



Foundation and literacy and numeracy – FLN

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ABSTRACT

Education is a dynamic process which needs changes and innovation based on the societal norms and priorities, in this aspect Government policies and programmes plays a significant role in bringing changes in the system of education. The National Education Policy (N.E.P. 2020) recognises that the ability to read, write and perform basic operations with numbers is a necessary foundation and an indispensable prerequisite for all future schooling and lifelong learning. Based on this The National Mission on Foundational literacy and numeracy named, National Initiative for Proficiency in Reading with Understanding Numeracy (NIPUN) Bharat Mission was launched by the ministry of education on 5th July 2021. As follow up to the National Education Policy 2020, a 3 months school preparatory modelling Vidya Pravesh has been developed by NCERT. NCF -FS launched on 20th October 2022 contains guidelines for engaging Teaching -Learning Material (TLM) both for teachers and learners. DIKSHA, which stands for Digital Infrastructure for Knowledge Sharing, is a free, national platform that provides educational resources for students and teachers in India and guides them to teach on the basis of FLN. NISHTHA - a training programme is conducted to teachers and heads regarding FLN.

Key words - NEP, NIPUN, FLN, Vidya Pravesh, NCF -FS , DIKSHA Nishtha.

Introduction

Foundational Literacy and Numeracy (FLN), one of the most pertinent programme is the initiative of National Education Policy 2020 (NEP) is a milestone development in education. To ensure the attainment of the basic ability of literacy and numeracy in students Government of India has launched National Initiative for Proficiency in Reading and Understanding in Numeracy (NIPUN) Bharat Mission, because sound foundations in the early years have a lasting impact on children's development and critical for ensuring enrollment and retention of children in formal schooling. Early childhood is a

critical period for the development of literacy and numeracy. Literacy and Numeracy develops in the first 3 years and has a closed linked with the communication,actions,thoughts and drawings of young children. This also helps them lifelong learning. Foundational Literacy and Numeracy (FLN) refers to basic skills in reading and arithmetic operations.It is the ability to read and understand a basic text, write and perform simple mathematical operations. **The key components in foundational Language and literacy are Oral Language, Decoding,Reading, Fluency,Reading Comprehension and Writing.**

As the UNICEF (2020) report Education for All point out, “ on average 40 per cent of children across all OECD and EU countries do not have basic reading and mathematics skills by age 15” and this is a concern across the world.

Even though the number of school going children has been increasing steadily year after year in India the learning of foundational skills is not showing the same trends. **The National Education Policy in (NEP,2020)recognises that the ability to read, write and perform basic operations with numbers is a necessary foundation and an indispensable prerequisite for all future schooling and lifelong learning.** Highlighting the importance of foundational literacy and numeracy the policy reiterates that the rest of the policy will become irrelevant for the students if the basic learning requirements (i.e., reading writing and arithmetic) at the foundation and level are not achieved. NEP has recommended that a National Mission on FLN should be setup by the Ministry of Education on priority.

The National mission on foundational Literacy and Numeracy (FLN), named **National Initiative for Proficiency in Reading with Understanding and Numeracy** (NIPUN) Bharat Mission was launched by the Ministry of Education.Union Minister Shri Ramesh Pokhriyal launched on July 5th 2021, under National Education Policy , 2020 . NIPUN lay down the priority and actionable agenda for States and Union Territories to achieve the goal of proficiency in FLN for every child and covers 5 years of education continuum, which includes 3 years of Pre school and Grade 1& 2.The mission aims to provide access and retention of children in the 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 and in achieving the learning outcomes. Economic advisory council to the Prime Minister released a report title The State Foundational Literacy and Numeracy in India on 16th December 2021. The main aim of NIPUN Bharat is to ensure that every child in the country attains **Foundational Literacy and Numeracy by the end of grade 3 by 2026- 27.**

As a follow up to the National Education Policy 2020 NEP, 2020, a 3 month School Preparatory Module **Vidya Pravesh** has been developed by NCERT a play based School preparation module (SPM) ,in consultation with various stakeholders of school education at the state and national level.This provides supportive materials for teachers and parents as also for the system to support parents, teachers as well as the children to get ready for formal schooling.

Methodology

This research paper is prepared based on the secondary data on literature review.

Need for FLN

The National Policy on Education(NEP. 2020) highlights that various government as well as non-governmental services clearly indicate that at the current time we are in severe learning crisis with respect to these most basic skills. A large proportion of students that is over 5 crore in number currently in elementary school, have not attended Fundamental Literacy and Numeracy . By grade 5th 55% of India’s school going children cannot read and understand their short age appropriate text. 13 to 18% students from class 3rd 5th and 8th are below basic learning levels and only 39 to 53% have achieved proficiency. In this aspect NIPUN Bharat will help children learn to read so that after grade 3 they read to learn **Tag line of NIPUN Bharat is निपुण भारत का एक ही सपना हर बच्चे समझे भाषा और गणना**

Education in early years

Young children are active, energetic, curious and interested in people, objects and events around them. They actively seek to make meaning of their experiences and their capacities continuously evolve. Children learn by doing and actively use their sensory capacities to understand the world around them. They discover and construct knowledge through activities they are involved in. To enable children to understand concepts and develop their abilities adults need to provide them opportunities to explore their environment, manipulate objects, engage in experimentation and ask questions and search for answers. These hands-on experiences help them understand how things work and in this way the child re-constructs his/her own understanding of the world.

At the same time, children learn in context of relationships. Children also need guidance and instruction from teachers and more knowledgeable peers who can help the child to move from one developmental level to the next- they help the children to move through their zone of proximal development. Having identified concepts and tasks which are within the child's potential development level (i.e. what the child is capable of doing with help), the teacher needs to provide dynamic support, guidance and teaching so that the child reaches her potential and is able to do the task independently.

Definition of Literacy and Numeracy

UNESCO defines literacy as the 'ability to identify, understand, interpret, create, communicate, compute and use printed materials associated with very contexts. (Education for All; Global Monitoring Report, UNESCO 2006). Literacy is more than the ability to read and write. It involves the knowledge, skills and abilities- the competencies that enable individuals to think critically, communicate effectively, deal with change and solve problems in a variety of contexts to achieve their personal goals, develop their knowledge and potential and participate fully in society. Numeracy encompasses the ability to use mathematical understanding and skills to solve problems and meet the demands of day-to-day living in complex social settings. To have this ability, a young person needs to be able to think and communicate quantitatively, to make sense of data, to have a special awareness, to understand patterns and sequences and to recognise situations where mathematical reasoning can be applied to solve problems.

Why are Literacy and Numeracy Important?

Early literacy and numeracy skills are not only foundational for learning but are correlated with greater quality of life, personal well-being, national stability, prosperity and are critical for educational outcomes in later years. Strong literacy and numeracy helps children to learn, experiment, reason and create, to be active and informed citizens and to contribute socially, culturally and economically. Lack of learning opportunities during the early stages of acquiring literacy and numeracy impede children's academic progress and motivation, resulting in further lack of achievement.

Vision

The vision for foundational literacy and numeracy therefore 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 from academic success and pleasure'. Children demonstrate an understanding of numbers and knowledge of mathematical concepts, make connections between related ideas and progressively apply their understanding in new and unfamiliar contexts.

To achieve the vision it is important that we understand the present status of reading and writing among children in the country. Various researchers conducted in the country point out that the children are facing a learning crisis.

The learning Crisis

The national policy on education (NEP 2020) highlights that various government as well as non-governmental surveys clearly indicate that, at the current time, we are in a severe learning crisis with respect to this most basic skills a large proportion of students that is (over 5 crore in number) currently in elementary school have not attained foundational literacy and numeracy, such that the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with Indian numerals. Numerous studies show that, in the current educational system, once students fall behind on foundational literacy and numeracy, they tend to maintain flat learning curves for years, perpetually unable to catch up. So many capable students have found themselves in this unfortunate black hole, unable to emerge. For many students, this has become a major reason for not attending school, or for dropping out altogether. The NEP-2020 further reiterates that it is imperative to address this crisis head on and immediately so that the 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.

The NEP, 2020 has recommended that in order to our the learning crisis there will be an increased focus on fundamental 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 this assessment in our schooling system will shift from one that is summative and primary test rote memorization skills to one that is more regular and formative. 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.

National curriculum framework for foundation stage (NCF-FS) launched on 20th October 2022 contains guidelines for engaging Teaching-Learning Material (TLM) both for teachers and learners, teacher capacity building programme, assessment and pedagogical approaches to guide the nature of syllabus, text books and other resource materials for teaching and learning in the country for the most vital formative years of learning. **Jaadui Pitara** containing teaching-learning materials in thirteen Indian languages and also been launched on 20th February 2023. This is an exemplar of content needed in any school for the Foundational Stage. It has toys, games, puzzles, puppets, posters, flash cards, story cards, play books for students and books for teachers.

Thematic session 10 of the Conference held as a panel discussion on August 1st 2023 was on Understanding Foundational Literacy and Numeracy. The panelists consisted of educationists, policy planners and implementers, administrators, educational innovators and practicing teachers. The ideas, discussions and the points of moving forward (way forward) are presented in the following sections.

Issues and Discussions • Understanding Foundational Literacy

There is a need to understand Foundational Literacy and Numeracy as the formal schooling may not connect the life lived and the experiences outside the classroom and the school. This places the children learn from the periphery at a disadvantage. The illustration is the children who do not speak the mainstream languages and do not share the urban cultural contexts face severe disadvantages as their language and culture are unique and different from the mainstream. 'How do FLN programmes address this issue?' is a major concern. The linguistic and cultural differences of the teaching learning materials learning is very challenging for them and finally it results in loss of self-esteem and self

confidence and loss of curiosity. This calls for the need to respect and take into serious consideration the learner's context and culture and above all their language and build upon them to slowly bring them towards mainstream languages and learning. **Literacy is not education**

Education is connecting with environment where cognitive as well as affective aspects develop. Therefore the three Hs- Head Hand and Heart should replace the three Rs- Reading, Writing and Retention in order to move to holistic education. This has been done in Ladakh under Operation New Hope with the government in which Village Education Communittees take charge of schools and introducing literacy in a logical way by drawing from nature in order to build related experience and knowledge. **Curiosity** software of childhood comes preloaded in the hard drives i.e. brain by nature linguistic abilities and the inquisitive brain. Learning and education is about stimulus and constructed environment. Effective FLN should be moving from known to unknown, building and associations between them, two unknowns at the same time, progression from familiar to unfamiliar and one unknown at a time. System of FLN should be about local language learning and writing and introducing English as a second language and this leads to a '**Child Driven system**'.

Implementation of Foundational Literacy and Numeracy

Achievement of the goals of FLN depends on recognising the child as the centre of learning and the school system. It is essential that we engage with students in a manner that captivates their attention, makes them learn and contributes to their holistic development. National Education Policy 2020 in its futuristic vision underscores some of the most essential aspects of our education system. **The Policy recognizes that the ability to read, write and perform basic operations with numbers is a necessary foundation and an indispensable prerequisite for all future school and life long learning.** The Policy believes that the rest of the policy will become irrelevant for students if the basic learning requirements i.e., reading, writing and arithmetic at the foundational level or not achieved by the students. To achieve this with young learners (below 8 years of age) learning needs to be imparted in a joyful manner. In this regard, NEP 2020 introduces various changes in curriculum and pedagogy in schools, making learning **Holistic, Integrated, Enjoyable and Engaging** with the help of **toy based pedagogy, sports-based pedagogy** and **art based pedagogy**. NCF for foundational stage (NCF-FS) for children between ages 3-8 launched on 20th October 2022 addresses all domains of development -physical, socio-emotional, ethical, cognitive and language as well as literacy, aesthetic and cultural aspects. NCF-FS recommends **play-based pedagogical approach**. NCF-FS emphasizes the importance of 'play' at the core of the curriculum organization, pedagogy, time and content organization and overall experience of the child.

1. Play can be guided, free or structured.
2. Conversations, stories, music, movement, arts, craft, toys and games her various methods to engage children play other methods to engage children in play - other methods could be innovated
3. Outdoor playing is actively encouraged.

Multilingualism at the Foundational stage

Learning outcomes cannot be improved without a transformative change in systems and practices like teaching and learning, rote learning to active learning for **FLN skills are gateway skills to all future learning**; they need to be developed early and well for later success in school. These skills need to be developed at a high level of proficiency (mastered)

1. NCF-FS lays down some important pedagogical principles for the foundational stage. These need to be incorporated in classroom teaching and learning. The three major aspects of effective teaching learning include

• **Play- based learning** • **Nurturing positive relationships in the classroom and** • **Using familiar language for teaching and learning**

Multilingualism making use of languages of children will be the strategy for inclusion during the Foundational stage. There is a need to bring about transformative change for FLN at scale and it has several challenges. However, the following major aspects will help support improved learning at scale. FLN solutions should be comprehensive including children's learning materials, teacher handbooks, assessment practices, strong Continuous Professional Development Programme for teachers, effective mentoring support to teachers to improve classroom practices. The FLN program must address certain practical problems that teachers face e.g. multilingual, multigrade and multi level teaching and learning situations. Also the loss in training quality of on large scale (annual) in face -to -face teacher training programs should also be addressed. All FLN solutions should be designed for implementation at scale: Not to be burdensome for teachers or the system.

Literacy includes thinking and reasoning, along with the basic skills. Mastery of these skills is necessary for attaining Proficiency. Skills need to be developed in age- stage appropriate manner. Students learn best in interactive more with positive environment and warmth, play base learning, environment of relationship and creates high self confidence. It also help children to feel positive about coming to school. Relationship growth and connection of neurons are better in students who are in positive relationship of school and home. **Play is central to learning** (physical, co-operational, socio-emotional). Play in FLN means:

1. Curiosity, wonder and discovery should be the grounding of any play based learning.
2. Sense of choice of agency should be with the child where child's role is free and teacher's role is guided and structured.
3. Getting joy and fun in activity.

How can schools realise the vision of FLN?

Schools are the real agencies which implement any educational programme and success of programmes and policies rest with the schools and the teachers. Schools like Satya Bharti Schools of Bharathi Foundation for the underprivileged children provide quality education to nearly 40,000 students of which 50% are girls. With reduced exposure to education, socialization which schools bring in and many more aspects, their attendance, attention, discipline at school, apart from learning loss was manifesting in classrooms. There is need for supportive eco-system; empowering teachers, role of academic staff and admin function, role of parent, community and leveraging technology. Loss of learning, lack of steady routine, children with low energy and focus and ways to deal with these problems such as improving well being, building teacher capacity, vibrant classroom, strength parent connect and ensuring child safety are major concern of implementation at school level. Further, teacher's autonomy and freedom are critical for achieving FLN. Teacher creativity is essential in all cases and also for leveraging technology. Satya Bharathi Schprogram of students as volunteers of adult education supporting the adults in their learning- do wonders for students as teachers (of their parent at home) are very good learners. Their Effort to teach the adults reinforces their learning.

About Foundational Literacy & Numeracy (FLN)

The aim of FLN is to ensure that children learn in a joyful manner through play, stories, rhymes, activities, local art, craft and music and develop strong foundations for lifelong learning. The mission outlines learning outcomes which have been designed in a spiral and progressive manner from Preschool to grade three aiming at holistic development and learning

Explore Developmental Goal wise e-content Development 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

Development Goal 2: Children Become Effective Communicators



This goal is to enable children to orally communicate with ease and competence in the preschool or school language, become print aware, understand, or make a meaningful connection with reading and writing in familiar contexts, develop interest in books and in learning to read is essential.

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



This goal is to enable children to 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.

DIKSHA

DIKSHA (Digital Infrastructure for Knowledge Sharing) has been formally launched by the Hon'ble Vice President of India on 5th September 2017.

For Students, Teachers, and Parents:

Features of DIKSHA Portal

Here are some important features of DIKSHA portal for easy access of students:

QR Code - National Digital Infrastructure for Teachers and students can be accessed after scanning the QR code provided in their NCERT books. After scanning the QR code, the portal will come up with suggestions and topics that you want to study.

Language - The portal is accessible in English and varied languages that include Hindi, Marathi, Tamil, Telugu and so (18 languages). You can choose any language depending upon your comfort and convenience.

Location-based - The portal would first ask for the location to which you belong. For example, you choose Delhi as an option, it would further ask you to choose 'sub-location' means in which locality of Delhi you reside. Accordingly, it will show you the courses that are going on in that region from which you can choose the desired course as per your skill set.

Class Based - DIKSHA portal requires a user to choose the class whose study material has to be accessed. Click on the standard whose study material you wish to access and enter the SUBMIT button.

DIKSHA Mobile App

DIKSHA portal is an advanced platform that is available for the android and iOS users also. You can download the DIKSHA app from Google Play Store. The mobile app is available for not just teachers but also for the students and parents. The app is loaded with engaging learning material that fits the needs of prescribed school curriculum.

Get DIKSHA Mobile App



App Highlights

Explore interactive material created by teachers and the best Indian content creators for teachers and students in India. By India, for India!

Scan QR codes from textbooks and find additional learning material associated with the topic

Store and share content offline, even without Internet connectivity

Find lessons and worksheets relevant to what is taught in the school classroom

Experience the app in English, Hindi, Tamil, Telugu, Marathi, Kannada, Assamese, Bengali, Gujarati, Urdu with additional Indian languages coming soon!

Supports multiple content formats like Video, PDF, HTML, ePub, H5P, Quizzes - and more formats coming soon! **How will Teachers benefit?**

DIKSHA - National Digital Infrastructure for Teachers is also available in the form of mobile app. It is loaded with lesson plans, worksheets and activities, to create enjoyable classroom experiences. The portal enables the teachers to understand their career span. From the time they join the school to their retirement, they can map out their career progression and can work on their skills accordingly.

Advantages for teachers

Find interactive and engaging teaching material to make your class interesting

See and share best practices with other teachers to explain difficult concepts to students Join courses to further your professional development and earn badges and certificates on completion

View your teaching history across your career as a school teacher

Receive official announcements from the state department

Conduct digital assessments to check your students' understanding of a topic that you have taught

How will Students benefit?

Students having access to DIKSHA app will be able to understand concepts in an easy and interactive manner. There are features through which lessons can be revised. The app also facilitates the students to test his/her learning through self-assessment practice exercises.

How will Parents benefit?

Parents having access to DIKSHA app in their mobiles can follow classroom activities and clear doubts outside school hours. It is a comprehensive platform for hassle free interaction of all the stakeholders involved.

Advantages for students and parents

Scan QR codes in your textbook for easy access to the associated lessons on the platform

Revise lessons that you learnt in class

Find additional material around topics that are difficult to understand

Practice solving problems and get immediate feedback on whether the answer is correct or not.

Sample Contents

Coming Soon

Creation of a Repository of all such e-contents at one place.

Development of online assessments and training software for students and teachers.

Provision of a platform for applying advanced technologies like Artificial Intelligence and

Machine Learnings

Way Forward and Conclusion

The above deliberations take us to reflect and plan for the future and how to go about to in furthering and implementation the FLN effectively and making it work in its true spirits. As the title itself suggests 'understanding' of Foundational Literacy and Numeracy, understanding what is literacy? and what is not Literacy? Why mere literacy is not education? How the school systems, teachers, parents and of course the learners (very young learners here) at various levels - state, national, school and classroom become part of the implementation of FLN to realize vision of the National Education Policy (NEP) 2020 is the most pertinent aspect of implementation of the FLN.

FLN also set the Lakshya(targets)for each class from Balvatika onwards. The mission guidelines recommend shifting towards competency based education and using school based assessment for providing continuous guidance to teachers. A robust IT system is recommended to be used for FLN Mission for big data analytics at National State and School level. The FLN Mission recommends leveraging DIKSHA (Digital Infrastructure for Knowledge Sharing) which is national digital platform for school education in India, an initiative of National council for Education Research and Training(NCERT)and Ministry of Education.To empower the teachers,a capacity development programme for teachers and school heads, NISHTHA(professional development program) ,FLN will be launched by the NCERT through DIKSHA (Digital Infrastructure for Knowledge Sharing) online platform. Ministry of Education, Government of India's viz. NIPUN,NCF-FS, Balvatika,Jadui Pitara and NISHTHA (professional development program of FLN) are being implemented in all states. The whole program focus on the foundation of understanding literacy and the value of Numeracy and to

realize the vision of National Education Policy (NEP) 2020 is the most pertinent aspect of implementation of the FLN.

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