

Foundational Learning: Unearthing Key Issues and Redressal

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Abstract

The National Education Policy 2020 in India recognizes the importance of investing in the early years which is the most important indicator of productive and efficient human capital a country must ensure. The policy thus, obligates strong investment in foundational learning with a special focus on the attainment of foundational literacy and numeracy skills among children in their early years. For this, policy lays a roadmap for academic and systemic reforms in mission mode for better planning, designing, and implementation of interventions for foundational learning. Accordingly, the NIPUN Bharat Mission was launched in 2021 with targets to be achieved in five years, i.e. by 2026-27. This paper is a narrative review of the literature with problem-solving approach to spot key issues in foundational learning in India and the remediation being followed. Review suggests issues and mitigation strategies in three areas viz, achieving access to the conducive learning environment, strengthening educational and developmental aspect of learning interventions and bringing systemic reforms as wells as developing convergence mechanism to build the robust administrative structure. Findings and strategies provided in this paper would help stakeholders identify issues beforehand and take action in, timely. This learning would also be useful to the countries having similar geographical, educational, and social constraints who want to or are in the process of designing or implementing such interventions.

Keywords: foundational learning, literacy, numeracy, reading, writing, policy

1. Introduction

Foundational learning in the early years is for building the foundations of a child's education. It refers to the basic literacy, numeracy and socio-emotional skills that are the building blocks for ensuring all other learning, knowledge and developing higher-order skills among children (The World Bank, United Nations International Children's Emergency Fund [UNICEF], United Nations Educational, Scientific and Cultural Organization [UNESCO], Foreign, Commonwealth & Development Office [FCDO], United States Agency for International Development [USAID] and Bill and Melinda Gates Foundation [BMGF], 2022). In other words, it is the ability to read and understand basic text, write with purpose and perform simple mathematical calculations, i.e. basic addition and subtraction even in day-to-day life situations. It is a known fact that children flourish with strong foundational skills that are correlated with greater quality of life, personal well-being, national stability, and prosperity. Researches indicate that the learning gap deepens when children do not achieve a certain degree of competency in literacy and numeracy by the end of Grade III, i.e. the ability of children to read with meaning and solve basic mathematical problems. This situation leads to inequality; impedes children's academic progress, lessens their motivation for further schooling and causes further economic loss (Ball et al., 2014; Evans & Hares, 2021). Recent studies have reported a learning crisis with reference to foundational literacy and numeracy (FLN) across the globe, especially in low-income countries. The level of FLN skills is shockingly low among primary-age children in low-income countries despite global efforts (Ball et al., 2014; Beeharr, 2021; Evans & Hares, 2021). A joint report of UNESCO, UNICEF, and the World Bank informed that, even before COVID-19 knocked the globe, the world was already experiencing a learning crisis that was distributed unequally and disproportionately thus affecting the most vulnerable children. In low-income countries, the rate of learning poverty was close to 90%, compared with 9% in high-income countries. The report further revealed that "COVID-19 resulted in an unprecedented disruption to education worldwide, affecting more than 1.6 billion children and amplifying the pre-existing learning crisis" (The World Bank, UNESCO, & UNICEF, 2021, p.9). According to the Human Capital Index 2020, there are many more factors contributing to the learning crisis such as conflict, natural disasters, financial crisis, poorer nutrition, inaccessibility to education and educational quality. This situation often failed to keep pace with gains in the enrollment of children in school. The key factor that affects the quality of education is the availability of funding (World Bank Group, 2020). UNICEF in a report highlighted that underinvestment in education results in numerous situations starting from large classroom sizes to poor-quality teachers, lack of supportive materials, and poor school infrastructure. This negatively impacts how and what children learn in school (2020) leading to a losing interest in schools. Analysis of five low-and middle-income countries using data from the Multiple Indicator Cluster Surveys 6 (MICS6), validated that losing school is linked to decline in foundational skills (Alban et al., 2020).

In case of India, it has significantly progressed to achieve universal access to learning up to elementary level with one of the largest schooling systems in the world. Five year plans, National Policy on Education (NPE) 1986, National Policy for Children 1974 and 2013,

Programme of Action 1992, District Primary Education Programme 1994, Sarva Shiksha Abhiyan 2001, National Plan of Action for Children 2005 and 2016, Right of Children to Free and Compulsory Education Act (RTE) 2009, National Early Childhood Care and Education (ECCE) Policy 2013, National ECCE Curriculum Framework 2014, National Curriculum Framework for Foundational Stage (NCF-FS) 2022 and current Samagra Shiksha Abhiyan launched in 2018 are the flagship initiatives of the Government of India. These initiatives have contributed significantly to ensure that all children are in schools and are learning. However, studies have shown that ensuring that children are in school does not naturally lead to an increase in their learning. Research has shown conclusively that once children fall behind on FLN, they tend to maintain flat learning curves for years, perpetually unable to catch up (Ministry of Education [MoE], 2021a). Kumar et al. (2023) in a study in India found that increase in the level of children's foundational literacy and numeracy skills significantly reduced school dropout.

Considering this as national concern, Government of India, through the National Education Policy (NEP), 2020 has indicated that children in India are currently undergoing a learning crisis (Ministry of Human resource Development [MHRD], 2020). Therefore, the policy accords the highest priority to the achievement of FLN skills. Further, it has recognized that rest of this Policy or efforts will become more appropriate for our children only if this most basic learning requirement is first achieved. The NEP 2020 has extended this coverage and pledged to provide equitable and quality education from the Foundational Stage through Grade 12 to all children between the ages 3 to 18 years. Accordingly, the restructuring of school education is recommended as 5+3+3+4 based on the pedagogical and academic inputs required for the different development stages, that includes the newly added Foundational Stage for the first five years of the school life, i.e., ages three to eight years. This stage subsumes the first three years of preschool education and two years of early primary grades (grade I and II). This provision aims to curtail the harmful drift of the downward extension of primary curriculum to the preschool classes that used to result in excess of teaching-learning content, causing tremendous pressure and burden on young children who were expected to master reading, writing, and number operations at preschool stage, itself. However, the purpose of introducing the foundational stage in the policy is to address the issue of learning crisis especially in terms of FLN by building the strong foundations for learning starting right from the preschool stage. Birgisdottir et al. (2020) in their study found positive effect of linkage between preschool and primary education for developing literacy and numeracy skills. Guta et al. (2017) in a study showed that, preschool education promotes better participation in classrooms and has a positive effect on children's social behavior. In addition, preschoolers had a better academic start to school including better school attendance in primary school than non-preschoolers.

Therefore, in NEP 2020, it is recommended to consider this stage in the continuum. Accordingly, suggested to take all the measures on many fronts with clear goals to attain literacy and numeracy skills in a time-bound manner including restructuring of pedagogical and curricular processes. Zahedi et al. (2022) in a case study in India found curriculum and professional development as one of the major components of a strategic improvement plan

for foundational learning. It is also stated in the policy that, suitable facilitation systems shall be put in place to achieve universal participation of children in schools by their careful tracking in terms of enrolment, transformation and learning.

Thus, strenuous efforts are being made by giving a lot of focus to the foundational stage and mainstreaming all children for learning even in a pandemic situation. The policy recommends that attaining FLN for all children must become an immediate national mission and an indispensable, non-negotiable part of the curriculum. Hence, to accelerate the process and achieve the set targets for FLN in the national development, the Ministry of Education, Government of India launched a dedicated national mission on FLN on 5th July 2021 named 'National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat)'. The vision of the mission is to create an enabling environment for ensuring that every child in the country necessarily attains FLN skills at the end of Grade 3 or by 2026-27. NIPUN Bharat is a large-scale mission aimed at changing the country's educational landscape by making learning holistic, integrated, inclusive, enjoyable, and engaging. Through multiple interventions, Mission intends to provide access and retain children in foundational years of schooling, build teacher capacity, develop high-quality and diversified children and teacher resources/learning materials, and track the progress of each child in achieving learning outcomes. The unique feature of the Mission is that the learning opportunities cover the entire gamut of the development of a child in all aspects including psycho-social, emotional, motor, cognitive and creative domains. For the effective implementation of the Mission, a comprehensive mission implementation guideline has been developed to provide a roadmap to different stakeholders as per their academic and administrative engagements for achieving the targets set under the mission. Guidelines also suggest administrative aspects for effectively setting up a five-tier implementation mechanism at the National, State, District, Block, and School levels (Garg & Chandra, 2022; MoE, 2021).

Thus, in India, systems have been activated and States and Union Territories (UTs) are undergoing the systematic planning and implementation of the mission in a sustainable manner to ensure foundational learning for all children. Each State and UT has the flexibility to come out with its unique way to achieve the targets set under the mission as per their local context and requirement. Looking at the limited duration and huge task of achieving FLN for all children, it is important that everyone or every stakeholder shoulder the responsibility within their limitations. To do so, it is important to build among them a general understanding of what foundational learning entails and what are the key issues that need to be addressed immediately, mainly from an implementation perspective. Also, timely and regular assessment of the impact of all interventions is critical for apt improvement or carrying out modifications in for mid-course correction leading to greater output and achievements later. Alban et al. (2020) in their working paper emphasized that the real-time assessment to measure the effects of all interventions needed to enable informed decisions and develop strategies for more inclusive and diverse learning. UNICEF (2023) for its RAPID 2023 analysis also mentioned that it provides governments and stakeholders a peep into the progress made, the areas that require acceleration in action, and the key considerations for the effective implementation of foundational learning.

Therefore, it is important to unearth key issues as quickly as possible and resolve them in time. Understanding these concerns NEP 2020 also suggests various strategies to mitigate the same. This paper highlights key issues in foundational learning in India, how some of the issues are being addressed through several interventions and what are the strategies to redress the rest of the key issues in foundational learning.

2. Method

This paper is a narrative review of the status of foundational learning in India that is based on the literature available in the form of various national reports, database, policy documents and studies conducted at the national and international levels. The problem-solution approach in this paper helped identify key issues in foundational learning and also the probable solutions to redress them. International reports and studies were referred to understand the magnitude of the issues in foundational learning and remedial measures available, globally. The literature included in the paper pertained to the foundational learning and learning crisis, written in English language and published after 2005. The literature was identified by manual searches of relevant journals and reports as well as electronic database searches on Google Scholar, JSTOR, Academia, Research Gate, ERIC and official websites of different ministries and departments of the Government of India and other national and international multilateral organizations.

National school education and health databases i.e. Unified District Information System for Education (UDISE+) plus, National Achievement Survey (NAS) developed and maintained by the Ministry of Education (MoE) and National Family Health Survey (NFHS) under the Ministry of Health and Family Welfare (MHFW) have been referred to understand the gaps for achieving targets under foundational learning initiatives. UDISE+ is one of the largest Management Information Systems covering more than 14.89 lacs of schools, 95 lacs of teachers and 26.5 crores of children from all recognized schools imparting formal education from Pre-primary to Grade XII. Information collected is utilized to plan; optimize resource allocation, implement different educational programs and assess progress. NAS is a national representative large-scale survey of children's learning that gives a system-level reflection on the effectiveness of school education. NAS findings help compare the performance across the spectrum and across the population to find out the desirable path for improvements. NFHS-5, the fifth in the NFHS series, provides information on population, health, and nutrition for India, each state/union territory (UT), and for 707 districts as of March 31st, 2017. NFHS-5 includes some new topics on education, such as preschool education, disability, and access to a toilet facility. These reports are in open access domain and can be accessed as UDISE+ Report 2021-22 (MoE, 2022) at https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/udise_21_22.pdf, National Achievement Survey (NAS)- 2021 Report Cards (NCERT, 2022a) at <https://nas.gov.in/report-card/2021> have been used for various analyses in this paper and National Family Health Survey (NFHS-5) 2019-20: India Report (Ministry of Health & Family Welfare [MHFW], 2022) at <https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf>.

Apart from annual and survey reports of the Ministry of Women and Child Development (MWCD), National Education Policy 2020, NIPUN Bharat Mission Implementation Guidelines and National Curriculum Framework for Foundational Stage (NCFFS) of the Ministry of Education and the latest documents on foundational learning by the National Council for Educational Research and Training (NCERT) have been referred to understand the key issues and drivers in foundational learning to strategies future course of action.

3. Results

The NEP 2020 has laid down a clear cut roadmap for achieving universal access to quality foundational learning opportunities for all children through a variety of interventions in the areas of curriculum, teacher training, conducive learning environment, learning teaching material, and strategic use of technology in learning, etc. However, identification of key areas of shortfalls in delivering interventions helps design a workable plan of action to achieve the set targets in a timely manner. This would facilitate improving the learning levels of children. This section flags those grey areas which need immediate action and intervention for alignment with the policy recommendations. These need to be addressed through prioritizing interventions at three levels i.e. access, academic and administrative. This section illustrates the current interventions or initiatives and the status of foundational learning under these three broad categories. It further suggests measures to redress the remaining issues.

3.1 *Achieving Access to Conducive Learning Environment for Learning in Schools*

Access is the most critical intervention for creating a conducive environment for learning in schools and ensuring retention. According to NEP 2020, the government must ensure that every child completes three years of preschool education. In preschool, the focus must be on the holistic development of children includes their physical, cognitive, language and socio-emotional development and continue the process till grades 1 and 2 to achieve FLN. Enrolment of all children in preschools and schools, universalization of age of entry to Grade I in all states and UTs, access to basic facilities to support learning, and appropriate Pupil Teacher Ratio (PTR) as per the Right to Education Act 2009 are the areas important to ensure universal access to the foundational learning for all children.

3.1.1 Issues

There is sufficient evidence through various research that suggests attending preschool improves children's school readiness and the level of school preparedness has a strong correlation to learning at the end of Grade III (Schmitt et al., 2023; Sulk et al., 2023; MHFW, 2022). On analyzing the enrolment and attendance data for preschool children, it was found that only 40% of boys and girls aged 2-4 years attend preschool. Overall, rural households (39%) show lower preschool attendance than urban households (44%). Preschool attendance is highest in Andaman and Nicobar Islands (89%), followed by Andhra Pradesh (75%) and Sikkim (74%) (MHFW, 2022). Based on this data it is evident that a large percentage of children are joining Grade I with no previous experience of preschool education.

India is moving towards having a uniform age of entry into primary schools. As per NEP 2020, the age of entry into Grade I should be 6 years that is after completing the 3 years of preschool education. However, there are 6 States and UTs where the age of admission of children in Grade I is still 5 years (MoE, 2024). As a result, children are entering Grade I in these States and UTs without completing 3 years of preschool education or joining the school underage. Also, many children come to Grade I without any preschool experience. Out of the total children enrolled in Grade I only 50.99% of children come with some prior experience of preschool education. This implies that 49.01% of children enrolled in Grade I do not come with any preschool experience (MoE, 2022). This is a huge demand on the cognition and abilities of those children who have to cope with the Grade I curriculum when developmentally also they are not ready. Such children face difficulty in coping with the academic content that is beyond their developmentally appropriate age group. This creates challenges for teachers also to address the learning needs of such children and develop the required competencies. This situation leads to poor school readiness, gradually ballooning into a learning crisis at the national level.

The basic facility includes infrastructure that is safe and secure and is equipped with an adequate number of learning and teaching material that are developmentally appropriate. As per the UDISE 2020-21 data, out of 8.8 lakh primary schools in the country, 7.4 lakh schools had electricity, 6.5 lakh had a library and 8.5 lakh had a drinking water facility. Further, as per the 2020-21 Annual Report of the MWCD, till now there are 13.8 lakh operational Anganwadi Centers (AWCs) in the country that cater to the health, nutritional, developmental and educational needs of children till the age of 6 years. Many of these AWCs are still waiting to have their building and are running in rented buildings, Anganwadi Workers (AWWs)/Anganwadi Helper's (AWHs) houses and Panchayat buildings (in case of rural areas). Similarly, there is a need for a separate kitchen in many AWCs, as the food is cooked either inside the room or in an open space. Also, there are different service providers for preschool education viz Government, private and NGOs which differ in quality in terms of infrastructure, materials and manpower (Chandra et al., 2017). There are different models of ECCE centers that also exist in India (i.e. stand-alone AWCs, AWCs co-located with primary schools, pre-primary schools/sections for ages 5 to 6 years co-located with existing primary schools and stand-alone preschools) and it is difficult for the government to have one strategy fit for all of them (MHRD, 2020). This becomes the real concern for ensuring the quality and accessibility of preschool education for all children. The NEP 2020 recognizes these variations and suggests different strategies to strengthen them and lead them toward a common goal.

Over the years Pupil Teacher Ratio (PTR) has improved in an elementary stage in government schools due to the enactment of the Right of Children to Free and Compulsory Education (RTE) Act 2009 and increased the accessibility to education under the centrally sponsored schemes of Sarva Shiksha Abhiyan (SSA) and Samagra Shiksha. Most of the states and UTs need to meet the 1:30 PTR norms in schools except few states that have slightly low PTR (UDISE+ 2020-21). However, the inconsistency is still visible as there are many single-teacher schools though the overall PTR norm is satisfied. While the national average

for single-teacher schools (all management) is about 11.8%, two teachers is 39.2% and more than two teachers is 47.9% in the case of primary section (UDISE+ 2020-2021). RTE Act has prescribed that all primary schools should have at least 2 teachers and thus schools with low enrollment less than 60 get only 2 teachers to teach children across all grades. This situation leads to multi-grade teaching where one/two teachers are expected to teach all grades simultaneously in the limited time she has during the day. This ultimately results in compromised quality in teaching-learning process and thus impacts the learning of children. According to UDISE+ 2020-21 data, in the total 3,71,129 schools with preschool sections same teacher teaches both preschool and primary children. This adds to the complexity of this situation as for foundational learning there should be a dedicated teacher and in the absence of that, too much learning and developmental loss can be easily predicted. In the case of AWCs and preschool education, PTR is expected to be followed as per 1:20/25 ratio (NCERT, 2019), however, due to the shortage of preschools and preschool teachers, PTR is still unregulated/undefined at this stage of education.

3.1.2 Redressal

With regard to the age of admission of children in Grade I at age 6 central government had issued time-to-time letters to all the states and UTs. Accordingly, states and UTs have either issued notification or advisories in this regard. To address other issues, efforts are being made to ensure basic requirements such as filling of teacher vacancies and rational deployment of teachers in schools. Chandra (2021) stated that the government in its policy had already set milestones to support preschool teachers. States and UTs are directed to recruit trained preschool teachers, ensure their career growth, create mechanism for performance-based promotions and salary structure, regulate teacher preparation programs, and ensure digital/distance mode of capacity building and develop strong mechanisms for monitoring, supervision and on-site mentoring of the preschool teachers. Appropriate PTR is being maintained at preschool and school level rather than at the district or state level as per the Guidelines for Preschool Education developed by the NCERT (NCERT, 2019). Gradual opening of preschool sections in schools as Balvatikas and co-location of preschools/ AWCs in primary schools in the same premises or proximity is being carried out in different states. So far, there are close to 6 lakh primary schools with either preschool sections or co-located AWCs, which is nearly 50% of all kinds of primary schools in India (MoE, 2022). All basic facilities in schools are being provided on time as per the RTE norms such as uniforms, textbooks, TLM, clean and adequate drinking water, etc. (MoE, 2022).

These approaches are also in synchronization with what other countries are doing and the recommendations made out of studies conducted globally. World trend on the age of admission in Grade-I shows that so far 138 countries consider age 6 as age of admission in Grade I (UNESCO, 2024). A Study conducted in South Africa (Kimani & Borhat, 2014) and a descriptive survey conducted in Kenya by Waita et al. (2016) revealed that there is a strong and significant effect of PTR on the performance of children in Primary Schools. Consequently in Kenya, it is recommended that all Education sector stakeholders pay adequate attention to employing more teachers to lower PTR and ease teacher workload. It was also advised to review the Education Act to facilitate schools to enroll children on the

basis of PTR and to stay away from over-enrolment and overcrowding in classrooms. The studies on teachers suggest that effective and motivated teachers help children acquire skills, motivate them to learn further, and build strong relationships with parents to support the learning of children (Edwards & Loveridge, 2011; Loughran, 2008). Meade and Ross (2006) in their paper have also emphasized that the basic facilities especially in terms of buildings and playgrounds can provide a supportive and stimulating environment for the learning process. Therefore, adequate teaching and learning resources and adequate funds should be provided to ensure the effective implementation of education (Okongo et al. 2015).

3.2 Strengthening Educational and Developmental Aspects of Learning Interventions

There are certain critical areas of concern that help strengthen educational and developmental aspects of learning interventions at the foundational stage. These are, shifting focus on learning skills and concepts that are competency-based, streamlining instructional or learning time, developmental appropriateness of curriculum, learning environment, learning resources, teaching learning practice, teacher training, onsite support and appropriate process of tracking children's progress.

3.2.1 Issues

Learning for most of the children at the foundational stage includes preschool education that focuses on rote memorization and children being passive recipients of 'knowledge' (Kaul et al, 2017). The entire focus is on concluding the syllabus rather than learning. Thus, children do not get engaging experiences and material to become active learners. This all leads to low learning levels. The National Achievement Survey 2021 summarizes the scenario by showing that only 64.6% of children had acquired proficiency level in language in Grade III, while for grade level competency in Grade V is 61.8% shows it goes down. Similarly, in mathematics, it is visible that 61.2% Grade III children acquired proficiency levels which further declined in Grade V which is 56.8% (NCERT, 2022a). Hence, there is a need to shift all efforts to help children learn skills and concepts related to FLN, rather than rote learning. A lot of instructional time in preschools including AWCs is lost every year. The reason is that the teachers or the AWWs are either not present, busy with non-academic tasks assigned to them, or teaching multi-grade classrooms. Other studies on time spent by AWWs on the delivery of the six services pointed out that on average less than 2 hours were dedicated to preschool education (Chandra et al., 2017; Kaul et al., 2014). As per the standards and norms of the Right to Education Act 2009, primary schools should be operational for 200 days in a year providing school education for 800 hours. In the daily school timetable language class is often only for 30-45 minutes which is grossly inadequate in early grades, being the key to all learning. This also limits the teacher's ability to provide additional support to children who need it.

A developmentally appropriate curriculum is central to a successful foundational learning program across the continuum of learning at this stage. The NEP 2020 suggests that the Foundational Stage will embrace five years of flexible, multilevel, play-based and activity-based learning. It will also follow the curriculum and pedagogy of the preschool stage in continuum. However, in states where preschool programs are implemented through

AWCs and pre-primary classes in schools, different curriculums based on varying learning goals and expectations are implemented. This difference in curriculum results in varying quality of programs and inadequately prepared children. Enabling environment, conducive to language learning that is print rich, availability of suitable Teaching Learning Material (TLM) such as loose material for manipulation to understand mathematical concepts, reading corners with the provision of material for writing and artwork is crucial.

About teaching-learning practices in early grades in school, several studies have pointed out that the teaching-learning process is often dominated by teacher talk. As a result, children are expected to repeat in chorus what is said by the teacher. In preschools and schools children hardly get scope to express themselves freely and the teacher is at the center of the classroom pedagogy. Teachers are mostly seen only using school textbooks and blackboards while, other important learning materials including children's literature are often lacking or not used (Chandra et al., 2017; Kaul et al., 2014). The focus is on completing the syllabus while it should be on developing strong skills of literacy and numeracy. In the case of language textbooks, the content is often at a level higher than what children can read. Lessons are often long with difficult vocabulary and limited scope with poor-quality illustrations. In the case of mathematics, the concepts are often presented in a condensed manner, without focusing on conceptual development using concrete materials and understanding the logic behind them, resulting in learning gaps. 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 lowers children's later performance in school.

Misquitta and Ghosh (2023) in a study found that Indian children are at risk for reading difficulties. An unfamiliar medium of instruction is another important reason for low learning levels in early grades. A smooth transition from a home language to a medium of instruction is desirable for forming deep connections with content. Children are unable to understand what is being taught in class as the language of instruction is different from the language that they speak and understand at home. Teachers are also unable to deal with this situation and nor do the capacity building programs address this adequately.

The government has a very large system of in-service teacher training (ISTT). However, there is a dearth for a formal mechanism for actual need analysis of the issues faced by teachers in the classroom. Also, in trainings based on the cascade model, chances of dilution of information or content are high. After training, the lack of onsite support further makes it difficult to assess the implementation of training components. The National Curriculum Framework (NCF), 2005 pointed out that most such programs are not organized according to the actual needs of teachers, the approach remained lecture-based, with little opportunity for trainees to actively participate (NCERT, 2005). The assessment system of the schools is geared towards assessing children at the end of the year. There is a need for the continuous inbuilt process as part of pedagogy which helps the teacher know whether the child has understood the concept or not. NEP 2020 emphasizes a 360-degree assessment where multiple forms of assessment—oral, project work, MCQs, writing, and feedback from multiple sources are used and accordingly, pedagogy can be customized. This kind of assessment will

continuously help the teachers to understand learning gaps and change/customize teaching-learning practices. However, it requires training of teachers and building their capacity to conduct such assessments.

3.2.2 Redressal

The development of FLN skills at the early stage is the pillar of all future learning. Therefore, it is important to ensure dedicated time for conducting language and numeracy-related activities in the school timetable. As per the NIPUN Bharat Mission Implementation Guidelines, it should be at least 90 minutes for language and 60 minutes for numeracy-related activities. Now, there is a shift in the focus from an input-based approach to an outcome-based approach. Thus, instead of thrusting on completing the syllabus, now the teachers are being trained to focus on achieving grade-level competencies and learning outcomes. Mentors focus more, now on onsite academic support to teachers instead of only focusing on compliance. Capacity building programs have been designed and extensively run across the nation in online and offline modes. The motive is to train teachers on FLN concepts, pedagogy, teaching-learning material, assessments for understanding the learning style of children, and designing instructional strategies as per the needs and interests of children. It is also designed to help teachers create print-rich environments, select, and use children's literature and other TLMs around FLN.

NEP 2020 mentions that Continuous Professional Development (CPD) opportunities for teachers will systematically cover the latest updates on teaching-learning. These are pedagogies regarding FLN, formative and adaptive assessment of learning outcomes, competency-based learning, and related approaches to learning such as experiential; arts-integrated; sports-integrated, and storytelling, etc. Each teacher is expected to participate in at least 50 hours of CPD opportunities every year for their professional development, driven by their interests. In this regard, the National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA) for FLN brought new perspectives. These are in terms of training accessibility, tracking of teachers' training progress and continuous connectivity to the teachers, and reaching to the teachers directly instead of cascade mode. So far, more than 12 lakh teachers have been trained under NISHTHA- FLN. A specialized NISHTHA ECCE for master trainers has also been launched on 29th July 2022 to support the training of preschool teachers (Garg & Chandra, 2022; MHRD, 2020). All efforts are being put in to assign a teacher to teach one class for the whole session. This helps develop a rapport/relationship of mutual trust, love and respect between the teacher and the children and understand the learning gap among children for remediation.

Building an academic cadre is another critical element in providing support to teachers at the school level. For this, academic cadre/ mentors are being identified and mapped to the school and teachers. Many of the states and UTs have completed this process and these mentors are being trained to support teachers as and when needed. A three-month school preparedness program 'Vidya Pravesh' (NCERT, 2021 & 2022b) has been developed and implemented in all 36 states and UTs for all Grade I children across all government, aided and private schools. The purpose is to help teachers ensure that all children are exposed to a warm and welcoming

environment when they enter Grade I (particularly relevant during the Covid-19 pandemic), leading to their smooth transition to the school.

Apart from this, tracking the progress of children has been made a holistic and continuous process. Teachers have started going beyond testing the content, to testing skills- such as reading writing numeracy, mathematical thinking, and higher order thinking skills of the learner along with their communication and collaboration skills. Participation of parents and the community is important in the early learning process of children to maximize the learning outcomes. Therefore, family and School Management Committees (SMCs) are involved in the monitoring of the working of the schools. They are also engaged in the preparation of school development plans, ensuring appropriate utilization of the grants received from the government, and improving the quality of learning of children in schools. Parents and other family members especially grandparents and siblings are being encouraged to support children's learning at home and in schools (Kumar & Behera, 2022). The 'Guidelines for Parent Participation in Home-Based Learning during School Closure and Beyond' (MoE, 2021b) is also playing a significant role in this process.

Strengthening the academic aspect of any learning intervention is very important. Several studies have been conducted and suggested a number of strategies to address academic issues. The remediation given above align with what has already been identified as proven techniques. Ramirez et al. (2018) in a study on dual language learners (DLLs) found that the amount and quality of training have a positive significant effect on language, literacy and math. Voorhis et al. (2013) have summarized 95 researches conducted primarily over the past 10 years on how families' involvement in children's learning and development through activities at home and school affects the literacy, mathematics, and social-emotional skills of children aged 3 to 8 years. The result indicates that family involvement is important for developing literacy and math skills. It further found that, children tend to do better when parents are engaged, and parental engagement can be increased by giving them directions and guidance on what and how to support learning. Godwin et al. (2016) in his study found that parent/family involvement helps children not only learn literacy and numeracy skills but other skills as well.

3.3 Bringing Systemic Reforms and Developing Convergence Mechanism to Build Robust Administrative Structure

In order to achieve NEP 2020 objectives, some administrative reforms must be introduced for better planning, monitoring, and implementation of the foundational learning goals. Strengthening monitoring mechanisms, ensuring the quality of learning opportunities, and convergence among different departments and ministries are some of the important issues that require immediate remediation.

3.3.1 Issues and Redressal

Currently, the Educational Management Information System (EMIS) for preschool education in AWCs is minimal and needs to be further strengthened. The only data points available in the public domain include a number of beneficiaries in the age group 3-6 years enrolled in

preschool and receiving supplementary nutrition. However, data disaggregated by age, social group, learning levels, etc. is not available. For quality preschool program other data points are necessary. Hence, the data capture format for preschool program in AWCs needs to be revisited and strengthened and integrated with the UDISE+ database on preschool education. Another challenge in the case of government, government-aided schools that are registered on UDISE+ is that data on children enrolled in pre-primary sections is available with disaggregation for certain parameters. The efficacy of this data needs to be verified and checked. A third issue is standalone private preschools or play schools that are not registered under UDISE+. Based on discussions with some private sector preschool/playgroup organizers there is a significant presence of these standalone preschools in the urban centers of the country. The challenge is that there is no database of these standalone preschools and little information about them is in the public domain, as also there is no process of registering, recognizing, maintaining standards, safety norms, etc. Accordingly, the foundational stage is now seen in the continuum from preschool to Grade II to ensure that the continuity of education of children from age 3 to 8 years is maintained.

As per the vision of NEP 2020, the NIPUN Bharat Mission targets that all children acquire foundational skills through this seamless process till Grade II/III. MWCD provides preschool education through the ICDS program. Therefore, the coherence between thoughts, strategies, and implementation of the NIPUN Bharat Mission between the two ministries is being done for the smooth transition and continuum of learning of children, especially those who are in AWCs. Because the preschool stage and Grades I to II are in a continuum, all stakeholders are being oriented to gear academic and administrative processes towards it to bring synergy and coherence. Preschools should also follow the RTE norms of a minimum of 200 teaching days for the primary grades. Wherever possible, synchronization of the timings of the preschool/ AWCs with the primary schools is done to assist parents having sibling children studying in preschool/ AWCs and Primary schools. States and UTs are adapting to admit children with a minimum age of 6 years in Grade I so that they are introduced to the appropriate content at the appropriate age.

The NEP 2020 emphasizes the provision of a common administrative head for all levels of school education. This includes the common principal/headmaster for preschools and primary both. Slowly, this target would be achieved by all the states and UTs. Basic quality standards and design of regulatory and accreditation framework applicable to all categories of preschools including government, government-aided and private have to be defined. Also, a system of planning, management and review of quality and progress of the implementation of foundational stage program at the national and state levels is being evolved. The use of technology is another critical component that is extensively being deployed. This is done especially, for the management of the implementation of the NIPUN Bharat Mission, tracking of teachers and children, teachers' training and providing learning content for all stakeholders including children. For this purpose under Digital Infrastructure for Knowledge Sharing (DIKSHA) a separate vertical for FLN resources has been developed to assist and mentor, States/UTs and teachers. This vertical contains infographics and videos on learning outcomes and assessment tools for teachers to facilitate them. Chandra (2024) stated that it is a

professional development platform that helps orient teachers, comprehensively on various aspects of how children learn and what should be the right approach.

Studies all over the country also recognize the significance of administrative reforms in ensuring a better learning environment for children. Birgisdottir et al. (2020) in their study found a positive effect of linkage between preschool and primary education for developing literacy and numeracy skills. On quality at the foundational stage of learning, Chandra et al. (2017) in their review of Indian research demonstrated that the quality of the foundational stage of education in the country is very diverse. Here, the basic quality standards are compromised at various levels. However, strenuous interventions from the government, local and individual level may overcome these challenges. Some of them are ensuring basic infrastructure and facilities, recruitment of exclusive teachers and their training, development and rollout of common developmentally appropriate curriculum, documentation and adaptation of good practices, ensuring parent and community involvement, convergence with concerned ministries, research-based interventions, making preschool education a mandate in all the schools and rigorous monitoring of educational activities. Ishimine et al. (2010) mentioned that higher-quality inputs will produce higher-quality outcomes for children. In their study, they suggested that the quality rating system can provide an indicator of quality in the form of stars, numbers, and letters and also provide useful and meaningful feedback to the schools, teachers and families. Fenech et al. (2007) in a study concluded that regulatory requirements need to be evaluated in terms of their contribution to structural, process, contextual and work environment dimensions of quality.

The use of technology has been proven as an alternative to education that makes education not only joyful but quick also. In an intervention study conducted by Beth et al. (2018) groups were compared on achievement of literacy skills (e.g. letter–word identification, picture/definitional vocabulary, phonological awareness) and numeracy skills (e.g. number recognition, counting, sizes/comparisons, applied problems, quantitative concepts, shapes). Results revealed significant differences between the groups on post-achievement tests, indicating that playful learning through educational software may enhance literacy and numeracy skills among young children.

4. Conclusion

Learning is a cumulative process, and the prevalence of a learning crisis especially at the foundational stage deciphers to severe impediments in higher grades and eventually to a poorly skilled workforce. Prioritization of learning at the foundational stage has been shown to have a significant impact on long-term childrens' learning outcomes. India has the largest democratic and federated education ecosystem in the world therefore; NEP 2020 accords the highest importance to the achievement of FLN skills for all children at the foundational stage, through a national mission. Accordingly, the government of India envisages supporting all the States and UT in developing their plans to translate the vision and spirit of the policy with greater emphasis on all children attaining foundational skills by the end of Grade III and no later than Grade V. In this context, the Ministry of Education, Government of India is putting

in all efforts in a mission mode, i.e. through the NIPUN Bharat Mission. The mission envisages making the experience of learning at the foundational stage holistic, integrated, inclusive, enjoyable, and engaging, through interventions at various levels and on various fronts. In this process, continuous assessment and monitoring of the progress of all interventions help track the progress, resolve issues in time and thus ensure timely accomplishment of all targets set to ensure the attainment of FLN skills among all children. Some of the prevalent issues on access, academics and administrative fronts have been discussed along with some suggestive strategies employed by the government for their redressal. These are going to bring-path breaking transforms at the foundational stage. However, quick and concerted efforts are required from many fronts and levels to achieve all goals in time. The main precursor to achieving them is building consistent and strong communication between the school and parents/ community to ensure their engagement in the growth, learning and development of all children.

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