

Foundational Literacy and Numeracy: A Pre-requisite to Learning

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Abstract

Foundational Literacy and Numeracy (FLN) skills are important for everyone to sustain in day-to-day life. The ability to read, write and perform basic mathematical operations is a necessary foundation and pre-requisite for lifelong learning. The present article focuses on the importance of foundational literacy and numeracy in the context of NEP 2020 and suggests some strategies to attain foundational literacy and numeracy. The article also emphasizes on NIPUN Bharat Mission, which is in cognizance with the NEP 2020, which focuses on providing access and retaining children of the age group of 3 to 9 years in foundational years of schooling.

Key Words: Foundational Literacy and Numeracy, ECCE, NEP 2020, NIPUN.

Introduction

The ASER report, January 2020 revealed the incompetency of elementary school students in basic skills of reading, understanding, and performing on basic arithmetic. At least 25% of school children of such students lacked age-appropriate cognitive and numeracy skills, leading to massive learning deficits at an early stage. The National Achievement Survey, 2017 reported that only 59% of students of class III were able to read a passage and interpret meanings from it. On average, a student of class VIII could only answer 40% of questions in math, science, and social science. “In class III only 53% children achieved grade-appropriate proficiency level, this proportion

of children reduced to 47% in class V and further reduced to 39% children in class VIII. This cohort of children can solve the problem using simple logic, apply simple rules, follow simple instructions, and use simple language to express themselves.” (NAS, 2017, pp. 165)

Various surveys indicate same results that non attainment of foundational literacy and numeracy is a disturbing finding impeding national development. The situation may be referred to as ‘Learning Crisis’ which is expected to worsen given the fact that the schools were under lockdown for almost a year.

The 3 R’s - Reading, Writing, and Arithmetic

(numeracy) are the foundational skills to lead an educated life. Many policy documents like Kothari Commission, NPE 1986, Sarva Shiksha Abhiyan have suggested focusing on the development of Early Childhood Care and Education (ECCE) in the Indian Education system. Right to Education Act, 2009, a milestone in the Indian education system, provided “free and compulsory education” to only 6-14 years of children. However, children belonging to the pre-primary stage were neglected. Now with the onset of National Education Policy 2020, ECCE and pre-primary education have got their due importance.

The NEP 2020 focuses on bringing qualitative changes to the education system of our country. The structure of the education system has been revised in NEP 2020 by including the foundational stage is 5+3+3+4. The vision for pre-primary education is the holistic development of the child including strengthening of foundational literacy and numeracy. The importance attached to this can be understood by the reaffirmation that “the rest of the Policy will become relevant for our students only if this most basic learning requirement (i.e., reading, writing, and arithmetic at the foundational level) is first achieved.” (NEP 2020, pp. 8)

As suggested in the policy, a national mission on Foundational Literacy and Numeracy has been launched by the Government of India. A strong foundation will have a positive impact on the learning of the child in their further educational journey. NEP 2020 promotes the idea of foundational literacy and numeracy as imperative prerequisites for schooling and education that require instant attention. The policy has shared that the attainment of Universal Foundational Literacy and Numeracy is the highest priority of the state, and

it includes:

1. making learners competent in doing meaningful reading and writing by the time they enter grade III.
2. developing the basic understanding and competencies related to numeracy and its related concepts among young learners till grade II.
3. developing skills among the learners to amalgamate their outside school experiences in their classroom learning to attain foundational literacy and numeracy in a better way.

Foundational Literacy

Foundational literacy is not limited only to the identification of alphabets and words. It is a meaning-making process, where all the skills of language; listening, speaking, reading, and writing are developed with a proper system. These skills are developed in coordination with one another and not in isolation. After birth, the child’s listening skills are developed in their natural environment by listening to various sounds in the environment. Imitation enables the child to repeat the sounds of the environment and thus starts the process of speaking. As the child uses the skills of language in a different context, it gets more fluent and effective. The acquisition of language skills is based on the Noam Chomsky Language Acquisition Device (LAD), wherein the development of thoughts in the brain is related to the verbal or written symbols present in the environment.

In pre-primary education, the focus is on all four language skills. LSRW skills are honed with activity-based teaching methods. Reading skill is a

process of decoding sounds and symbols, along with contextual comprehension. Children learn to read to enhance their knowledge and get more information about their world. Fantasy stories, poems, riddles, puzzles are encouraged to be read by the children. It helps develop their interest in reading. Reading when used for pleasure, communicating, or getting new information can be very helpful for developing children's curiosity. On the other hand, writing is a graphical representation of symbols. Initially, the child tries to express his/her emotions in different forms such as pictures and drawings. The process of writing includes the identification of symbols, their comprehension, and organization on paper. Children need to have developed fine motor skills for the process of writing. Control over muscles of fingers and wrists, effective hand-eye coordination is important to write symbols in proper shape and size. The process of reading and writing are interrelated to each other.

Foundational Numeracy

Foundational numeracy includes the ability of an individual to perform basic arithmetic operations in daily life. It includes:

- **Pre-number Concepts:** The knowledge of numbers, shapes, classification, and identification of big, small, short, tall, etc.
- **Counting Competency:** Counting in pairs, groups, and individuals is also required to develop functional numeracy.
- **Number Sense:** Ability to view a single number in many ways, which are essential to be developed in the early years of school life.
- **Visualization:** Ability to visualize the objects,

compare and differentiate them based on their attributes and features.

- **Spatial Understanding:** The understanding of space, size, and position helps in building the spatial understanding in the child.
- **Mathematical vocabulary and its application:** Mathematical vocabulary and thinking are required for the application of foundational numeracy in the child.

The numeracy skills in children are developed naturally in a conducive environment. For instance, a vegetable seller who has never gone to school knows basic maths in their way by using alternative methods.

NIPUN

Recent policy initiative NIPUN Bharat was launched by the Ministry of Education, Government of India to ensure realization of foundational literacy and numeracy among elementary school students by the end of 2026-27. It aims to provide a conducive environment for the child to achieve universal foundational literacy and numeracy. It is in cognizance with the NEP 2020. The vision of the mission is to create an enabling environment in all aspects to ensure the universal acquisition of FLN in primary classes by 2026-27 so that every child achieves the desired learning competencies in reading, writing, and numeracy by the end of class III and not later than class V.

It has been planned to set up a 5-tier implementation mechanism, at the National-State-District-Block-School level across India. The NCERT will provide academic support to teachers, develop a curriculum and pedagogical framework focusing on FLN with

learner-centric pedagogy, etc. CBSE will work with NCERT, introduce competency-based education in CBSE affiliated schools, monitor learning levels of children, and report the same and capacity building of primary teachers. States and UTs have a vital role to play in the achievement of the objective of the mission from mapping the requirements of schools, teachers, and students and fulfilling those requirements.

Strategies to attain Foundational Literacy and Numeracy



Figure: Strategies to attain Foundational Literacy and Numeracy

1. **Curriculum Reforms:** NEP 2020 focus on ECCE as an integral part of the education system. Therefore, there is a need to develop guidelines for the curriculum of pre-primary classes, including the learning outcomes of the classes. Also, more focus should be on the child along with the content and content delivery in the curriculum. Focus on e-content should also be there in the curriculum.
2. **Pedagogical Innovations:** It is important to develop innovative classroom processes through pedagogical interventions. There is a need to provide space for exploration in the classroom for the child by including multiple classroom processes. Learner-friendly pedagogical activities are required to be included in the school system to make learning a joyful process.
3. **Restructuring of Teacher Education Programs:** It is important to revamp the existing pre-service teacher education programs to make them more inclusive and related to the contemporary education system. Also, new pre-service teacher education programs should cater to the needs of pre-primary education. Capacity-building programs should also be developed for the in-service teachers.
4. **Revisiting Assessment:** Our school evaluation system focuses on the memorization of the concept rather than its understanding. Assessment of the learning should be skill and competency-based. Different models of assessment based on the learning outcomes should be developed. The creation of audio-visual tools for assessment can also be done to ensure foundational literacy and numeracy among the children.
5. **Administrative Support:** It is important to recruit quality teachers on regular basis in the school education system. Various stakeholders related to education should work together for the betterment of the children. Central, State, and Local Governments should work in coordination to ensure the all-round development of the child.
6. **Integration of Literacy & Numeracy Skills:** It is important to integrate literacy and numeracy skills in a manner that the child can

relate with their natural environment. The resources, teaching-learning material, and activities should also be provided to the child in an integrated manner.

Conclusion

Attainment of basic reading, writing, and numeracy skills in early classes will create a strong foundation for future school learning and continuous lifelong learning for the students. If there are learning gaps and these are not filled at the earliest, they continue to widen. Thus the classrooms are needed to be strengthened with print-rich environments, child-friendly textbooks, workbooks, and storybooks among other resources, and a teaching-learning process following a play and activity-based approach related to the daily life of the learners, to enable children to read and write with comprehension and develop mathematical understanding.

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