILM 5.26 Identifies the relationship between half, quarter and whole using paper folding, daily life context like folding of roti/ sandwich, etc. and clothes (bedsheets, handkerchief, etc.).	ILM 6.26 Identifies half, one-fourth, three-fourths of a whole in each picture by paper folding and in a collection of objects.
IL 1.27 Follows/ reproduces a simple pattern like clapping hands, clicking fingers, tapping feet, etc.	IL 2.27 Identifies the unit of repeating a simple pattern and extends the pattern	IL 3.27 Creates new patterns with leaf printing or thumb printing, etc.	ILM 4.27 Observes, extends, and creates patterns of shapes, numbers, and musical/sound patterns. For example, arrangement of shapes/ objects/ numbers, etc.: - For example 1, 2, 3, 4, 5, . . . 1, 3, 5, . . . 2, 4, 6, . . . 1, 2, 3, 1, 2, etc.	ILM 5.27 Observes and generalises the patterns in numbers like in multiplication tables, 1-100 number grid or objects in the environment.	ILM 6.27 Observes, extends, and generalizes patterns in numbers up to three digits like patterns of numbers in multiplication tables, number chart up to 1000 or objects in the environment.

IL 1.28 Identifies / counts objects around like her/ his own body parts and draw inferences like two hands, 1 nose etc through poems	IL 2.28 Collects objects from her/ his surroundings based on simple instructions for example: bring 2 spoons etc	IL 3.28 Draws inferences from situations that surround him/her for example: I have more red pencils than blue.	ILM 4.28 Collects, records (using pictures/ numerals) and interprets simple information by looking at visuals. (For example, in a picture of a garden the child looks at different flowers and draws inference that flowers of a certain colour are more).	ILM 5.28 Draws inference based on the data collected such as the number of vehicles used in Samir's house is more than that of Angelina's, the price of a commodity is more than any other commodity in a rate chart, etc.	ILM 6.28 Records data using tally marks, represents pictorially, and draws conclusions
IL 1.29 Uses vocabulary in daily life like today, tomorrow and yesterday	IL 2.29 Identifies special days like Saturday, Sunday, holiday, etc. For example: Sunday is a holiday.	IL 3.29 Recites the names of the days of the week and months of the year	ILM 4.29 Identifies the names of the days of the week and months of the year for day/ month	ILM 5.29 Identifies the days of the week and months of the year using a calendar in her daily life events.	ILM 6.29 Identifies a particular date and corresponding day on a calendar
IL 1.30 Explores different technological tools like TV, Remotes, mobile phones, and others available in house	IL 2. 30 Demonstrates awareness about technology like T.V., mobile phones.	IL 3. 30 Describes usage of commonly available technological tools around him/ her.	ILM 4. 30 Uses some of the technological tools available around him/her.	ILM 5. 30 Demonstrates interest/ curiosity in newer technology as per child's context.	ILM 6. 30 Applies the knowledge of various technological tools in daily life.
EVS AS A SEPARATE SUBJECT STARTS IN CLASS THREE.EVS IN INTGRATED IN LANGUAGES AND MATHS IN CLASSES 1 AND 2					EVS 6.1 Identifies simple observable features (e.g., shape, colour, texture, aroma) of leaves, trunk, and bark of plants, animals and birds in immediate surroundings EVS 6.2 Identifies simple features (e.g. movement, at places 45 found/ kept, eating habits, sounds of animals and birds) in the immediate surroundings EVS 6.3 Identify relationships with and among family members.



					<p>EVS 6.4 Identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards , etc.), places (types of houses/shelters, bus stand, petrol pump , etc.) activities (works people do, cooking processes, , etc.) at home/school/ neighbour hood</p> <p>EVS 6.5 Describes need of food for people of different age groups, animal/ birds, availability of food and water and use of water at home and surroundings</p> <p>EVS 6.6 Describes roles of family members, family influences (traits/features/habits/ practices), need for living together, through oral, written or other ways</p> <p>EVS 6.7 Groups objects, birds, animals, features, activities according to differences/ similarities using different senses (e.g., appearance/ place of living/ food/ movement/ likes- dislikes/ any other features) using different senses</p> <p>EVS 6.8 Differentiates between objects and activities of present and (at time of the elders) (e.g., clothes/ vessels/ games played/ work done by people)</p> <p>EVS 6.9 Identifies directions, location of objects/places in simple maps of (home/classroom/school) using signs/symbols verbally</p>
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					<p>EVS 6.10 Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/ non standard units (hand spans, spoons/mugs, etc.)</p> <p>EVS 6.11 Records observations, experiences, information on objects/activities/ places visited in different ways and predicts patterns (e.g. shapes of moon, seasons)</p> <p>EVS 6.12 Creates drawings, designs, motifs, models, top, front, side views of objects, simple maps (of classroom, sections of home/ school, etc.) and slogans, poems, etc.</p> <p>EVS 6.13 Observes rules in games (local, indoor, outdoor) and other collective tasks</p> <p>EVS 6.14 Voices opinion on good/bad touch. stereotypes for tasks/ play/ food in family w.r.t. gender, misuse/wastage of food and water in family or food</p> <p>EVS 6.15 Shows sensitivity for plants, animals, the elderly, differently abled and diverse family set ups in surroundings. (For the diversity in appearance, abilities, choices - likes/dislikes, and access to basic needs such as food, shelter, etc.)</p>
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Annexure-II

Programmatic, Financial Norms and Key Performance Indicators

Sr. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
I. EARLY CHILDHOOD CARE AND EDUCATION (ECCE)					
1	Support at Pre-school Education	<p>Renamed as 'Early Childhood Care and Education' with the following interventions:</p> <ul style="list-style-type: none"> • Co-location of Anganwadis in Primary Schools • Curriculum development in convergence with Ministry/Department of Women and Child Development aligned to the National Curricular and Pedagogical Framework for Early Childhood Care and Education (SCPPECCE) for children up to the age of 8 which will be developed by NCERT (NEP Para 1.3) 	<ul style="list-style-type: none"> • Recurring Grant, including manpower deployment and other teaching learning aids/ materials of up to Rs 2 lakh per school per annum for pre-primary sections in Govt. primary Schools. 	<p>Enrolment and access</p> <ul style="list-style-type: none"> • GER/NER for children in 3-6 age cohort • Ratio of number of days that pre-school functioned to total number of working days in the year <p>Attendance and Health</p> <ul style="list-style-type: none"> • Average Attendance vs. enrollment ratio • Provision of uptoRs. 500/- per child for Teaching Learning Materials, indigenous toys and games, play based activities per annum for pre-primary sections in Govt. Schools. 	<p>(i) Enrolment and access</p> <ul style="list-style-type: none"> • Number of Anganwadis co-located in primary schools. • Number of Anganwadis and primary schools where Balvatika has started. • Number of children enrolled in Balvatika. • GER/NER, Transition • Student Classroom Ratio • Number of days in a year that the Balvatika/AW functioned • Number of children with 100% attendance • Number of children with 80-100% attendance • Number of children with 60-80% attendance • Number of children below 40-60% attendance • Number of children below 40% attendance • Average attendance rate in the year

Goals:

- Every child of appropriate age has access to Pre-School, is enrolled and attending
- Every child achieves optimum health and fitness parameters
- All teachers are qualified to deliver quality ECCE as per National Curriculum Framework (NCF)/State Curriculum Framework (SCF)
- Every child acquires all cognitive/transversal/affective/psychomotor skills required for being school/grade-1 ready
- Every pre-school has an inclusive teaching and learning environment.

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
	<ul style="list-style-type: none"> Numerous rich local traditions of India developed over millennia in ECCE involving art, stories, poetry, games, songs, and more, to be incorporated. (NEP Para 1.3) Requirement of additional Classrooms (ACR), Toilets, Drinking water facility etc will be provided under the strengthening component for starting pre-primary classes. Training of Master Trainers for training of Anganwadi workers for pre-school education in line with the NCERT Framework. In-service teacher training would also include training for ECCE teachers as per existing norms on art-integrated, sport integrated, story-telling, experiential and toy based pedagogies (Admissibility for Govt. Schools) 	<ul style="list-style-type: none"> Non-recurring grant of up to Rs. 1 lakh per school for Bala Features, Child friendly furniture, outdoor play materials etc. for pre-primary sections in Govt. Schools and co-located Anganwadis (once in 5 years) 	<p>Pupil Teacher Ratio (PTR) and teacher qualification</p> <ul style="list-style-type: none"> Children to Teacher/AWW ratio Ratio of qualified Teachers to total pre-school teachers; Ratio of qualified AWWs to total AWWs. Number of pre-schools/AWWs trained and using art-integrated, sport-integrated, story-telling, experiential and toy-based pedagogies, as evidenced from CRC/BRC inspections <p>Teaching Learning Material</p> <ul style="list-style-type: none"> Whether SCPFECCCE is developed in simple and local language by SCERTs based on NCFECCCE Whether SCFECCE specifically addresses areas related to the education of children with disabilities 	<p>(ii) Attendance and Health</p> <ul style="list-style-type: none"> Number of children achieving all parameters of health and fitness. Number of children falling short in 25% of the parameters. Number of children falling short in %0% or more of the parameters. Number of functional toilets in AW Balvatikas vis total enrolment of children in AW Balvatika Number of functional toilets in standalone Balvatikas vis total enrolment of children in standalone Balvatika Number of functional toilets in school where pre-school is located, or AW is co-located is co-located vis a vis total enrolment of children in that school. Number of times that potability of drinking water is tested (at least once every month/2 months/6 months/never) Number of children whose annual health check-up was undertaken <p>(iii) PTR and teacher qualification</p> <ul style="list-style-type: none"> Total number of teachers/AWWs in Aws/pre-schools Of these, Number of ECCE qualified teachers/Anganwadi workers Number of teachers/AWWs undergone training/CPD in ECCE. Number of Master trainers trained in ECCE. 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
				<p>Student Performance</p> <ul style="list-style-type: none"> localized teaching learning materials available with AWW/pre-school for ECCE (including art, stories, poetry, games, songs etc.) in local language Number of AWCs and pre-schools where HPC is implemented Number of students achieved desired competencies/learning Outcomes identified for ECCE. 	<ul style="list-style-type: none"> Number of AWWs/pre-school teachers specifically trained in art-integrated pedagogy. Number of AWWs/pre-school teachers specifically trained in sport-integrated pedagogy. Number of AWWs/pre-school teachers specifically trained in story-telling pedagogy. Number of AWWs/pre-school teachers specifically trained in experiential learning pedagogy. Number of AWWs/pre-school teachers specifically trained in toy-based pedagogy Pupil Teacher Ratio (PTR) Number of Teachers of Balvatika using special resources for education of children with disabilities
					<p>(iv) Resources/Teaching Learning Material</p> <ul style="list-style-type: none"> Number of primary schools with pre-sections received recurring/ non-recurring grant. Number of AWs/pre-school that have adequate educational toys/puppets/games/ board games, etc. Number of children received TLMs. Number of TLM produced in local languages by SCERT. Number of languages in which TLM is produced. Number of Balvatika having internet connectivity and IT equipment of integrating it into teaching and learning.

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
				(v) Student Performance	<ul style="list-style-type: none"> Total number of CRC/BRC/ICDS Supervisor Number of CRC/BRC/ICDS Supervisors who have been given App based specific rubrics for assessing performance of Balvrikta. Number of visits by CRC/BRC/ICDS Supervisor in pre-school/Balvrikta to assess performance – once a month/once in two months/in 3 months/6 months/never Number of teachers/AWWs who have access to App based Holistic Progress Card rubrics for entering/tracking progress of each child. Number of children who have achieved proficiency in requisite skills and have achieved the required learning outcomes to be considered school ready.
2.	Teaching Learning Materials for implementation of Innovative pedagogies (New)	• Core TLM: in all languages, including mother tongue/home languages/local languages for language and mathematics.	• Provision of up to Rs. 500 per child per annum upto primary level as per state specific action plan as approved by the national mission on FLN	• Development of Core TLM for reading literacy and mathematics literacy by SCERT in local language based on SCFSF	<ul style="list-style-type: none"> Number of children provided Core TLM for language Number of children provided Core TLM for mathematics Number of children provided Supplementary Graded material

II. FOUNDATIONAL LITERACY AND NUMERACY (FL&N)

Goals:

- All children in the age group of 6-9 have access to foundational schooling and achieve foundational skills by grade 3.
- High quality and diversified Student and Teacher Resources/Learning Materials are made available for a joyful learning environment
- School Readiness module is implemented in local language in class 1 in all schools
- Teachers of Grades I to V (New) are trained in order to ensure the requisite capacity to deliver high quality instruction for foundational years.
- Development of a robust technology enabled Monitoring Mechanism (New) to track the progress of each child in achieving learning outcomes.

S.I. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
	(including worksheets/ workbooks, reading cards, Supplementary graded materials, activity materials, etc.)	<ul style="list-style-type: none"> Supplementary graded material: will be provided to children to enhance the learning levels in reading, comprehension and numeracy, such as, Worksheets, workbooks, quizzes, etc. Supplementary TLM: for acquiring various skills and competencies in cognitive as well as other domains: Toys, Puzzles, puppets, games, board games, Story books, anecdotes, jokes, local rhymes, local folk songs/lore, art and craft, online access, etc. E-content will be prepared and uploaded on DIKSHA for Mathematics and Reading Literacy for FLN in local languages and context by SCERTs. 		<ul style="list-style-type: none"> Percentage of foundational years (Class 1 to 3) students that have access to and use Core TLM Development of Supplementary graded material for reading literacy and mathematics literacy by SCERT in local language based on SCFSE Percentage of foundational years (Class 1 to 3) students that have access to and use Supplementary graded material Development/provisioning of Supplementary TLM as additional resources by SCERT, such as, Toys, Puzzles, puppets, games, board games, Story books, anecdotes, jokes, local rhymes, local folk songs/lore, art and craft, online access, etc. 	<ul style="list-style-type: none"> Number of children having access to Supplementary TLM in school Number of books in school library pertaining to FLN years. Number of times these books have been borrowed/read by students of grade 1-3 Number of parental communications by the school (through teachers of grades 1-3) of IEC material regarding Learning Outcomes to be achieved by their child in the given year. Number of schools where parents/volunteers are actively involved in supporting the school to achieve FLN. Number of schools where peer learning has been introduced

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
	<ul style="list-style-type: none"> Development of IEC material such as infographics, school to parent communication material, State/JUT to teachers/school communication material, etc. regarding the benefits of Foundational skills and learning outcomes to be achieved by the child, in simple and regional languages by states/JUTs to ensure that students are given support in learning at home as well as at school. In disadvantaged or SEDG areas, SEZ and Aspirational districts, States and JUTs will assess teachers' vacancy specifically and take up PTR rationalisation on priority for these areas. 			<ul style="list-style-type: none"> High quality and engaging e-content related to Learning Outcomes for Grades 1-3 on DIKSHA IEC material: or parent communication material regarding the learning outcomes to be achieved by the child, designed in simple and regional languages by SCERT Percentage of foundational years (Class 1 to 3) students that have access to and use Supplementary ILM Number of books in school library pertaining to FLN years Number of times these books have been borrowed/read by students of grade 1-3 Percentage of schools where parental communication has been undertaken once every year/twice/thrice/four times/five times/six times or more 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
2.	<ul style="list-style-type: none"> States/JTs shall prepare their own guidelines for innovatively engaging peer groups and other local volunteers in contributing towards the goal of achieving FL&N for all grade 3 students. States/JTs will particularly prepare guidelines for parent's engagement as mentors/resources/volunteers in school to help the FLN mission. (Admissibility for Govt. Schools) 	<ul style="list-style-type: none"> Percentage of schools where parents/volunteers are supporting the cause of FLN Percentage of schools that have peer learning <ul style="list-style-type: none"> PTR in grade 1-3 in Aspirational Districts PTR in grade 1-3 in SEZ 			
3.	School Readiness module in all class 1 schools (New)	<ul style="list-style-type: none"> An interim 3-month play-based-school readiness/ preparation module - for all students who enter Grade 1 which should include monthly assessment framework, three in number (NEP Para 2.5) 	<p>Percentage of children:</p> <ul style="list-style-type: none"> enrolled in grade 1 who underwent School preparation module who attained high proficiency level in the module who attained medium proficiency level in the module who attained low proficiency level in the module who attained medium proficiency level in the module who attained low proficiency level in the said module 	<ul style="list-style-type: none"> Number of children undergone school preparation module. Number of children who attained high proficiency level in the module. Number of children who attained medium proficiency level in the module. Number of children who attained low proficiency level in the module. Balvatika to Class 1 : Number of children enrolled in grade 1 as a ratio to total number of children in Balvatika in the previous year. Total children and girls, boys and CWSN from Class 1 to Class 2 Total children and girls, boys, and disabled children from Class2 to Class 3 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
4.	Teacher Resource Material/Activity Handbook (New)	<ul style="list-style-type: none"> Provision of Teacher Manuals, Activity Handbooks, resource materials for teachers to align their innovative pedagogies with learning outcomes and grade level competencies States/UTs will identify a pool of mentors to render academic support (offline/online/ blended) to teachers who will be delivering the FLN mission objectives. 	<ul style="list-style-type: none"> Provision of up to Rs. 150 per teacher teaching at Primary level. 	<ul style="list-style-type: none"> Transition Rate to be measured from ECCE to Class V. 	<ul style="list-style-type: none"> Total children and girls, boys and CWSN from Class 3 to Class 4 Total children and girls, boys and CWSN from Class 4 to Class 5



Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
				<p>Percentage of teachers</p> <ul style="list-style-type: none"> • Number of items in the online item bank developed by SCERTs, including criterion-referenced items for classes 1 to 5 related to the measurement or achievement of each learning outcomes (at least 500 items per grade). • teaching grades 1 -3 who have access to these resources • teaching grades 1 -3 involved in creating teacher resources at cluster//complex/block/district/state level in language/s spoken by children in their school • Number of mentors identified • Number of Mentees associated with the mentors in offline/online mode 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
5.	Capacity building of teachers of Grades I to V (New)	<ul style="list-style-type: none"> Specific Teacher Training Modules focusing on FL&N will be designed through NISHTHA by NCERT. FLN-NISHTHA modules will specifically contain a module on bridging the language barrier and teaching in mother tongue/regional language/home language. FLN-NISHTHA will also contain a specific module on peer learning and how parents can be utilized as volunteers in the schools. Adoption of NISHTHA-FLN by the state will be done through SCERT translating it into local language 	<ul style="list-style-type: none"> As per the in-service teacher training norms of the scheme. 	<ul style="list-style-type: none"> Specific Teacher Training Modules focusing on FLN-NISHTHA designed for this purpose by NCERT. Adoption of FLN-NISHTHA by the state through SCERT translating it into local language Completion of the FLN-NISHTHA module by all teachers teaching grades 1 to 3 Number of Teachers who have undergone additional in-service training in specialized themes of FLN (Assessment, ICT, HPC, Child Tracking etc.) Adoption of NISHTHA-FLN by the state will be done through SCERT translating it into local language 	<ul style="list-style-type: none"> Number of teachers received training in FLN-NISHTHA. Number of visits by CRC/BRC to the school during the year to assess instruction delivery of teachers in classrooms. Number of Teachers of grade 1-5 using toy/game-based pedagogy in the classrooms as reported through CRC/BRC visit Number of Teachers of grade 1-5 using other innovative pedagogies in the classrooms, such as, art-integrated learning, sport-integrated learning, experiential learning, story-telling pedagogy as reported through CRC/BRC visit Number of teachers of grade 1-5 using resource materials for preparing their own lesson plans as reported through CRC/BRC visit Number of Teachers of grade 1-5 developing own TLM for classroom transactions as reported through CRC/BRC visit Number of teachers who are undertaking classroom transactions by using mother tongue as the link language Number of times the CRC/BRC visits the school to assess performance <ul style="list-style-type: none"> - once a month/once in two months/three months/four months/six months or more

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
	<ul style="list-style-type: none"> SCERTs will be the nodal agency in the State to conduct NISHTHA as well as all other supplementary in-service teachers' training. Teachers will be trained specifically on self-developing requisite TLMs in language spoken by child Teachers from SEDG areas, and Aspirational districts will be trained on priority (NEP Para 2.3 & 2.4) All Teachers teaching grades 1-3 will be trained on the variety of pedagogies that are important for joyful education at FLN level – art-integrated/sport-integrated/toy-based/storytelling/experiential/ICT-integrated/activity-based pedagogies 	<ul style="list-style-type: none"> Percentage of Teachers using toy/game-based pedagogy in the classrooms as reported through CRC/BRC visit Percentage of Teachers using other innovative pedagogies in the classrooms, such as, art-integrated learning, sport-integrated learning, experiential learning, story-telling pedagogy as reported through CRC/BRC visit Percentage of teachers using resource materials for preparing their own lesson plans as reported through CRC/BRC visit Percentage of Teachers developing own TLM for classroom transactions as reported through CRC/BRC visit 	<ul style="list-style-type: none"> Percentage of teachers in grades 1-3 using the mother tongue as the link language for instructional delivery 		

Sl. No.	Activities	Programmatic Norms	Proposed Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
6.	Independent, periodic, and holistic assessment of Students (New)	<ul style="list-style-type: none"> Formative and periodic assessment of the learning outcomes of Class I & II and desired competencies grade and subject-wise. Assessment of progress and achievements by students, schools and states/UTs in FL&N will be at four levels (school-based assessment, SAS, third party assessment and NAS). For the first level, that is, school-based assessments, a Holistic Progress Card will be designed by NCERT (for KVS/JNV/CBSE schools) for the foundational years. SERCET to develop an App based Rubrics for Holistic Progress Card to focus on Knowledge, Competencies/Skills, Attitudes, Values, etc. and AI based analysis. This will utilise the national level HPC prepared by CBSE and NCERT as the basis of developing the state/UT level HPC in the local language. 	<p>Up to @ Rs. 10 to 20 lakhs per district depending upon the size of the districts and states.</p>	<ul style="list-style-type: none"> Robust Rubrics developed at state level for tracking of FLN progress school-wise/student-wise Robust Rubrics developed at District level for tracking of progress of FLN school-wise, subject-wise, and grade-wise Robust Rubrics developed at BRC/CRC levels for tracking of progress of FLN student-wise in all domains Percentage of students acquired grade level competencies in language and Literacy in grade 1 as evidenced from HPC Percentage of students acquired grade level competencies in Numeracy in grade 1 as evidenced from HPC Percentage of students acquired grade level competencies in Language and Literacy in grade 2 as evidenced from HPC Percentage of students acquired grade level competencies in Numeracy in grade 2 as evidenced from HPC 	<ul style="list-style-type: none"> Number of students acquired grade level competencies in language, literacy, and Numeracy in grade 1 -5 as evidenced from HPC. Number of students acquired grade level competencies in language, Literacy, and numeracy in grade 1 to 5 as evidenced from NAS. Number of students acquired grade level competencies in language, Literacy, and numeracy in grade 1 to 5 as evidenced from SAS. Number of children who have acquired grade level ORF. Number of schools where additional strategies were deployed for enhancing learning and acquiring of relevant competencies – peer learning, parents as volunteer teachers, ICT integration, CRC/school complex level joint activities, etc. 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
	<ul style="list-style-type: none"> • HPC should be such that the teacher must fill it up at least twice/thrice in a year • SCERT to also delineate the speed of reading with comprehension in the local language, or Oral Reading Fluency (ORF) for grades 2 to 9 • Holding Periodic independent State level, third-party assessments, and national surveys. • Additional strategies deployed for enhancing learning and acquiring of relevant competencies – peer learning, parents as volunteer teachers, ICT integration, CRC/school complex level joint activities, etc. 			<ul style="list-style-type: none"> • Percentage of students acquired grade level competencies in language and Literacy in grade 3 as evidenced from HPC • Percentage of students acquired grade level competencies in Numeracy in grade 3 as evidenced from HPC • Percentage of students acquired grade level competencies in language and Literacy in grade 1 as evidenced from NAS • Percentage of students acquired grade level competencies in Numeracy in grade 1 as evidenced from NAS • Percentage of students acquired grade level competencies in language and Literacy in grade 2 as evidenced from NAS • Percentage of students acquired grade level competencies in Numeracy in grade 2 as evidenced from NAS 	

Sl. No.	Activities	Proposed Norms		Key Performance Indicators (KPIs)	DATA Points
		Programmatic Norms	Financial Norms		
7.	Development of a robust technology enabled Monitoring Mechanism (New)	<ul style="list-style-type: none"> To track children's learning progress and prepare a baseline data base for assessment of class/children at the beginning. Development of dashboard by states/UTs to have school/CRC/BRC/District/State level information. Reporting of progress to the national level Mission for FLN (NEP para 2.2. and 3.2) 	<ul style="list-style-type: none"> Provision under National Component at national level For States/UTs, the provision of child tracking has been provided under MIS component. 	<ul style="list-style-type: none"> Percentage of students acquired grade level competencies in language and Literacy in grade 3 as evidenced from NAS Percentage of students acquired grade level competencies in Numeracy in grade 3 as evidenced from NAS Percentage of children who have acquired grade level ORF. 	<ul style="list-style-type: none"> Number of schools reporting student-wise progress data, at least twice/three times a year at BRC, CRC and national, state, district level. Availability of Dashboards at National, State and District level Systematic reporting of school-wise/student-wise progress data, at least twice/three times a year at national, state, district. Systematic reporting of student-wise progress data, at least twice/three times a year at BRC, CRC and school level Access to state level dynamic and real time dashboard given to national Mission on FLN

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
8.	Formation of PMU at National, State and District level (New)	<ul style="list-style-type: none"> Setting-up of State/District PMU including subject experts/IT personnel/Data analysts etc. Provision for PMU at States/UTs/Districts will be made as per the size, school going population/enrolment etc. An Implementation Framework consisting of roadmaps and annual action plans for implementing of activities covering all the focus areas of FL&N Mission will be prepared by each State/UT. Year wise targets to be achieved would also be indicated in the plan. CRC/BRC guidelines for periodic assessment of schools/teacher's progress/ performance. 	<ul style="list-style-type: none"> Provision under National Component for PMU at national level For setting up and functional cost of PMU at State/UT level, financial support will be provided from Rs. 25 lakhs to Rs. 1 crore per State/UT. For setting up and functional cost of PMU at District level, financial support will be provided from Rs. 6 to Rs. 24 lakh per district. 	<ul style="list-style-type: none"> Monitoring of FLN mission at State level Monitoring of FLN mission at District and Block level Quarterly analysis of data related to improvement of learning level of students. Remediation/course correction interventions every quarter/every six months/every year. Percentage of schools given academic support as a part of course correction. Percentage of teachers given additional training as a part of course correction. 	<ul style="list-style-type: none"> Number of PMUs formed at State and District level. Analysis of Child wise (including CwSN) data (School/Block/ District/State) Number of schools given academic support. Number of teachers given training support

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
III. INCLUSIVE EDUCATION					
9	Provision for children with special needs (CWSN) system	<ul style="list-style-type: none"> The key thrust of Programme will be on providing inclusive education to all children with special needs in general schools. Funding will be based on data of CWSN provided under UDISE+. Programme will also support special training, education through open learning system, home schooling, wherever necessary, itinerant teaching, remedial teaching, community-based rehabilitation (CBR) and vocational education. States/UTs to also undertake 10 years projection on the need of providing adequate resources in all schools, including infrastructure and other resources for children with disabilities, through efficient sharing of available school resources. 	<ul style="list-style-type: none"> Provision of up to Rs. 3500 per child, per year for children with special needs, studying in government, government aided and local body schools as per the specific proposal. This will include aids and appliances, teaching material, etc. Provision of special educators at cluster/school level as per requirement and financial norms as per para 30 above. 	<ul style="list-style-type: none"> Improvement in Transition and Retention of CWSN Identification and categorization of CWSN at all levels in accordance with Pwd Act (21 categories) Identification of OoSC CWSN and mainstreaming OOSC CWSN at all levels Ratio of enrolled CWSN to special educators Percentage of children given aids and appliances received TLMs Percentage of children received TLMs Percentage of CWSN girls received stipend (Class/School/District/State) Number of qualified Special educators Percentage of children given aids and appliances received TLMs Percentage CWSN girls received stipend Percentage of schools having barrier-free access (Ramps with railings, CWSN friendly toilets) The special educators should be qualified and registered with the RCI. 	<ul style="list-style-type: none"> Improvement in GER and NER at all levels Improvement in transition rate at all levels Improvement in retention rate at all levels Number of CWSN identified at all levels (category wise) Number of OoSC CWSN identified at all levels. Percentage of children given aids and appliances (At all levels) Percentage of children received TLMs. Number of CWSN girls received stipend (Class/School/District/State) Off above, number of qualified special educators available at school cluster/complex level Number of Block Resource Persons available at Block/District/State Number of schools having functional CWSN friendly toilets (boys and girls) Number of special educators received salary. Number of teachers trained in early identification support and classroom support of CWSN

Sl. No.	Activities	Programmatic Norms	Proposed Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
	<ul style="list-style-type: none"> For providing support to the learning of children with disabilities, focus will be on early identification and support. States/UTs will build specific capacities of teachers at Foundational and Preparatory levels. (Chapter 6) States/UTs will undertake mapping of requirements of students with disabilities for participating fully in school education. States/UTs will strengthen BRCs with online/offline facilities of special educators, so that BRCs can also act as Resource centres for learners with severe or multiple disabilities. To assist teachers in catering to the needs of all learners more fully, States/UTs will provide services of special educator/s with cross-disability training to special educators and block resource persons at groups/clusters of schools or school complex. (Para 6.10 and 6.11) 	<ul style="list-style-type: none"> Provision of stipend for CWSN girls @ Rs. 200 per month for 10 months, in addition to student component from pre-primary to senior secondary level. 	<ul style="list-style-type: none"> Number of qualified special educators and Block Resource Persons appointed Number of children provided home based schooling Improvement in learning Levels of CWSN at all levels Percentage of teachers trained in early identification support and classroom support of CWSN. Identification camps at block level @ Rs 10000 per camp. These camps will be held for early identification of disabilities and the data of identified children shall be maintained by the States/UTs for all categories of disabilities defined under the PwD Act. 			

Sl. No.	Activities	Proposed Norms	Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> Support for CWSN children as defined in RPWD Act 2016 will be available from ECCE classes in Govt. primary schools to Sr. Secondary level. (NEP para 6.10) Resource centres (provision of TLMs) in conjunction with special educators will support the rehabilitation and educational needs of learners with severe or multiple disabilities and will assist parents/guardians in achieving high-quality home schooling and skilling for such students as needed. (NEP Para 6.12) 	<ul style="list-style-type: none"> Equipping Resource centres at Block level @ Rs 2 lakh per Block resource centre (Once in 5 years) with equipment for rehabilitation and special training of CWSN. Training for special educators and Block resource persons will be provided as per in-service teacher training norms 			

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
IV. STRENGTHENING OF TEACHER EDUCATION					
10	DIKSHA (Na- tional Teacher Platform)	<p>Support will be provided for:</p> <ul style="list-style-type: none"> Software development/maintenance for DIKSHA, setting-up of project team, creation, curation and translation of digital content, capacity building, awareness, and communication drive etc. Content should be uploaded after proper curation and as per prescribed taxonomy. A national repository of high-quality resources on foundational literacy and numeracy will be made available on the Digital Infrastructure for Knowledge Sharing (DIKSHA). (NEP Para 2.6) 	<p>Provision of Rs. 5 Lakhs to Rs. 50 lakh per State per annum to be given to SCERT based on the progress of the previous year</p>	<ul style="list-style-type: none"> Percentage of textbooks digitized by SCERT for classes 1-12 on DIKSHA Percentage of textbooks prescribed by SCERT for classes 1-12 on DIKSHA in audio format for visually impaired Percentage of Energized textbooks from among the total number of textbooks prescribed by SCERT for classes 1-12 Number of pieces of e-content tagged to the QR codes of the Energized Textbooks (ETB) Number of pieces of e-content tagged to the QR codes of the Energized Textbooks (ETB) for which there is e-content on DIKSHA that is grade-wise and subject wise Total number of pieces of e-content by state/UT on DIKSHA 	<ul style="list-style-type: none"> Number of textbooks prescribed by SCERT for classes 1-12 Number of textbooks prescribed by SCERT for classes 1-12 uploaded on DIKSHA. Number of textbooks prescribed by SCERT for classes 1-12 on DIKSHA in audio format for visually impaired Number of Energized textbooks from among the total number of textbooks prescribed by SCERT for classes 1-12 Number of pieces of e-content tagged to the QR codes of the Energized Textbooks (ETB) Total number of textbooks prescribed for grade 1. Number of textbooks for which there is complete e-content on DIKSHA for grade 1. Total number of textbooks prescribed for grade 2. Number of textbooks for which there is complete e-content on DIKSHA for grade 2. Total number of textbooks prescribed for grade 3.

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		Online teaching platform and tools: Appropriate existing e-learning platforms such as DIKSHA, will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners. (NEP para 24.4 (c))		<ul style="list-style-type: none"> Number of languages in which e-content is uploaded by state/UT on DIKSHA Number of teacher training modules by state/UT on DIKSHA Percentage of teachers who completed the training modules on DIKSHA Percentage of teachers trained by state/UT to enable the use of digital content and resources on DIKSHA in classroom transactions by the teachers Percentage of teachers using ICT and digital resources in the classrooms Percentage of teachers using digital resources on DIKSHA for preparing a lesson plan Several pieces of e-content were received by state/UT on Vidyaddan. 	<ul style="list-style-type: none"> Number of textbooks for which there is complete e-content on DIKSHA for grade 3. Total number of textbooks prescribed for grade 4. Number of textbooks for which there is complete e-content on DIKSHA for grade 4. Total number of textbooks prescribed for grade 5. Number of textbooks for which there is complete e-content on DIKSHA for grade 5. Total number of textbooks prescribed for grade 6. Number of textbooks for which there is complete e-content on DIKSHA for grade 6. Total number of textbooks prescribed for grade 7. Number of textbooks for which there is complete e-content on DIKSHA for grade 7. Total number of textbooks prescribed for grade 8. Number of textbooks for which there is complete e-content on DIKSHA for grade 8. Total number of textbooks prescribed for grade 9. Number of textbooks for which there is complete e-content on DIKSHA for grade 9. Total number of textbooks prescribed for grade 10. Number of textbooks for which there is complete e-content on DIKSHA for grade 10.

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
				<ul style="list-style-type: none"> Total number of textbooks prescribed for grade 11. Number of textbooks for which there is complete e-content on DIKSHA for grade 11. Total number of textbooks prescribed for grade 12. Number of textbooks for which there is complete e-content on DIKSHA for grade 12. Total number of pieces of e-content developed and uploaded by state/UT on DIKSHA. Number of languages in which e-content is developed and uploaded by state/UT on DIKSHA. Number of teacher training modules by state/UT on DIKSHA Number of teachers completed the training modules on DIKSHA. Number of teachers trained by state/UT to enable use of digital content and resources on DIKSHA in classroom transactions by the teachers. Number of teachers monitoring the progress of learners through DIKSHA. Number of teachers using digital resources in DIKSHA for classroom transaction. Number of teachers developed e-content and uploaded on DIKSHA. Number of different use cases by state/UT on DIKSHA Number of pieces of e-content received by state/UT on Vidyadaan 	

Sl. No.	Activities	Programmatic Norms	Proposed Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
11	Training for In-service Teacher, Head Teachers and Teacher Educators	<ul style="list-style-type: none"> To emphasize the integration of training structures in the States, the funds for teachers' training would be implemented through SCERTs who the nodal agency in the State will be to conduct in-service teachers' training. This may be done in close coordination with CTEs and ASEs. SCERTs/DIETs/ BRCs/CRCs will be strengthened to enable them to take up the initial professional preparation of ECCE educators in primary schools and their Continuous Professional Development (CPD) for the implementation of ECCE. (NEP Para 1.7) 	<p>Training for In-service Teacher: Project will provide training support as per the following norms:</p> <ul style="list-style-type: none"> Up to 10 days of Blended Refresher In-service blended training for teachers (Pre-Primary to Class 12, and including Headmasters/ Principals), at least 5 days of which will be in online mode, @ up to 500/- per teacher per day (amount will depend upon the amount of online and offline components;). Up to 10 days of Blended Induction training Recruited Teachers. (Pre-Primary to Class 12)@ up to 500/- per teacher per day (amount will depend upon the amount of online and offline components). 	<ul style="list-style-type: none"> Teacher-TEI ratio: Ratio of teachers to several in-service teacher training institutions identified at district/state/national level ECCE Educators -CRC/ BRC ratio: Ratio of ECCE educators/pre-primary teachers to several CRC/ BRC identified for initial professional preparation Percentage of teachers participated in teaching-learning workshops Percentage of teachers completed minimum 50 hours CPD in the year Percentage of Head Teachers/Principals completed minimum 50 hours CPD in the year Number of teachers trained through HEI collaboration Number of teachers trained through CTE and IASE collaboration 	<ul style="list-style-type: none"> Number of elementary teachers trained under NISHTHA Online on DIKSHA Number of secondary teachers trained under NISHTHA Online on DIKSHA Number of SCERTs notified as nodal agency for teacher training at state level. Number of DIETs notified for in-service teacher training. Teacher-TEI Ratio: Ratio of teachers to number of in-service teacher training institutions identified at district/state/national level. Number of CRC/BRC identified for initial professional preparation of ECCE educators in primary schools for the implementation of ECCE. ECCE Educators -CRC/BRC ratio: Ratio of ECCE educators/pre-primary teachers to number of CRC/BRC identified for initial professional preparation. Number of teaching-learning workshops held. Number of teachers participated in workshops. Number of online/blended teacher training modules developed for anytime, anywhere access by teachers. Number of teachers completed minimum 50 hours CPD in the year. Number of Head Teachers/Principals completed minimum 50 hours CPD in the year. 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
	<ul style="list-style-type: none"> In-service training will have inputs on safety, health, and environment at the workplace in schools to ensure that all teachers are sensitized to these requirements. (NEP para 5.9) Continuous opportunities for self-improvement will be offered in multiple modes, such as workshops, online teacher development modules, etc. (NEP Para 5.15) Each teacher will be expected to participate in at least 50 hours of CPD opportunities every year driven by their interests. (NEP Para 5.16) 	<ul style="list-style-type: none"> Up to 10 days Blended Refresher training for all Resource Persons, Master Trainers, BRC and CRC faculty, DIET faculties, and coordinators designated as RPs, at least 5 days of which will be in online mode, @ up to 1000/- per person per day. 	<ul style="list-style-type: none"> Use of technology platforms such as SWAYAM/DIKSHA for online training of teachers – number of programmes uploaded/number of teachers completed the course Percentage of new teachers undergone induction training Percentage of Head Teachers/Principals trained on School Leadership Programme Percentage of educational administrators Blended Leadership Training through NIEPA/State Leadership Academy for Headmaster/ Principals up to Rs. 8000/-for 16 days, at least 8 days of which will be in online mode, @ Rs.500 per person per day) per Headmaster/ Principal per year. 	<ul style="list-style-type: none"> Use of technology platforms such as SWAYAM/DIKSHA for online training of teachers – number of programmes uploaded/number of teachers completed the course Percentage of new teachers undergone induction training Percentage of Head Teachers/Principals trained on School Leadership Programme Percentage of educational administrators Blended Leadership Training through NIEPA/State Leadership Academy for Headmaster/ Principals up to Rs. 8000/-for 16 days, at least 8 days of which will be in online mode, @ Rs.500 per person per day) per Headmaster/ Principal per year. 	<ul style="list-style-type: none"> Number of master resource persons trained by SCERT, DIETs and BRCs/CRCs for guiding the capacity building of teachers. Number of collaborations with HEIs, such as, Universities and National Institutions, etc. for training of teacher educators Number of teachers trained through HEI collaboration. Number of training programmes conducted for by CTEs and IASEs for training of secondary & higher secondary teachers. Number of secondary and higher secondary teachers trained through CTE and IASE collaboration Use of technology platforms such as SWAYAM/DIKSHA for online training of teachers – number of programmes uploaded/ number of teachers completed course. Development of comprehensive annual in-service teacher training calendar by the SCERTs/State/JT Number of Teacher manuals/handbooks/guidebooks developed for teacher capacity building (online) Number of new teachers undergone induction training. Number of Head Teachers/Principals trained on School Leadership Programme Number of educational administrators Number of induction training conducted for teachers and teacher educators. Number of teacher educators trained

Sl. No.	Activities	Proposed Norms	Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> Teacher training may be done in close coordination with CTEs and IASEs, as these institutions are mandated to prepare secondary and higher secondary teachers through in-service programs. CTEs and IASEs also leverage support from PanditMadan Mohan Malviya National Mission on Teachers and Teaching (PMMNMTT), specifically for faculty development. The use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged so that standardized training programs can be administered to large numbers of teachers within a short period (NEP Para 15.10) 	<ul style="list-style-type: none"> Up to 5 days Blended Training of Educational Administrators: Residential State Level Training for Educational administrators, at least 3 days of which will be through online mode, @ up to Rs 1000 per person per day <p>Training for Teacher Educators</p> <ul style="list-style-type: none"> Up to 10 days Blended Training program Teacher Educators (SCERT, DIETs, CTEs, IASEs) as Resource Persons, at least 5 days of which will be in online mode, @ up to 1000/- per person per day 			

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> While promoting digital learning and education, the importance of face-to-face in-person learning is fully recognized. Accordingly, different effective models of blended learning will be identified for appropriate replication for different subjects. (Para 24.4(i)) 	<ul style="list-style-type: none"> Up to 10 days of Blended Induction Training of Teacher Educators, @ up to 500/- per person per day In the Blended model of training, the online to offline ratio should be at least 50:50. Efforts should be made to make all training 100% online. 		
12	Academic support through BRC/URC/ CRC	<ul style="list-style-type: none"> BRC/CRC have a significant role in ensuring the implementation of the National Education Policy, 2020 BRCs/URCs and CRCs are the most critical units for ensuring and evaluating the quality of education at school level on a constant basis and provide timely remedial interventions. 	<p>The project will provide support for BRC/URC and CRC as per the following norms:</p> <p>For BRC/URC:</p>	<ul style="list-style-type: none"> Development of Guidelines for CRC/BRC functioning by state/UT Development of App-based reporting format/ rubrics for reporting by CRC/BRC Improved selection criteria for Resource Persons/ Coordinators in BRCs & CRCs. Percentage of BRCs and CRCs who have undergone capacity building programme for providing academic resource support. Number of School Visits conducted by BRC/ URC. Number of school visits conducted by BRC/ URC. 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
8.5)	<ul style="list-style-type: none"> SCERT will develop an overall strategic plan, and an institution wise action plan for the reinvigoration of CRCs, BRCs, and DIETs within three years (NEP Para 8.5) BRCs/URCs and CRCs are the main units providing training and on-site support to schools and teachers. Given the significance of these structures, the programme will strengthen the faculty and infrastructure support to BRC/URC and CRCs. 	<ul style="list-style-type: none"> There would ordinarily be one BRC in each Community Development (CD) Block. In states, where the sub-district educational administrative structure like educational blocks or circles have jurisdictions that are not co-terminus with the CD Blocks, the State may opt for a BRC in each such sub-district educational administrative unit. However, in such a case the overall recurring and non-recurring expenditure on BRCs in a CD Block, should not exceed the overall expenditure that would have been incurred had only one BRC per CD Block been opened. 	<ul style="list-style-type: none"> Percentage of Schools visited 5 to 6 times in a year by CRC/BRC for monitoring and onsite support to schools Percentage of Schools never visited during the academic year by CRC/BRC for monitoring and onsite support to schools Percentage of CRC/BRC submitting online (App-based) reports after the school visit by the BRC and CRC Percentage of teachers teaching above 25 hours a week according to CRC/BRC reports Percentage of teachers teaching less than 10 hours a week according to CRC/BRC reports Number of training programmes jointly organized between DIETs and BRCs/CRCs 	<ul style="list-style-type: none"> Percentage of BRCs and CRCs who have undergone capacity building programme for providing academic resource support. Number of Schools visited ten to twelve times in a year by CRC/BRC for monitoring and onsite support to schools. Number of Schools visited eight to ten times in a year by CRC/BRC for monitoring and onsite support to schools. Number of Schools visited six to eight times in a year by CRC/BRC for monitoring and onsite support to schools. Number of Schools visited four to two times in a year by CRC/BRC for monitoring and onsite support to schools. Number of Schools visited two or less times in a year by CRC/BRC for monitoring and onsite support to schools. Number of CRC/BRC submitting online (App-based) reports submitted after the school visit by the BRC and CRC. Number of training programmes jointly organized between DIETs and BRCs/CRCs 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
		<ul style="list-style-type: none"> States/JTs will prepare detailed Guidelines for the roles, responsibilities, selection criteria, functioning, and reporting by CRC/ BRC based on the requirements of the National Education Policy, 2020. These Guidelines will also lay down a rubric of Key Performance Indicators for assessing the performance of BRC/ URC/CRC, which will include the following among others: <ol style="list-style-type: none"> <i>regular academic inspection visits to the school,</i> <i>providing training and on-site support to schools and teachers,</i> <i>monitoring the number of hours of teaching by teachers in a week</i> 	<ul style="list-style-type: none"> The BRC will function under the overall supervision of the Block education officer. There would ordinarily be one BRC in each Community Development (CD) Block. In states, where the sub-district educational administrative structure like educational blocks or circles have jurisdictions that are not co-terminus with the CD Blocks, the State may opt for a BRC in each such sub-district educational administrative unit. However, in such a case the overall recurring and non-recurring expenditure on BRCs in a CD Block, should not exceed the overall expenditure that would have been incurred had only one BRC per CD Block been opened. 	<ul style="list-style-type: none"> Number of School Visit Reports submitted Number of teachers preparing their own no cost or low-cost teaching aids/tools to make their classes interesting. Number of teachers teaching above 25 hours a week according to CRC/BRC reports Number of teachers teaching 20-25 hours a week according to CRC/BRC reports Number of teachers teaching 15-20 hours a week according to CRC/BRC reports Number of teachers teaching 10-15 hours a week according to CRC/BRC reports Number of teachers teaching less than 10 hours a week according to CRC/BRC reports Number of training programmes conducted for BRCs & CRCs 	

Sl. No.	Activities	Proposed Norms	Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<p>iv. ensuring introduction and sustenance of innovative pedagogies in schools (art-integrated/activity-based/experiential/story-telling-based/ICT-integrated learning, etc.),</p> <p>v. ensuring effective use of all TLM provided to schools</p> <p>vi. facilitating and guiding the preparation of no-cost or low-cost teaching aids/tools by school teachers</p> <p>vii. ensuring continuous and effective integration of ICT through efficient use of ICT equipment and ICT based educational resources</p> <p>viii. monitoring the progress of Foundational Literacy and Numeracy</p>	<ul style="list-style-type: none"> • There would ordinarily be one BRC in each Community Development (CD) Block. In states, where the sub-district educational administrative structure like educational blocks or circles have jurisdictions that are not co-terminus with the CD Blocks, the State may opt for a BRC in each such sub-district educational administrative unit. However, in such a case the overall recurring and non-recurring expenditure on BRCs in a CD Block, should not exceed the overall expenditure that would have been incurred had only one BRC per CD Block been opened. 			

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indi- cators (KPIs)	DATA Points
	<p>iv. ensuring introduction and sustenance of innovative pedagogies in schools (art-integrated/activity-based/experiential/story-telling-based/ICT-integrated learning, etc.),</p> <p>v. ensuring effective use of all TLM provided to schools</p> <p>vi. facilitating and guiding the preparation of no-cost or low-cost teaching aids/tools by school teachers</p> <p>vii. ensuring continuous and effective integration of ICT through efficient use of ICT equipment and ICT based educational resources</p> <p>viii. monitoring the progress of Foundational Literacy and Numeracy</p>	<ul style="list-style-type: none"> There would ordinarily be one BRC in each Community Development (CD) Block. In states, where the sub-district educational administrative structure like educational blocks or circles have jurisdictions that are not co-terminus with the CD Blocks, the State may opt for a BRC in each such sub-district educational administrative unit. However, in such a case the overall recurring and non-recurring expenditure on BRCs in a CD Block, should not exceed the overall expenditure that would have been incurred had only one BRC per CD Block been opened. 	<p>CRC/BRC guidelines in the local language.</p>	<p>one BRC per CD Block been opened.</p>	

Sl. No.	Activities	Proposed Norms	Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> States must focus on improved selection criteria for the coordinators and faculty of BRC/URC and CRCs. The selection criteria should take into consideration their experience, qualifications, and aptitude for training and research, and should follow an objective assessment of the same. BRC/URC Coordinator and faculty should be professionally qualified and have at least five years of teaching experience States must provide for constant skill enhancement of BRC/URC and CRC coordinators and faculty The functional linkage between BRC/URCs and CRCs with DIETs and district-level resource groups should be strengthened. 	<ul style="list-style-type: none"> States must focus on improved selection criteria for the coordinators and faculty of BRC/URC and CRCs. The selection criteria should take into consideration their experience, qualifications, and aptitude for training and research, and should follow an objective assessment of the same. BRC/URC Coordinator and faculty should be professionally qualified and have at least five years of teaching experience States must provide for constant skill enhancement of BRC/URC and CRC coordinators and faculty The functional linkage between BRC/URCs and CRCs with DIETs and district-level resource groups should be strengthened. 	<ol style="list-style-type: none"> Six Resource persons for subject-specific teaching, out of which the senior-most will be designated as in charge of BRC. Two Resource Persons for Inclusive Education for children with special needs. One MIS Coordinator and one Data Entry Operator One Accountant-cum-support staff per 50 schools. These accountants will be mobile and provide support to schools and blocks to help them maintain their records properly. 		

Sl. No.	Activities	Programmatic Norms	Proposed Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> • BRCs and CRCs will support the schooling system i.e., classes pre-primary -10 • In urban areas, academic resource centres would be set up on the lines of BRC to cover 10-15 CRCs. If the municipality or town development authority has academic staff, they may be deployed in the URCs. • On average, one CRC Coordinator may be placed in charge of up to 18 schools in a block, which must include the KGBVs and residential schools also. 	<ul style="list-style-type: none"> v. An additional grant of up to Rs 5 lakh per annum for expanding the support to the secondary level. This may include deployment of additional Resource Persons, and recurring expenditure for strengthening the BRC/URC • BRC/URC may be on school campuses as far as possible. Construction will be as per the State Schedule of Rates (SSoR)/CPWD rates, whichever is lower. • Provision for BRCs/ URCs up to Rs 3 lakh for furniture, the computer once in 5 years 			

Sl. No.	Activities	Proposed Norms	Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
		<ul style="list-style-type: none"> CRC construction cost will be as per the schedule of Rates notified by the State for an additional classroom. The CRC may be used as an additional classroom in schools on days when CRC meetings are not held. 	<ul style="list-style-type: none"> One CRC Coordinator may be placed in charge of up to 18 schools in a block. 	<ul style="list-style-type: none"> Provision for BRCs/URCs up to Rs. 2 lakhs for TLE/TLM, recurring expenditure, meetings, contingencies, etc. per annum. 	<ul style="list-style-type: none"> Provision for BRCs/URCs up to Rs. 2 lakhs for TLE/TLM, recurring expenditure, meetings, contingencies, etc. per annum. 	

Sl. No.	Activities	Proposed Norms Programmatic Norms	Financial Norms	Key Performance Indicators (KPIs)	DATA Points
13	Monitoring Information Systems (MIS)	<ul style="list-style-type: none"> The central financial assistance for salary purposes of the BRC and CRC will be given based on salary support given by the PAB in 2020-21. 	<ul style="list-style-type: none"> Assistance up to Rs. 2 per student as per the total enrolment reflected in UDISE+. To achieve universal participation in school by carefully tracking students, as well as their learning levels. (NEP para 3.2) 	<ul style="list-style-type: none"> Improvement in the adequacy of UDISE+ data Improvement in the MIS in the States/UTs For child tracking of students up to Rs. 3 per student may be provided once the State/ Centre has developed and implemented a comprehensive and robust system for the same. 	<ul style="list-style-type: none"> Number of qualified MIS personnel in the State/UT Number of trainings conducted for MIS personnel/staff. Number of Videos, Case Studies, Testimonials & Images uploaded on SHAGUN Portal by the State/UT each year. Number of children identified through the child tracking mechanism. Number of children tracked with learning levels identified
V. MONITORING OF THE SCHEME					
		<ul style="list-style-type: none"> Support to States for various MIS of the Department like UDISE+, Shagun and child tracking, etc. 	<ul style="list-style-type: none"> Percentage of qualified and trained MIS Personnel Upload of Videos, Case Studies, Testimonials & Images on SHAGUN Repository Percentage of children tracked with learning levels identified by the State/UT 	<p>(Admissibility for Govt. and Govt. Aided Schools)</p>	

Annexure-III

Risk and Mitigation

RISK 1: LACK OF CLARITY IN THE INTERPRETATION & IMPLEMENTATION OF THE MISSION GOALS BY DIFFERENT STAKEHOLDERS

SUGGESTED APPROACHES	POTENTIAL ROLE OF THE MOE	EXAMPLES & CASE STUDIES
<p>Imperative that the Mission</p> <ul style="list-style-type: none"> (a) Clearly articulates the learning outcome goals, and (b) This is accompanied by a strong communication campaign to align all system actors to the stated goals <p>Goals: Specific, measurable, and easy to understand</p> <ul style="list-style-type: none"> • To ensure system alignment, track progress, and aid decision-making, the NIPUN Bharat Mission must clearly define the learning outcome goals (and the associated indicator) for the end of Grade 3 • These goals must be specific, measurable, and easy to understand • The benchmarks associated with the stated Mission goals should be established in the first year of the Mission. In this respect, the timing and design of NAS 2021 is crucial • The goals and associated benchmarks should be widely disseminated and reinforced through multiple channels/documents <p>Communication Campaign</p> <ul style="list-style-type: none"> • Important to institutionalize NIPUN Bharat's communication campaign for sustained and lasting change • The Honourable PM, Education Minister along with the respective Chief Ministers can help to build salience on the issue, and make this a people's movement • The MOE and states can consider focusing on their mass media campaign <u>Reading with Meaning</u>, given its simplicity 	<ul style="list-style-type: none"> • Clearly articulate the Mission goals for the end of grade 3. For example: <ul style="list-style-type: none"> ♦ Literacy: By the end of grade 3, children can read 30-35 correct words per minute with comprehension ♦ Numeracy: By the end of grade 3, children can solve three-digit addition and subtraction problems as well as identify basic 2D- shapes • Ensure that NAS2021 results are available at the earliest to establish benchmarks and targets for each state <ul style="list-style-type: none"> ♦ Before NAS2021, need to conduct an ORF study to establish a reading fluency benchmark for different languages • Make adequate funding available for the IEC component. 	<p>Goal setting and communication for system alignment</p> <p>Example 1: Swachh Bharat Abhiyan</p> <ul style="list-style-type: none"> • The goal of "Open Defecation Free (ODF)" is simple, specific, and measurable • The Mission had a multi-year, holistic communication plan, led by the PM, and it leveraged different platforms and mediums • The campaign focused on creating salience for the issue, changing norms and beliefs, and nudging change in practice • Sufficient funding made available for the IEC activities <p>Example 2: Goal Setting by the Mission Prerna, Government of UP</p> <ul style="list-style-type: none"> • Mission Prerna, Government of UPs, holistic program to improve foundational learning outcomes has articulated a very sharp goal • For each grade 1-5, the Mission has specified the final goal for Hindi (language) and maths along with clear, quantifiable & contextual learning metrics defined



RISK 2: POOR QUALITY OF LEARNING OUTCOMES DATA TO MONITOR PROGRESS OF THE MISSION

SUGGESTED APPROACHES	POTENTIAL ROLE OF THE MOE	EXAMPLES & CASE STUDIES
<p>Institute a robust learning outcomes assessment architecture to ensure reliable and valid data on the attainment of FLN competencies is available at the National, State, and District-level to aid evidence-based decision-making.</p> <p>SUGGESTED DATA ARCHITECTURE FOR NIPUN BHARAT</p> <p>National level</p> <ol style="list-style-type: none"> 1. NDEAR 2. National Achievement Survey (NAS) to establish state-wise benchmarks and targets for the goals, and monitor progress. <ol style="list-style-type: none"> a. Periodicity: At the interval of 3 years b. A separate Oral Reading Fluency (ORF) study to establish ORF benchmarks <p>State-level</p> <ol style="list-style-type: none"> 1. State-level Achievement Survey (SLAS) 2. Key Stage (FLN competency-based) exam at the end of grade 3 (starting 2023) to assess achievement of key FLN competencies and improve accountability towards goals 3. Regular assessments with robust data reliability mechanism to track progress and improve accountability towards FLN goals 	<p>To monitor progress and hold states accountable to achieving the stated goals, MOE should ensure student assessments are reliable and timely.</p> <p>On NAS, MOE should</p> <ol style="list-style-type: none"> 1. Ensure NAS cycles include: <ol style="list-style-type: none"> a. Testing children on key competencies on foundational literacy and numeracy competencies, preferably up to two grades below -- Processes and measures to strengthen the reliability of NAS data 2. Provide technical guidance and support to State SCERTs to conduct ORF study to establish benchmarks for different languages <p>Assessments</p> <ol style="list-style-type: none"> 1. Recommend states to adopt a model to verify the assessment data reported by teachers, and measure it through a "data reliability score" 2. Consider incentivising states to generate and report reliable student learning assessment 	<p>Several states in India conduct periodic standardised summative assessments. However, independent studies suggest that often this data is inflated, and hence unreliable. Some states have introduced measures to validate and verify the assessment data.</p> <p>Below we highlight different approaches and models for improving the reliability of the assessment data.</p> <p>Using Tablet-based assessments to collect reliable assessment data</p> <p><u>Example1:</u> Prakasam district, Andhra Pradesh</p> <ul style="list-style-type: none"> • In 2019, the government decided to use a combination of paper and tablets to administer the end of grade 4 summative assessments (centralised test paper) across government and private schools in the Prakasam district • In 768 schools, students took a pen-paper test administered by the schoolteachers, whereas in 1,694 schools, students used tablets • Results of a re-test conducted by an independent agency across these 2,462 schools showed that the pen-paper test scores were inflated by 20%. This was not so in the case of the tablet-based test scores <p>Different Approaches for generating a "Data Reliability Score"</p> <p><u>Model 1 (State-led): Verification by the District Education bureaucracy</u></p> <p>Example: Wall of Fame, Madhya Pradesh</p> <ul style="list-style-type: none"> • Under the "Wall of Fame" initiative, as part of the remediation programme for Grades 3-9, schools are certified as Gold, Silver, or Bronze when 90%, 75%, and 60% of students respectively meet the set competency criteria • Once a school self-nominates, a district committee re-tests a sample of students in the school • School receives the appropriate certification if the results from the re-tested sample meet the criteria <p><u>Model 2 (State-led with nested supervision): Re-verification of data reported by the district education bureaucracy</u></p> <p>Example: School Certification, Jharkhand</p> <ul style="list-style-type: none"> • In Jharkhand's School Certification program, the CRCs retest a sample of students to verify if the schools meet the criteria for certification

Approaches for generating reliable assessment data

1. Measures to decrease the likelihood of misreporting of data such as introducing multiple test booklets with different order of questions, using technology to enable geo-tagging, time stamping, and reducing scope for cheating, and ensuring independent invigilation of the test
2. Generating a data reliability score by re-testing a sample of students to determine the veracity of the assessment data reported by teachers. The re-testing can be done by different stakeholders - state bureaucracy, another department, external agency, etc.

a. E.g., PGI could include a measure for reliability of state-reported learning outcomes data

3. Provide technical guidance and inputs to states on different models and approaches to ensure data reliability and generating a reliability score

4. Make adequate funding available to States for conducting different assessments with appropriate data reliability measures

- Thereafter, an independent third party verifies the CRC reported scores by retesting a sample of students
- Schools are rewarded with certificates based on the results of the independent third-party retest

Model 3 (External third party): Verification by an independent external (private) agency

Example: Saksham Ghoshna, Haryana

- Saksham Haryana includes an inter-block competitive model, Saksham Ghoshna, wherein blocks which believed they are "Saksham". i.e., 80% of their students are grade-level competent, nominate themselves to be evaluated by an independent third-party
- A random sample of students from every block is selected and tested with the help of D.Ed. – B.Ed. volunteers under strict surveillance
- If 80 percent of a representative sample of students in grades 3,5 and 7 achieve grade-level competency in Math and Hindi, the block is declared Saksham

RISK 3 THE DESIRED CHANGE IN THE CLASSROOM, IN TERMS OF ADOPTION OF EVIDENCE-BASED PRACTICES, DOES NOT TAKE PLACE

SUGGESTED APPROACHES	POTENTIAL ROLE OF THE MOE	EXAMPLES & CASE STUDIES
<p>Given the variation in context and capacity both, inter-and intra-States, States need to be given the flexibility to contextualise the design and implementation of academic interventions. At the same time, it is important that certain classroom resources and teaching-learning processes which are evidence-based and widely acknowledged to be critical for FLN acquisition, are included in their plans.</p> <p>These include:</p> <ol style="list-style-type: none"> 1. A <u>daily dedicated block for FLN</u> - 90minutes for language and 60minutes for numeracy - in the school timetable 2. <u>Print-rich classroom environment</u> in the form of word walls, storybooks, posters to assist in the development of print awareness and supports other literacy skills. 	<ol style="list-style-type: none"> 1. Ensure adequate funding is available for essential TLM (student workbooks, graded reading books, big books, manipulatives, teacher manuals, lesson plans) 2. Create guidelines for TLM to enable states to develop a range of TLM from different sources in collaboration with NCERT, share a suggested Learning Outcomes Framework (LOF) well-defined competency for language and numeracy for Grades 1-3, which can be contextualised by State SCERTs. 3. The state may collaborate with civil society organisations as per their need and requirement. 	<p>Structured Pedagogy in Practice</p> <p><u>Example1: Tusome (Kenya) on Structured Pedagogy</u></p> <p>Launched by the Government of Kenya, in collaboration with DFID and USAID, Tusome has shown strong gains in foundational literacy outcomes. The program focused on the following key interventions:</p> <ul style="list-style-type: none"> • Enhanced teacher's capacity to effectively deliver classroom instruction through training on learner-centred pedagogy and follow-up cluster meetings. • 1:1 pupil to book ratio • Provision of supplementary material like letter cards and pocket charts to aid literacy instruction. • Provision of detailed manuals to teachers which gave step-by-step guidance on teaching a given concept



<p>3. Availability of <u>high-quality TLM</u> for both students (student workbooks, graded reading books, big books, manipulatives) and teachers (teacher manual, lesson plans, formative assessment guidelines)</p> <p>4. An<u>FLN competency framework</u> wherein the grade-wise FLN competencies are broken down into micro-competencies, which are linked to the lesson plans, teaching-learning material (TLM), and regularly tracked by teachers.</p> <p>5. <u>Training and capacity building of teachers</u>, with a focus on pedagogical approaches for early literacy and numeracy skills, classroom management strategies in the context of MGML classrooms (multi-grade, multi-learning), and the FLN Learning Outcomes framework</p>		<ul style="list-style-type: none"> Enhanced instructional support and supervision through app-based monitoring that provided real-time data on students and teacher performance. <p><u>Example 2: Mission Prerna, Uttar Pradesh</u></p> <p>The Government of UP's flagship programme on FLN has the following features:</p> <ul style="list-style-type: none"> Sharply defined goals for Hindi and maths for each grade 1-5, Prerna Soochi. These are further broken down into granular competencies and micro-competencies, PrernaTaalika. Detailed lesson plans, TLM (student workbooks, graded reading material, manipulatives, student worksheets), and assessment bank aligned to the PrernaTaalika and PrernaSoochi Online FLN focused MOOC to help teachers build conceptual knowledge and pedagogical skills
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RISK 4 LACK OF OWNERSHIP AND ENGAGEMENT ON FLN AT THE DISTRICT LEVEL		
SUGGESTED APPROACHES	POTENTIAL ROLE OF THE MOE	EXAMPLES & CASE STUDIES
<p>For the success of the Mission, it would be important to build ownership at the district-level (or appropriate administrative unit) to provide leadership to the overall mission, monitor progress, and address challenges.</p> <p>One potential approach is through introducing incentives and competition at the district-level to energize the system, align incentives, and drive ownership.</p> <ul style="list-style-type: none"> States should determine the appropriate unit for competition for their respective states, based on their administrative structure (e.g., district-level, ZillaParishad, PRIs) Important that competition is regarded as "low-stakes" but be designed to generate the requisite effort; thus, messaging will be key. <ul style="list-style-type: none"> Potential messaging: to identify and celebrate success stories, while motivating others 	<ul style="list-style-type: none"> MOE can provide guidelines for possible district-wise gamification program and some funding norms around this 	<p>Mobilization of state machinery through competition <u>Example 1: Saksham, Haryana</u></p> <ul style="list-style-type: none"> Saksham Haryana, the Government of Haryana's flagship program, was launched to make 80% of the students in the state grade-level competent. The program included an inter-block competitive model, <i>Saksham Ghoshna</i>, wherein blocks that believed they were "Saksham" nominated themselves to be evaluated by an independent thirdparty. The competition was designed to reward blocks for taking initiatives and achieving targets, thereby generating momentum on the ground, and ensuring alignment among multiple stakeholders. <p><u>Example2: School certification (Gold, Silver, Bronze) to instil competition and energize at a school level.</u></p> <ul style="list-style-type: none"> Several states like Odisha, Jharkhand, Madhya Pradesh have introduced school-level certification initiatives. Schools are certified as Gold, Silver, or Bronze depending upon if the school meets the specified set competency criteria, based on verification conducted by either CRCs or an external agency

Annexure-III

TUSOME PROGRAM, Government of Kenya's National Literacy Program

- Planning to ensure availability of adequate number of Teachers in each school at each grade from pre-primary to grade 3, especially in aspirational districts, SEZs and undertaking extensive capacity building of teachers for implementing FLN in mission mode.

11.3 Role of NCERT:

Background: In 2012, Kenya was facing an education crisis with extremely poor foundational literacy outcomes: less than 5 percent of first- and second-grade children met the government's literacy benchmarks and 80 percent of teachers reported no professional development support the prior year. Following a successful pilot program (PRIMR), in 2015 the Government of Kenya in collaboration with USAID and DFID, launched Tusome to improve literacy outcomes for children in grades 1, 2, and 3 over five years. The nation-wide program reached over 7 million students in grades 1-3 and 70,000 teachers across nearly 23,000 primary schools and 1,500 low-cost private schools.

Program Outcomes

- The percentage of non-reader students in English Class 2 dropped from 38% to 12% and that of students reading fluently increased from 12% to 47.2%
- Over 70,000 teachers received evidence-based professional development.
- Over 24 million learning materials were distributed to schools, resulting in a 1:1 pupil to textbook ratio.
- On average, coaches made 90 observations over the school year, a massive increase in system supervision/support and expectation setting for teachers.

Program Goals

- The goal of the program is to promote strong gains in reading in grades 1 and 2 in both Kiswahili and English.

Instructional Design

- The program breaks 30 weeks into 3 phases: each phase focusing on a particular component of literacy.
 - Phase I (Week 1 to 6): Focus on Oral Language Development
 - Phase II (Week 7 to 8): Transition to Reading and Writing
 - Phase III (Week 9 to 30): Reading and Writing



- Each phase has a core area of focus; however, it also simultaneously builds other literacy skills in children.
- The program follows the balanced approach to literacy i.e., focuses on skills like phonological awareness, letter knowledge, and meaning-based work like oral language development and reading comprehension

Classroom Resources

Classroom Resources for Teachers: Teachers are given comprehensive teacher guides with the following characteristics:

- Day wise lesson plans for 30 weeks, 5 lessons for each week (every 5th plan is a revision plan)
- Time duration for each lesson across all components of literacy
- Snapshot of letter sounds and blends to be completed through the academic year.
- Stories and any other reference material mapped with the student workbook.
- Scripted plans for the initial months and structured plans for the latter part of the year
- Homework instruction at the end of every lesson; homework sheet is mapped to student workbook.

Classroom Resources for Students

- Each student is given a Student Workbook.
- Homework books that include writing and handwriting practice, age-appropriate stories, and engaging activities to support literacy development in both languages.

Formative Assessments:

- Strategies like thumbs up and down are embedded in the workbook at a lesson level to quickly check if students have understood the concept.
- Questions to solve independently given at a daily level to practice in the “you-do” phase of the lesson.
- Revision and remediation plans are given in the workbook at a weekly level.

Training Content and Delivery:

- **Topics:** Teacher training sessions develop teachers' pedagogical skills in critical areas of reading instruction (phonemic awareness, reading comprehension, lesson planning, and curriculum coverage).

- **Demonstration:** Training is heavily based on demonstration and modelling of activities followed by group practice; individual components of literacy, as well as the full lessons, are modelled.
- **Practice:** For practice, Class 2 teachers who have been with Tusome are paired with Class 1 teachers who are new to the program; Practice is done in turns followed by scoring of each activity in the mastery card by the partner; scoring is based on mastery checklist; feedback is provided by partner until mastery is achieved
- **Technology:** Video-based content is used to learn certain skills like the alphabetic principle
- **Homework:** There is homework given at the end of every training day; reviewed the following morning
- **Cascade:** Training is done in a cascaded form. Reinforcement of large-scale cascade training is done by interspersing smaller, iterative localized support often at a cluster level.
- **Duration:** The training is conducted for 3 days at the beginning of the year. There is a 1-day training in term 2 followed by a refresher workshop every subsequent year.

Teacher Support (Mentoring and Coaching)

- Curriculum Support Officers, administrators, and instructional coaches received training based on practical classroom-based experiences.
- Head teachers are trained to provide instructional leadership for their schools while managing the acquisition, utilization, and maintenance of the new learning materials.
- Ongoing Support to Teachers: Ongoing support provided through interactive text messages that offer information and motivation to implement the lesson plans e.g., please remember to have children finger-point as they track the text

Monitoring

- Monitoring mechanisms include regular visits to schools, preparing structured observations, and feedback. The CSOs are provided a tablet-based app that has the following features:
- Classroom observation checklist to help coaches see if teachers were delivering lessons as expected and then giving them the right pointers.
- Curriculum-aligned formative reading assessments which the coaches administer to a few random students (such as timed 1 minute reading of passages) to inform teacher feedback.



- Provision to pull up a digitized version of the day's lesson plan on the tablet to see how well the teacher is following suggestions for reading and math instruction.
- The CSOs are required to produce a 2-page brief report after each classroom observation, which is reviewed by senior management.
- The Head Teacher is also provided with an Observation Tool which is available both on an app and in hard copy.

Data Systems:

- There is a centralized portal to upload classroom observation data and uncover trends. The data is uploaded in real-time, making it available to local and national education stakeholders. This helps create reading champions and fosters accountability throughout the education system.
- The data allows MOE decision-makers to monitor progress and make informed judgments and adjustments when necessary.

Core Drafting Team of MoE and NCERT

@ MoE

Anita Karwal

Secretary, Department of School Education
& Literacy, Govt. of India

Maneesh Garg

Joint Secretary, Samagra Shiksha
Department of School Education & Literacy
Govt. of India

Rashi Sharma

Director, Samagra Shiksha
Department of School Education & Literacy
Govt. of India

Purabi Pattanayak

Chief Consultant, Samagra Shiksha
Department of School Education & Literacy
Govt. of India

Taramani Naorem

Chief Consultant, Samagra Shiksha
Department of School Education & Literacy
Govt. of India

@ NCERT

Prof. Sridhar Srivastava

Director (I/C)
NCERT

Prof. Suniti Sanwal

Head, DEE, NCERT

Prof. Anup Rajput

Head PD, NCERT

Prof. Indrani Bhaduri

ESD, NCERT

Prof. Ranjan arora

Head, DTE, NCERT

Prof. Usha Sharma

DEE, NCERT

Dr. Meenakshi Khar

DEL, NCERT

Dr. Romila Soni

DEE, NCERT

Dr. Ritu Chandra

DEE, NCERT



**Department of School Education & Literacy
Ministry of Education
Government of India**