

Evolution and Policy Landscape of Foundational Literacy and Numeracy in India

Judhistir Mallik* and Laxmidhar Behera

Department of Education, Regional Institute of Education, NCERT, Bhubaneswar, India

*Corresponding author: judhistirk101@gmail.com

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ABSTRACT

In recent years, Foundational Literacy and Numeracy (FLN) has come to occupy a central position in global education debates, as growing evidence underscores its critical role in shaping not only academic success but also broader social and economic participation. Although access to schooling has expanded considerably across many countries, this progress has not been accompanied by commensurate improvements in early learning outcomes. A persistent gap between schooling and learning continues to be observed, particularly in the foundational years, where many children struggle to attain basic competencies in reading and numeracy. Within the Indian context, large-scale assessments have repeatedly pointed to this challenge, revealing that a significant proportion of learners remain below expected proficiency levels despite continued participation in formal education. Against this backdrop, the present paper undertakes a thematic policy analysis of the evolution and current landscape of FLN initiatives in India. Drawing on a range of policy documents, programme frameworks, and scholarly sources, the study traces the gradual repositioning of foundational learning from a largely implicit expectation within access-driven reforms to a clearly articulated national priority in recent policy developments, including the National Education Policy 2020 and the NIPUN Bharat Mission. The analysis further examines key dimensions of implementation, including institutional arrangements, pedagogical practices, and systemic constraints, while also engaging with insights from international experiences. By adopting a multidisciplinary lens, the paper seeks to situate FLN within a broader framework that encompasses developmental, social, and governance-related considerations. It argues that meaningful progress in foundational learning depends not only on policy intent but also on sustained efforts to ensure coherence across systems, strengthen professional capacity, and address persistent inequities in educational opportunity.

Keywords: Foundational Literacy and Numeracy (FLN), National Education Policy 2020, NIPUN Bharat Mission, Early Grade Learning, Educational Equity, Policy Implementation

In recent years, Foundational Literacy and Numeracy (FLN) has assumed a pivotal place in education discourse, reflecting a growing recognition of its influence on both immediate learning and long-term life outcomes. Early acquisition of reading and numeracy skills is widely regarded as a prerequisite for meaningful engagement with formal schooling, as it enables learners to access curricular content and develop higher-order cognitive abilities. Research in developmental science and education consistently indicates that children who do not attain foundational competencies at the appropriate

stage are likely to encounter persistent academic difficulties, often leading to cumulative learning deficits over time (Shonkoff & Phillips, 2000; Heckman, 2006). In response to this evidence, global education priorities have increasingly shifted from a focus on enrolment and participation to a stronger emphasis on the quality of learning achieved during the early years (World Bank, 2018).

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This renewed emphasis on foundational learning has emerged alongside significant progress in expanding access to schooling. Countries such as India have made notable advances in achieving near-universal enrolment at the primary level, reflecting sustained policy efforts over several decades. However, this expansion has not been matched by corresponding improvements in learning outcomes. Large-scale assessments continue to reveal that a substantial proportion of children in the early grades struggle with basic reading comprehension and numeracy tasks. This disconnect between schooling and learning has drawn attention to systemic limitations within education systems, where institutional priorities have often centred on infrastructure, compliance, and administrative targets rather than on classroom processes and pedagogical quality (Pritchett, 2013; ASER Centre, 2023).

Within the Indian context, these concerns have prompted a gradual yet significant reorientation of education policy. Earlier policy frameworks, including rights-based approaches, played a crucial role in broadening access and addressing issues of educational exclusion. However, they tended to place relatively less emphasis on the quality of learning in the foundational years. Over time, growing evidence of low learning levels has underscored the need to move beyond access towards a more outcome-oriented approach. This shift is most clearly reflected in the National Education Policy 2020, which identifies universal attainment of foundational literacy and numeracy as the foremost priority of the school education system. By foregrounding early learning, the policy marks a departure from earlier approaches and signals a renewed commitment to ensuring that all children acquire essential competencies during the initial years of schooling (Government of India, 2020).

The operationalisation of this policy vision has been further advanced through the NIPUN Bharat Mission, which provides a structured framework for achieving grade-level learning outcomes in literacy and numeracy. The mission emphasises clearly defined learning goals, teacher capacity building, continuous assessment, and community engagement, aligning with international evidence on effective early grade interventions (Piper *et al.* 2018). At the same time, variations in implementation across states and regions highlight the continuing

challenges associated with translating policy intent into classroom practice.

Against this background, the present paper examines the evolution and policy landscape of Foundational Literacy and Numeracy in India through a thematic and analytical lens. It traces the progression of policy priorities over time, analyses the institutional and programmatic mechanisms that support FLN, and explores the systemic challenges that shape its implementation. By situating India's experience within broader international debates and drawing on insights from multiple disciplines including education policy, developmental psychology, pedagogy, sociology, and governance the paper seeks to conceptualise FLN not merely as an instructional issue but as a complex and interconnected policy domain. In doing so, it contributes to ongoing scholarly and policy discussions on how foundational learning reforms can be designed, implemented, and sustained in ways that promote both quality and equity in education.

Review of Literature on Foundational Literacy and Numeracy and Policy Implementation

Foundational Literacy and Numeracy (FLN) is widely acknowledged as the bedrock upon which all subsequent learning is constructed. A substantial body of research across education and developmental sciences has demonstrated that early acquisition of reading and numeracy skills plays a decisive role in shaping later academic achievement, school retention, and long-term socio-economic outcomes. Foundational competencies enable learners to meaningfully engage with curricular content and support the development of higher-order cognitive processes. Conversely, gaps at this stage tend to accumulate over time, often resulting in persistent learning difficulties that are increasingly resistant to remediation (Shonkoff & Phillips, 2000; Heckman, 2011).

Over the past decade, international scholarship has drawn attention to what is now commonly described as a global "learning crisis." This crisis is characterised by the inability of a large proportion of school-going children to achieve minimum proficiency in reading and numeracy, despite being enrolled in formal education systems. Evidence from

large-scale assessments suggests that the problem lies less in access to schooling and more in the quality of instruction and system-level effectiveness. Factors such as poorly aligned curricula, limited instructional time devoted to foundational skills, and inadequate academic support for teachers have been identified as key contributors to weak learning outcomes in the early grades (World Bank, 2018; Pritchett, 2013).

In response to these challenges, policy-oriented research increasingly emphasises the importance of systemic coherence in FLN reform. Effective foundational learning initiatives require alignment across curriculum design, pedagogical practices, assessment systems, and teacher professional development. Empirical studies on early grade interventions indicate that structured pedagogical approaches when combined with continuous teacher mentoring and the use of formative assessments can lead to measurable improvements in student learning outcomes (Piper *et al.* 2018; Kraft *et al.* 2018). However, the sustainability and scalability of such interventions depend heavily on the institutional capacity of education systems and their ability to adapt strategies to diverse local contexts.

Despite the growing prominence of FLN in policy discourse, a consistent concern in the literature relates to the gap between policy formulation and classroom implementation. Research on education reform highlights that even well-designed policies may yield limited results when constraints related to teacher preparedness, administrative efficiency, and resource allocation are not adequately addressed. In many education systems, teachers continue to receive fragmented or one-time training with limited follow-up support, while assessment mechanisms often prioritise reporting and compliance rather than informing instructional practice. These factors collectively weaken the potential impact of FLN-focused reforms (Grindle, 2017; Black & Wiliam, 2009).

Another important strand of literature underscores the role of early childhood education as a critical foundation for later learning. Studies indicate that children’s early exposure to language-rich environments, numeracy concepts, and socio-emotional development significantly influences their readiness for formal schooling. Well-designed

early childhood programmes can therefore serve as a crucial entry point for strengthening foundational skills. However, policy analyses frequently point to a lack of effective integration between pre-primary and primary education, leading to discontinuities that hinder smooth learning progression (UNESCO, 2016; Britto *et al.* 2017).

From a sociological perspective, foundational learning outcomes are closely linked to broader socio-economic conditions. Factors such as parental education, household income, and the availability of supportive home learning environments significantly shape children’s early learning experiences. Inequities in these conditions contribute to unequal starting points, which are often reinforced rather than mitigated by schooling processes. As a result, scholars argue that FLN policies must extend beyond school-based interventions to include equity-oriented strategies that address the wider social determinants of learning (Reardon, 2011; ASER Centre, 2023).

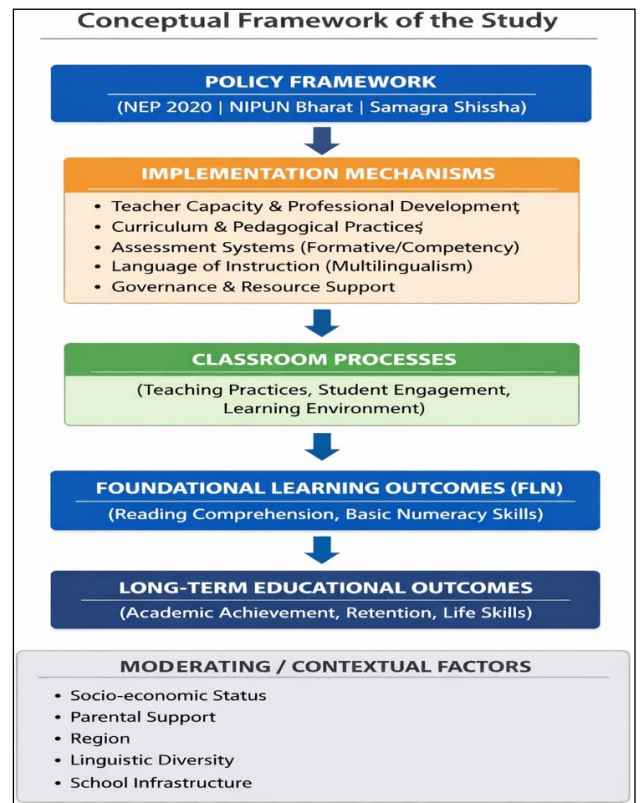


Fig. 1: Conceptual Framework of Foundational Literacy and Numeracy

Taken together, the existing literature provides a comprehensive understanding of both the

importance of FLN and the complexities involved in its implementation. While there is broad consensus on the need to prioritise foundational learning, translating this recognition into sustained improvements remains a significant challenge. The evidence suggests that effective FLN reform requires an integrated approach that aligns policy intent with classroom realities, strengthens teacher support systems, and accounts for contextual diversity. These insights form a critical basis for examining the evolution and policy landscape of FLN in India, particularly in relation to ongoing efforts to bridge the gap between policy aspirations and actual learning outcomes.

Methodology

The present study adopts a qualitative approach grounded in thematic policy analysis to examine the evolution and contemporary policy landscape of Foundational Literacy and Numeracy (FLN) in India. Such an approach is particularly appropriate for exploring complex education reforms, as it enables a close reading of policy texts while also allowing for interpretation of underlying assumptions, priorities, and implementation logics within their broader institutional and socio-political contexts (Bowen, 2009; Braun & Clarke, 2006). Given that the study seeks to analyse policy trajectories and conceptual shifts rather than generate primary empirical evidence, a document-based qualitative design provides both flexibility and analytical depth.

Data Sources

The analysis draws primarily on secondary sources, with a focus on official policy documents, programme frameworks, and government guidelines related to school education and early childhood development in India. Key sources include national policy statements and implementation frameworks that have shaped the direction of foundational learning initiatives. These documents were selected purposively on the basis of their relevance, authority, and influence in defining FLN priorities, strategies, and accountability mechanisms.

In addition to policy texts, the study incorporates peer-reviewed journal articles, evaluation reports, and international research literature addressing early grade learning, policy implementation, and

foundational skills development. The inclusion of these sources allows for a more comprehensive understanding of the issues under consideration and supports critical engagement with both national and global perspectives.

Analytical Procedure

The analysis followed a systematic thematic process. Initially, selected documents were reviewed in detail to identify recurring ideas, concepts, and areas of emphasis related to foundational learning. These included, among others, early childhood education, teacher professional development, assessment practices, language of instruction, and governance structures. Through an iterative process, these preliminary codes were refined and grouped into broader analytical themes that captured patterns across policy design and implementation.

This thematic organisation enabled the study to examine both areas of alignment and points of tension between policy intent and actual practice. Particular attention was given to identifying gaps between stated objectives and implementation realities, an issue frequently highlighted in education policy research (Grindle, 2017). The process of coding and theme development was not strictly linear but involved repeated engagement with the data to ensure conceptual clarity and analytical consistency.

Use of Secondary Literature and Triangulation

Secondary literature played a dual role in the analysis. First, it provided contextual grounding by situating Indian policy developments within broader debates on foundational learning. Second, it offered theoretical and empirical lenses through which policy provisions could be critically interpreted. Comparative international studies and multidisciplinary research were particularly useful in enriching the analysis and highlighting both convergences and divergences across contexts.

The triangulation of policy documents with scholarly literature enhanced the credibility and robustness of the findings. By drawing on multiple sources of evidence, the study was able to develop a more nuanced understanding of policy coherence, institutional capacity, and systemic challenges associated with FLN implementation (Creswell & Poth, 2018).

Scope and Ethical Considerations

As a non-empirical study based entirely on publicly available documents and secondary sources, the research does not involve human participants or primary data collection. Consequently, formal ethical clearance was not required. Nevertheless, care has been taken to ensure transparency in the selection and interpretation of sources, as well as adherence to academic standards of citation and representation.

The methodological emphasis of the study lies in maintaining conceptual clarity, analytical rigour, and coherence in interpretation. Qualitative policy analysis of this nature is widely recognised in education research, particularly in studies aimed at informing policy discourse, identifying systemic gaps, and suggesting directions for future inquiry.

Evolution and Policy Landscape of Foundational Literacy and Numeracy in India

The trajectory of Foundational Literacy and Numeracy (FLN) policy in India reflects a gradual but significant reorientation in educational priorities, moving from an emphasis on access to a deeper concern for learning outcomes in the early years of schooling. In the initial decades following independence, policy efforts were largely directed toward expanding the reach of formal education and reducing mass illiteracy. Foundational learning, although implicitly valued, did not receive explicit conceptual or operational attention within policy frameworks.

The National Policy on Education and its subsequent Programme of Action (1992) represented early attempts to universalise elementary education and introduced the idea of minimum levels of learning. However, literacy during this phase was often understood in functional terms, with limited articulation of grade-specific competencies or systematic mechanisms for tracking early learning progress. As noted in earlier analyses, the absence of clear benchmarks for foundational skills resulted in a weak linkage between schooling participation and actual learning (Tilak, 2018).

A more structural transformation occurred with the enactment of the Right of Children to Free and Compulsory Education Act, which positioned

elementary education as a justiciable right. This legislation strengthened institutional provisions by prescribing norms related to school infrastructure, teacher qualifications, and pupil-teacher ratios. While the Act played a crucial role in improving access and formalising educational entitlements, its primary focus remained on compliance and input-based indicators. Consequently, issues related to foundational learning particularly in the early grades received comparatively less direct attention. Empirical studies during this period consistently highlighted a disconnect between increased enrolment and actual learning achievement, pointing to a systemic learning deficit (Kingdon, 2020).

In response to these concerns, policy discourse increasingly began to acknowledge the importance of early childhood education as a precursor to formal schooling. The National Early Childhood Care and Education Policy emphasised a holistic approach to child development, advocating play-based pedagogies and continuity between pre-primary and primary education. Insights from developmental research have long established that early cognitive and linguistic stimulation significantly influences later academic outcomes, including literacy and numeracy acquisition (Shonkoff & Phillips, 2000). However, despite this recognition, challenges related to programme quality, fragmentation, and weak institutional integration limited the effectiveness of early childhood initiatives in strengthening foundational learning.

A decisive shift in policy orientation emerged with the introduction of the National Education Policy, which explicitly identified universal attainment of FLN as a national priority. Unlike earlier frameworks that prioritised access or structural inputs, this policy repositioned foundational learning at the core of the education system. Its proposed 5+3+3+4 curricular structure reflects a developmentally appropriate reorganisation of schooling, placing strong emphasis on the foundational stage. Furthermore, the policy advocates experiential learning, multilingual instruction, and competency-based assessment, thereby aligning pedagogical practices with contemporary understanding of child development (Government of India, 2020).

The vision articulated in NEP-2020 was operationalised through the NIPUN Bharat Mission, which provided a structured framework for achieving FLN goals. By specifying grade-wise learning outcomes and establishing clear timelines, the mission introduced greater clarity and accountability into the system. Its focus on teacher professional development, formative assessment, and community participation reflects global evidence on effective strategies for improving early grade learning (Piper *et al.* 2018). At the same time, variations in administrative capacity, resource availability, and monitoring mechanisms across states continue to influence implementation fidelity.

Complementary policy instruments have further contributed to strengthening the FLN ecosystem. The Samagra Shiksha Abhiyan integrates multiple components of school education, including early grade learning, teacher training, and resource provision, within a unified framework. In addition, ongoing reforms in assessment practices and the increasing use of digital technologies aim to enhance both instructional quality and system-level monitoring. However, the success of these initiatives depends critically on their alignment with classroom realities and the extent to which they address disparities in access and quality across diverse socio-economic contexts (Black & Wiliam, 2009; Selwyn, 2016).

Overall, the evolution of FLN policy in India illustrates a clear transition from an access-driven model to a more outcome-oriented approach centred on foundational learning. This progression underscores an important realisation within the policy landscape: expanding schooling opportunities, while necessary, is insufficient unless accompanied by meaningful learning gains in literacy and numeracy during the early years. The current policy framework, therefore, represents a more integrated and learning-focused paradigm, although its long-term effectiveness will depend on sustained implementation and contextual adaptation.

Implementation Mechanisms and Systemic Challenges

The success of Foundational Literacy and Numeracy (FLN) reforms is determined not only by the clarity of policy vision but also by the strength

and coherence of implementation processes across different layers of the education system. Evidence from education reform research suggests that even well-conceived policies may yield inconsistent results when institutional readiness, professional capacity, and contextual realities are not adequately aligned (Grindle, 2017). In the context of FLN, mechanisms such as teacher professional development, governance structures, language practices, and resource distribution play a pivotal role in bridging the gap between policy formulation and classroom enactment.

At the school level, teacher capacity emerges as the most influential determinant of foundational learning outcomes. A substantial body of research highlights that teachers' content knowledge, pedagogical competence, and sensitivity to early childhood development directly shape students' acquisition of literacy and numeracy skills (Darling-Hammond, 2017). While large-scale training programmes have been widely implemented, their effectiveness often remains limited when they are delivered as isolated, short-term interventions. Sustained professional development models in corporating mentoring, instructional coaching, and collaborative learning communities have been shown to produce more meaningful changes in classroom practice (Kraft *et al.* 2018). However, systemic constraints such as heavy teaching loads, administrative responsibilities, and limited access to ongoing academic support continue to restrict the impact of such initiatives, particularly in resource-constrained settings.

Beyond the classroom, governance and institutional coordination present significant challenges for FLN implementation. Effective execution requires alignment among national frameworks such as the National Education Policy, state-level strategies, district administration, and school leadership. In practice, fragmented administrative arrangements and overlapping mandates often weaken accountability and disrupt policy coherence (Honig, 2006). Although decentralisation can enable context-specific planning and responsiveness, it also necessitates the presence of strong intermediary institutions capable of providing pedagogical guidance, monitoring progress, and facilitating communication across levels (Grindle, 2017). Variations in administrative capacity across states

and districts further contribute to disparities in implementation quality and learning outcomes.

Language of instruction constitutes another critical dimension of FLN implementation, particularly in linguistically diverse contexts. Research in multilingual education consistently demonstrates that early learning is more effective when children are taught in their home language, as it enhances comprehension, engagement, and cognitive development (Cummins, 2000). Policy frameworks in India have acknowledged the value of multilingual approaches; however, translating this principle into practice remains a complex task. Shortages of adequately trained teachers, limited availability of teaching-learning materials in regional and tribal languages, and insufficient planning for transition to additional languages create barriers to effective implementation. These challenges disproportionately affect children from marginalised linguistic backgrounds, thereby reinforcing existing educational inequalities (UNESCO, 2016).

Issues of equity are further compounded by disparities in resource allocation and socio-economic conditions. Empirical research indicates that factors such as household income, parental education, and the home learning environment significantly influence early literacy and numeracy development (Reardon, 2011). Schools serving disadvantaged communities often encounter multiple constraints, including inadequate infrastructure, higher rates of teacher absenteeism or turnover, and limited instructional support. Although national initiatives such as the Samagra Shiksha Abhiyan aim to provide integrated financial and technical assistance, their effectiveness depends largely on the planning and execution capacities of state and local authorities. Differences in fiscal resources, governance efficiency, and academic leadership contribute to uneven implementation across regions (Tilak & Kumar, 2022).

In sum, the implementation of FLN reforms is shaped by a complex interplay of pedagogical, institutional, linguistic, and socio-economic factors. Addressing these systemic challenges requires moving beyond standardised policy prescriptions toward contextually responsive strategies that prioritise sustained teacher support, strengthen multi-level governance mechanisms, and ensure

equitable distribution of resources. Without such an integrated and adaptive approach, even well-designed reforms risk generating uneven and limited improvements in foundational learning outcomes.

Comparative International Perspectives

Comparative scholarship offers a valuable lens for understanding how diverse education systems have responded to the persistent challenge of ensuring Foundational Literacy and Numeracy (FLN) for all learners. Across contexts marked by inequality, linguistic diversity, and varying institutional capacities, international evidence points to a set of recurring principles that shape successful foundational learning reforms. At the same time, cross-national analysis cautions against simplistic policy transfer, emphasising instead the importance of contextual adaptation and systemic alignment. Situating India's FLN efforts within this broader global discourse enables a more critical appreciation of both opportunities and constraints in policy design and implementation.

Experiences from Low- and Middle-Income Countries

A number of low- and middle-income countries have implemented large-scale reforms targeting early grade learning, often under conditions of limited resources and systemic constraints. Kenya's Tusome Early Grade Reading Programme is frequently cited as a notable example. The programme combined structured lesson plans with sustained teacher coaching and real-time monitoring of classroom practices. Empirical evaluations indicate substantial gains in reading fluency and comprehension, with success attributed to the clarity of instructional design and the consistency of professional support provided to teachers (Piper *et al.* 2018). Importantly, the programme incorporated local language instruction in the early grades, reflecting sensitivity to linguistic diversity.

In a similar vein, Bangladesh's Primary Education Development Programme adopted a comprehensive, system-wide strategy that integrated curriculum reform, teacher development, assessment strengthening, and community participation. Evidence suggests that decentralised planning mechanisms and strengthened local accountability

contributed to improvements in foundational learning, particularly among disadvantaged populations (Nath & Chowdhury, 2019). These cases demonstrate that even in resource-constrained settings, coherent policy design combined with sustained institutional support can yield measurable improvements in FLN outcomes.

Approaches in High-Income Education Systems

In contrast, high-income education systems have generally addressed foundational learning through long-term investment in early childhood education, teacher professionalism, and developmentally appropriate pedagogies. For instance, Finland's education model is widely recognised for its emphasis on play-based learning, teacher autonomy, and minimal reliance on standardised testing. The Finnish approach prioritises holistic child development and formative assessment practices, enabling deeper conceptual understanding rather than surface-level skill acquisition (Sahlberg, 2015).

Similarly, countries such as Canada and other members of the Organisation for Economic Co-operation and Development have focused on strengthening teacher quality, inclusive curricula, and early childhood provision. Comparative assessments indicate that systems characterised by well-prepared teachers and sustained professional development tend to achieve not only higher learning outcomes but also greater equity across socio-economic groups (OECD, 2021). These experiences underscore that durable improvements in FLN are closely linked to sustained institutional investment rather than short-term programme-based interventions.

Teacher Coaching, Assessment, and Language Policy

Across both developing and developed contexts, teacher professional support particularly instructional coaching has emerged as a critical lever for improving early grade learning. Research consistently shows that coaching models involving classroom observation, feedback, and ongoing pedagogical guidance are more effective than episodic training programmes in transforming teaching practices (Kraft *et al.* 2018). This is especially relevant for FLN, where effective instruction requires continuous adaptation to learners' developmental needs.

Assessment practices constitute another area of convergence in international research. Evidence suggests that formative and diagnostic assessments are more conducive to foundational learning than high-stakes examinations, particularly in the early years of schooling (Black & Wiliam, 2009). Education systems that integrate assessment data into day-to-day teaching processes tend to demonstrate stronger alignment between instructional strategies and learning objectives.

Language policy further shapes foundational learning trajectories, particularly in multilingual societies. Studies from countries such as Ethiopia and South Africa highlight that early instruction in children's home languages enhances comprehension, participation, and cognitive engagement, provided that transitions to additional languages are carefully managed (UNESCO, 2016). These findings reinforce the importance of linguistically responsive pedagogy in promoting both learning effectiveness and educational equity.

Implications for Contextual Adaptation

While international experiences offer important insights, comparative education research consistently warns against direct policy borrowing without regard for contextual differences. As noted by Gita Steiner-Khamsi, education reforms are deeply embedded within specific socio-cultural, political, and institutional environments, and strategies that succeed in one context may not yield similar outcomes elsewhere (Steiner-Khamsi, 2014). Consequently, effective policy learning requires selective adaptation rather than wholesale replication.

For India, this implies that global FLN practices such as structured pedagogy, continuous teacher support, formative assessment, and mother-tongue instruction must be carefully aligned with local realities, including linguistic diversity, administrative variation, and socio-economic disparities. A context-sensitive approach that integrates international lessons with domestic priorities offers a more sustainable pathway for strengthening foundational learning than the uncritical adoption of external models.

Multidisciplinary Discussion

Foundational Literacy and Numeracy (FLN)

represents a complex educational objective that extends beyond the boundaries of any single discipline. Its development is influenced by an interplay of cognitive processes, pedagogical practices, socio-economic contexts, linguistic environments, and institutional structures. A multidisciplinary perspective is therefore essential to move beyond narrow, intervention-based approaches and to understand foundational learning as a systemic phenomenon. This section integrates insights from psychology, pedagogy, sociology, linguistics, and governance to provide a comprehensive interpretation of both the challenges and possibilities associated with FLN reforms.

Psychological Perspective on Early Learning

From a psychological viewpoint, foundational learning is deeply rooted in early cognitive and socio-emotional development. Research in developmental science indicates that skills such as attention regulation, working memory, language processing, and executive functioning form the cognitive basis for literacy and numeracy acquisition during the early years (Shonkoff & Phillips, 2000). These capacities are shaped not only by biological maturation but also by the quality of early experiences, including caregiver interaction, emotional security, and exposure to language-rich environments.

Policy emphasis on early childhood care and education reflects this understanding, particularly the recognition that school readiness is a cumulative outcome of early developmental conditions. However, as argued by James Heckman, the long-term benefits of early interventions depend significantly on continuity in learning environments across home, preschool, and primary schooling (Heckman, 2006). Disruptions or inconsistencies across these stages may limit the effectiveness of early gains, highlighting the need for integrated policy design.

Pedagogical and Curriculum Perspectives

Pedagogical research underscores that the manner in which instruction is delivered is central to the success of FLN initiatives. Developmentally appropriate teaching strategies characterised by guided learning, active engagement, and timely feedback are more effective in fostering

foundational competencies than approaches focused primarily on rote memorisation or rapid curriculum coverage. Contemporary scholarship emphasises the importance of aligning instructional practices with children's developmental stages and learning needs (Darling-Hammond *et al.* 2020).

Curriculum frameworks that incorporate play-based and experiential learning have been shown to support deeper conceptual understanding, particularly in the early grades. Nevertheless, a recurring concern in the literature is the gap between intended curriculum and enacted classroom practice. As highlighted by Lant Pritchett and colleagues, misalignment between curriculum expectations and students' actual learning levels can result in ineffective instruction, especially when teachers lack adequate pedagogical support (Pritchett & Beatty, 2015). This reinforces the importance of continuous professional development and classroom-level support mechanisms.

Sociological and Equity Perspectives

A sociological perspective brings attention to the broader structural factors that shape foundational learning outcomes. Empirical research consistently demonstrates that children's early literacy and numeracy development is closely associated with socio-economic status, parental education, and the quality of home learning environments (Reardon, 2011). These factors contribute to disparities in school readiness, which often persist and widen over time if not adequately addressed.

Educational institutions serving marginalised communities frequently encounter compounded challenges, including limited resources, higher teacher attrition, and weaker institutional support. From an equity standpoint, this suggests that school-based interventions alone may be insufficient to address foundational learning gaps. Organisations such as UNICEF have emphasised the need for integrated approaches that combine educational reforms with community engagement and targeted social support (UNICEF, 2019). Such strategies are critical for reducing disparities and ensuring inclusive access to foundational learning opportunities.

Linguistic and Cultural Dimensions

Language constitutes a fundamental dimension of

early learning, particularly in multilingual societies. Linguistic research indicates that children acquire literacy skills more effectively when instruction is rooted in their home language during the initial years of schooling (Cummins, 2000). This approach not only enhances comprehension but also strengthens learner confidence and participation.

In addition to language, cultural relevance plays a significant role in shaping engagement and meaning-making. Pedagogical approaches that connect instructional content to learners' lived experiences are more likely to foster deeper understanding. Despite policy recognition of multilingual and culturally responsive education, implementation challenges remain substantial. Reports by UNESCO highlight persistent gaps in teacher preparedness, availability of instructional materials, and planning for language transition across grades (UNESCO, 2016). These limitations continue to affect both learning quality and equity.

Governance and Technology Perspectives

From a governance perspective, the success of FLN reforms depends on the ability of education systems to coordinate efforts across multiple administrative levels. Fragmented governance structures often create gaps between policy formulation and classroom implementation, reducing overall effectiveness. As noted by Meredith Honig, intermediary institutions play a crucial role in translating policy into practice by providing academic guidance, monitoring, and support (Honig, 2006).

The increasing integration of technology into education systems has introduced new possibilities for strengthening FLN initiatives. Digital tools can support teacher training, enable continuous assessment, and provide access to instructional resources. However, research cautions that technology is not inherently transformative. Its effectiveness depends on meaningful integration with pedagogy and equitable access across socio-economic groups. As argued by Neil Selwyn, uncritical adoption of educational technology without addressing contextual constraints may reproduce existing inequalities rather than mitigate them (Selwyn, 2016).

Policy Analysis and Implications for Foundational Literacy and Numeracy

A critical examination of India's education policy architecture indicates an increasing consolidation around Foundational Literacy and Numeracy (FLN) as the central objective of school education. This convergence reflects a broader shift in policy thinking from expanding access to ensuring meaningful learning. However, the effectiveness of this shift depends not only on policy articulation but also on the degree of coherence across multiple policy instruments and the extent to which implementation strategies are responsive to issues of equity and contextual diversity.

The National Education Policy 2020 marks a significant turning point by positioning universal FLN as the foremost priority of the education system. Its emphasis on restructuring schooling into a 5+3+3+4 design, alongside a focus on play-based and experiential learning, reflects alignment with established insights from developmental science (Government of India, 2020). From a policy analysis perspective, this represents a conceptual shift toward outcome-oriented reform. Nevertheless, the translation of these provisions into classroom practice remains uneven, particularly in regions where teacher preparedness, instructional support, and administrative capacity are constrained.

The NIPUN Bharat Mission serves as the principal operational mechanism for advancing the FLN agenda. By specifying grade-level competencies and establishing clear timelines, the mission enhances policy coherence and provides a structured framework for implementation. Comparative evidence suggests that clearly defined learning benchmarks can improve instructional alignment and accountability within education systems (Piper *et al.* 2018). At the same time, disparities in state-level monitoring systems and institutional capacity raise concerns about differentiated outcomes, with the risk that existing inequalities across regions may be reinforced rather than reduced.

The Samagra Shiksha Abhiyan plays a pivotal role in financing and administratively supporting FLN-related initiatives. Its integrated design facilitates resource allocation across key domains, including

early childhood education, teacher professional development, learning materials, and assessment reforms. While this integration strengthens systemic alignment, empirical evidence indicates that resource availability alone does not guarantee improved learning outcomes. As noted in policy research, the effectiveness of such programmes depends significantly on state and district-level planning capacity, academic leadership, and the ability to translate financial inputs into pedagogically meaningful practices (Tilak & Kumar, 2022).

Assessment reforms and digital education initiatives further shape the evolving FLN policy landscape. The increasing emphasis on formative, competency-based assessment reflects a shift toward supporting learning rather than merely measuring it, consistent with international research (Black & Wiliam, 2009). Digital platforms for teacher training, student assessment, and instructional support offer new opportunities to strengthen implementation. However, as highlighted by Neil Selwyn, the benefits of educational technology are contingent upon equitable access and meaningful pedagogical integration (Selwyn, 2016). Persistent disparities in digital infrastructure and literacy continue to limit the reach of such initiatives, particularly in rural and marginalised contexts.

An equity-oriented perspective reveals that policy coherence at the national level does not automatically ensure equitable learning outcomes. Structural factors including socio-economic disadvantage, linguistic diversity, and geographic isolation continue to shape children's access to foundational learning opportunities. Research demonstrates that disparities in early learning conditions contribute to unequal starting points, which formal schooling alone may not fully address (Reardon, 2011). Although existing policies acknowledge these challenges, their implementation often follows standardised models that insufficiently account for local variation. This underscores the need for differentiated strategies that prioritise high-need regions, strengthen community engagement, and integrate educational interventions with broader social policies.

In sum, India's policy framework reflects a decisive shift toward prioritising foundational learning as the basis for educational transformation. The challenge now lies in deepening coherence across policy

instruments while ensuring that implementation strategies are sensitive to contextual realities and equity concerns. Bridging the gap between policy intent and classroom practice will require sustained investment in teacher support systems, institutional capacity, and inclusive approaches that address the diverse needs of learners. Only through such an integrated and context-responsive approach can the goals of FLN reform be translated into durable improvements in learning outcomes.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This paper has explored the evolution, policy architecture, and implementation dynamics of Foundational Literacy and Numeracy (FLN) in India, situating national developments within a wider international and multidisciplinary context. The analysis reveals a discernible shift in policy orientation from a primary focus on access and rights-based provisioning toward a more explicit emphasis on learning outcomes in the foundational years. This transition reflects a growing recognition that early literacy and numeracy are not merely preparatory skills but constitute the essential foundation upon which subsequent educational progression and social participation depend.

A key insight emerging from the study is that India's contemporary FLN framework demonstrates substantial conceptual alignment with global research on early learning. Policy initiatives increasingly foreground developmentally appropriate pedagogy, early childhood education, continuous teacher support, formative assessment practices, and attention to linguistic diversity. However, the analysis also indicates that the effectiveness of these reforms is mediated by systemic factors, including institutional capacity, governance coordination, and socio-economic inequalities. As highlighted in policy implementation research, ambitious reforms often yield uneven outcomes when enabling conditions are not uniformly present across regions (Grindle, 2017; Organisation for Economic Co-operation and Development, 2021).

From a policy perspective, the prioritisation of FLN represents a significant opportunity to address persistent learning disparities that have remained unresolved despite expanded access to schooling. By focusing on foundational competencies, current

reforms have the potential to interrupt cycles of cumulative disadvantage that disproportionately affect children from marginalised and under-served communities. At the same time, realising this potential requires sustained attention to the quality of classroom processes, the professional support available to teachers, and the alignment between curriculum, pedagogy, and assessment systems. As emphasised in contemporary scholarship, improvements in learning outcomes depend not only on policy intent but also on the depth of instructional change within classrooms (Darling-Hammond *et al.* 2020).

The study also identifies several priority areas for future research that are critical for strengthening both policy design and implementation. First, there is a need for fine-grained, classroom-based research to examine how FLN policies are enacted in practice across diverse educational settings. Such work can illuminate the micro-level processes through which teachers interpret policy directives and adapt them to local conditions, thereby shaping learning outcomes (Pritchett & Beatty, 2015). Second, longitudinal research is essential to assess the sustained impact of early FLN interventions on later academic achievement, skill development, and socio-emotional well-being. Insights from scholars such as James Heckman suggest that early investments yield long-term benefits, but context-specific evidence remains limited (Heckman, 2006). Third, further inquiry is needed into the role of teacher motivation, professional identity, and organisational culture in influencing the uptake and effectiveness of FLN reforms. While existing policies emphasise teacher capacity, less attention has been given to the motivational dimensions that shape instructional practices and responsiveness to reform initiatives (Kraft *et al.* 2018). Fourth, comparative analyses across states and regions within India can provide valuable insights into how variations in governance, resource allocation, and institutional capacity influence FLN outcomes. Such analyses can inform more differentiated and context-sensitive policy strategies (Tilak & Kumar, 2022).

Finally, the increasing integration of digital technologies into education systems raises important questions regarding their role in supporting foundational learning. While technology offers potential avenues for enhancing access

to instructional resources and professional development, its effectiveness depends on equitable access and meaningful pedagogical integration. As noted by Neil Selwyn, uncritical reliance on digital solutions risks reinforcing existing inequalities unless supported by inclusive design and implementation (Selwyn, 2016).

In conclusion, the advancement of FLN in India requires a sustained and integrated approach that bridges the gap between policy aspiration and classroom reality. Ensuring that all children acquire foundational literacy and numeracy skills demands not only coherent policy frameworks but also continuous investment in institutional capacity, teacher support, and equity-oriented strategies. Future research, grounded in contextual realities and interdisciplinary perspectives, will play a crucial role in informing this process and in guiding the evolution of more inclusive and effective foundational learning systems.

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