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Primary Teachers' Role in Achieving Foundational Literacy and Numeracy in India: A Review of Policies and Classroom Practices

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ABSTRACT

Foundational Literacy and Numeracy (FLN) forms the cornerstone of children's educational development and lifelong learning. Recognising its significance, the Government of India introduced the National Education Policy (NEP) 2020, the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), and the National Curriculum Framework for the Foundational Stage (NCF-FS, 2022) to ensure that every child achieves age-appropriate literacy and numeracy by the end of Grade 3. Primary teachers are central to the successful implementation of these initiatives because they transform policy into classroom practice through effective pedagogy, assessment, and learner support. This review synthesises national policy documents and scholarly literature to examine the role of primary teachers in promoting FLN. It discusses teacher competencies, classroom pedagogies, assessment practices, inclusive education, multilingual instruction, and professional development while highlighting major implementation challenges. The review concludes that strengthening teacher preparation, continuous professional development, school leadership, and community participation is essential for improving foundational learning outcomes and achieving equitable, quality primary education in India.

KEYWORDS

Foundational Literacy, Primary Teachers, Foundational Numeracy, NIPUN Bharat, NEP 2020.

INTRODUCTION

Education is universally recognised as the foundation of human development, economic progress, and social transformation. The first years of schooling are particularly significant because they establish the

cognitive, linguistic, emotional, and social foundations upon which future learning depends. Children who develop strong literacy and numeracy skills during these formative years are more likely to experience academic success, complete their education, and participate productively in society. Conversely, children who fail to acquire these competencies often face persistent learning difficulties that extend throughout their educational journey.

Foundational Literacy and Numeracy (FLN) refers to the ability of children to read with understanding, write effectively, and perform basic mathematical operations by the end of Grade 3. International organisations such as UNESCO and the World Bank have consistently identified foundational learning as a prerequisite for achieving Sustainable Development Goal 4 (SDG 4), which seeks to ensure inclusive and equitable quality education for all. Their reports indicate that millions of children worldwide attend school but are unable to achieve minimum proficiency in reading and mathematics, emphasising the urgent need for systemic reforms focused on learning outcomes.

In India, the challenge of low foundational learning levels has been documented by national assessments such as the Annual Status of Education Report (ASER). These assessments have shown that many children in the primary grades struggle with basic reading comprehension and arithmetic skills. Recognising the seriousness of this issue, the National Education Policy (NEP) 2020 declared universal Foundational Literacy and Numeracy as the highest priority of school education and proposed that every child should attain these competencies by the end of Grade 3.

To implement this vision, the Ministry of Education launched the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) in 2021. The mission provides a structured framework for curriculum reform, competency-based assessment, teacher capacity building, school readiness programmes, parental engagement, and continuous monitoring. Complementing these initiatives, the National Curriculum Framework for the Foundational Stage (NCF-FS, 2022) recommends developmentally appropriate, play-based, activity-oriented, multilingual, and child-centred pedagogical practices.

Among all stakeholders, primary teachers occupy the most critical position in achieving the objectives of FLN. Teachers directly influence children's learning experiences through lesson planning, classroom management, instructional strategies, formative assessment, and learner support. Their professional knowledge, pedagogical competence, and commitment determine the effectiveness with which policy reforms are translated into meaningful classroom practices.

Research consistently identifies teacher quality as one of the strongest school-related factors affecting student achievement. Effective teachers establish literacy-rich classrooms, encourage mathematical thinking, provide constructive feedback, differentiate instruction according to children's needs, and collaborate with parents to reinforce learning beyond school. At the same time, teachers often encounter challenges such as overcrowded classrooms, multilingual settings, inadequate teaching-learning materials, administrative workload, and limited opportunities for sustained professional development. These factors influence the successful implementation of FLN programmes.

This review article critically examines the role of primary teachers in achieving Foundational Literacy and Numeracy in India. It synthesises evidence from policy documents, empirical studies, and theoretical literature to analyse teacher competencies, classroom practices, implementation challenges, and policy implications. The paper aims to contribute to the ongoing discourse on strengthening teacher education and improving foundational learning outcomes in Indian primary schools.

Objectives of The Review

The review has the following objectives:

1. To examine the concept and significance of Foundational Literacy and Numeracy.
2. To analyse major national policy initiatives supporting FLN.
3. To review the role of primary teachers in implementing FLN.
4. To identify effective classroom pedagogical practices that improve literacy and numeracy.

Methodology of The Review

This review is based on an analysis of published literature, policy documents, books, journal articles, and reports related to Foundational Literacy and Numeracy. Sources were identified through academic databases, official Government publications, and reports from organisations such as UNESCO, the World Bank, NCERT, and the Ministry of Education. Particular emphasis was placed on literature published after the introduction of the National Education Policy (2020), while selected foundational studies were included to provide theoretical context. The reviewed literature was analysed thematically under key areas including policy initiatives, teacher competencies, classroom pedagogy, assessment practices, professional development, implementation challenges, and recommendations.

Critical Review of Literature

Foundational Literacy and Numeracy (FLN) has emerged as a major priority in educational research because children's acquisition of basic reading, writing, and numeracy skills during the early years strongly influences later academic achievement and lifelong learning. Research from international organisations, national policy bodies, and educational scholars consistently demonstrates that effective teachers are the most important school-based factor in improving foundational learning outcomes.

UNESCO (2021) emphasises that literacy and numeracy are essential for achieving Sustainable Development Goal 4 (SDG 4), which aims to ensure inclusive and equitable quality education for all. The report argues that foundational learning is a prerequisite for reducing educational inequalities and promoting sustainable development.

The World Bank (2022) introduced the concept of Learning Poverty, defined as the inability of a child to read and understand a simple text by the age of ten. According to the report, teacher quality, effective classroom instruction, and supportive school environments are critical for reducing learning poverty globally.

Hattie (2009), in *Visible Learning*, analysed more than 800 meta-analyses and concluded that teacher effectiveness has one of the highest impacts on student achievement. Effective feedback, clear learning intentions, formative assessment, and teacher expectations significantly improve learning outcomes.

Darling-Hammond (2017) highlighted that sustained professional development enables teachers to improve instructional practices and respond effectively to diverse learner needs. One-time training programmes are generally less effective than continuous mentoring, collaborative learning, and reflective practice.

Snow, Burns, and Griffin (1998) demonstrated that early literacy develops through rich oral language experiences, systematic instruction, phonemic awareness, vocabulary development, and reading comprehension activities. Their findings continue to inform foundational literacy programmes worldwide.

Bruner (1966) argued that children learn most effectively through discovery and guided exploration, while Vygotsky (1978) emphasised the role of social interaction and teacher scaffolding in cognitive development. Piaget (1972) similarly proposed that children actively construct knowledge through meaningful experiences. These theories underpin the child-centred and activity-based approaches promoted in India's FLN framework.

In the Indian context, the National Education Policy (2020) identifies universal FLN as the highest priority for school education. The policy recognises that failure to acquire foundational competencies by Grade 3 affects all subsequent learning.

The NIPUN Bharat Mission (2021) operationalises this vision through competency-based learning outcomes, teacher training, classroom assessment, school readiness, and community participation. Likewise, the National Curriculum Framework for the Foundational Stage (2022) recommends play-based, experiential, multilingual, and activity-oriented learning.

Evidence from successive Annual Status of Education Report (ASER) surveys indicates that many children in primary schools continue to face challenges in reading fluently and solving basic arithmetic problems. These findings reinforce the need to strengthen teacher preparation and classroom practices.

Overall, existing literature consistently identifies teacher competence, effective pedagogy, continuous professional development, and supportive educational policies as essential determinants of successful FLN implementation.

Research Gap

Although considerable literature exists on Foundational Literacy and Numeracy, several important gaps remain.

Most existing studies focus on either policy implementation or student learning outcomes rather than examining the comprehensive role of primary teachers in translating policy into classroom practice. There is limited synthesis of evidence connecting teacher competencies, pedagogical practices, assessment strategies, and professional development within a single review.

Furthermore, relatively few review studies analyse the combined implications of NEP 2020, NIPUN Bharat, and NCF-FS (2022) for primary teachers. Published research from many Indian states, including Odisha, also remains limited.

The present review addresses these gaps by critically examining the role of primary teachers in achieving FLN while integrating policy analysis, theoretical perspectives, and empirical evidence.

Theoretical Framework

This review is informed by four complementary educational theories.

Constructivism (Jean Piaget)

Piaget proposed that children actively construct knowledge through interaction with their environment. Learning occurs when children explore, manipulate materials, and solve problems independently. This theory supports activity-based learning in FLN classrooms.

Social Constructivism (Lev Vygotsky)

Vygotsky emphasised the Zone of Proximal Development (ZPD) and the importance of teacher guidance. Teachers scaffold children's learning by providing appropriate support until learners become independent.

Discovery Learning (Jerome Bruner)

Bruner advocated learning through exploration and discovery. Teachers encourage children to investigate, ask questions, and develop concepts through meaningful experiences.

Competency-Based Learning

Competency-based learning focuses on mastery of clearly defined learning outcomes rather than completion of prescribed content. This approach aligns closely with the objectives of NEP 2020 and NIPUN Bharat.

Together, these theories provide a strong foundation for understanding effective teaching practices that promote Foundational Literacy and Numeracy.

National Policy Framework

National Education Policy (NEP) 2020

The National Education Policy (2020) recognises universal Foundational Literacy and Numeracy as an urgent national priority.

Major recommendations include:

- Universal FLN by Grade 3.
- Competency-based education.
- Child-centred pedagogy.
- Mother tongue or home language as the medium of instruction in the early grades, where feasible.
- Continuous professional development of teachers.
- Reduction of rote learning.
- Holistic assessment.

The policy positions teachers as facilitators who create engaging, inclusive, and meaningful learning experiences.

NIPUN Bharat Mission

Launched in 2021, the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) provides a comprehensive framework for achieving FLN.

Key components include:

- Teacher capacity building.
- School readiness programmes.
- Competency-based curriculum.
- Continuous assessment.
- Teaching-learning materials.
- Community participation.
- Monitoring and evaluation.

The mission recognises that sustained teacher support is essential for achieving foundational learning outcomes.

National Curriculum Framework for Foundational Stage (NCF-FS 2022)

The NCF-FS provides curricular guidance for children aged 3–8 years.

It recommends:

- Play-based learning.
- Storytelling.
- Activity-based instruction.
- Multilingual classrooms.
- Experiential learning.
- Holistic assessment.
- Developmentally appropriate pedagogy.

Teachers are expected to facilitate exploration, creativity, collaboration, and joyful learning rather than relying primarily on lecture-based instruction.

Table 1: National FLN Policy Initiatives

Initiative	Year	Major Focus
National Education Policy	2020	Universal Foundational Literacy and Numeracy
NIPUN Bharat Mission	2021	Reading with understanding and numeracy by Grade 3
NCF-FS	2022	Play-based, competency-based curriculum
Samagra Shiksha	Ongoing	Academic support and school improvement
NISHTHA	Ongoing	Teacher professional development

Role of Primary Teachers in Achieving Foundational Literacy and Numeracy

Primary teachers are the cornerstone of India's Foundational Literacy and Numeracy (FLN) mission. While national policies establish the vision and framework for improving foundational learning, it is teachers who translate these policies into effective classroom practice. Their professional competence, pedagogical knowledge, and commitment directly influence children's acquisition of literacy and numeracy skills during the foundational stage.

Teachers are expected to create learning environments that are safe, inclusive, stimulating, and responsive to children's developmental needs. Beyond teaching academic content, they facilitate children's cognitive, social, emotional, and language development through meaningful classroom interactions.

Teacher as a Facilitator of Learning

Modern educational philosophy views teachers as facilitators rather than mere transmitters of knowledge. In FLN classrooms, teachers encourage exploration, questioning, discussion, collaboration, and independent thinking. They provide opportunities for children to learn through experience and gradually assume responsibility for their own learning.

By creating learner-centred classrooms, teachers promote curiosity, confidence, creativity, and critical thinking qualities essential for lifelong learning.

Developing Foundational Literacy

Primary teachers promote literacy through systematic instruction in listening, speaking, reading, and writing.

Effective classroom practices include:

- Read-aloud sessions.
- Shared reading.
- Guided reading.
- Storytelling.
- Picture reading.
- Vocabulary enrichment.
- Creative writing.
- Oral language activities.

A print-rich classroom environment containing storybooks, alphabet charts, labels, posters, and children's written work encourages regular interaction with language and strengthens reading habits.

Teachers also identify children experiencing reading difficulties and provide appropriate remedial support through differentiated instruction.

Developing Foundational Numeracy

Foundational numeracy extends beyond performing arithmetic calculations. It involves helping children understand numbers, patterns, measurement, shapes, and mathematical reasoning.

Teachers develop numeracy through:

- Counting activities.
- Manipulatives.
- Games and puzzles.
- Measurement exercises.
- Pattern recognition.
- Real-life mathematical situations.
- Problem-solving activities.

Activity-based mathematics enables children to understand concepts rather than memorise procedures.

Formative Assessment

Assessment in FLN should support learning rather than merely evaluate achievement.

Primary teachers use:

- Classroom observation.
- Oral questioning.
- Competency checklists.
- Anecdotal records.
- Worksheets.
- Student portfolios.
- Performance-based tasks.

Regular formative assessment helps identify learning gaps early and enables timely intervention before difficulties become more serious.

Inclusive Education

Every classroom includes learners with different backgrounds, abilities, languages, and learning styles.

Teachers therefore should:

- Differentiate instruction.
- Encourage equal participation.

- Support children with learning difficulties.
- Respect cultural and linguistic diversity.
- Promote gender equity.
- Create a positive classroom climate.

Inclusive teaching ensures that every child has equitable opportunities to achieve foundational competencies.

Multilingual Teaching

India's multilingual classrooms require flexible teaching approaches.

Teachers should:

- Build upon children's home language.
- Introduce additional languages gradually.
- Encourage oral communication.
- Use bilingual teaching-learning materials where appropriate.
- Respect linguistic diversity.

Research indicates that children understand foundational concepts more effectively when instruction connects with their home language during the early years.

Parental and Community Engagement

Parents significantly influence children's literacy and numeracy development.

Primary teachers strengthen home-school partnerships by:

- Organising parent meetings.
- Sharing children's progress.
- Encouraging home reading.
- Suggesting simple numeracy activities.
- Promoting regular attendance.

Community participation further supports children's learning by creating positive educational environments beyond school.

Continuous Professional Development

Teacher learning should continue throughout their careers.

Professional development opportunities include:

- NISHTHA programmes.
- SCERT training.
- DIET workshops.
- School-based mentoring.
- Peer-learning communities.
- Classroom observation.
- Reflective practice.
- Action research.

Continuous professional development enables teachers to adopt innovative pedagogical practices and respond effectively to curriculum reforms.

Effective Classroom Pedagogical Practices

Research consistently identifies several instructional strategies that improve Foundational Literacy and Numeracy.

Play-Based Learning

Play encourages imagination, language development, collaboration, and problem-solving. Games, songs, role play, storytelling, and learning corners create joyful learning experiences.

Activity-Based Learning

Children learn more effectively when actively involved in meaningful tasks such as sorting objects, measuring materials, drawing, discussing, and solving real-life problems.

Storytelling

Stories develop vocabulary, listening skills, comprehension, creativity, and communication. Daily storytelling sessions significantly strengthen literacy development.

Print-Rich Classrooms

Displaying books, charts, word walls, children's writing, labels, and visual aids creates an environment that encourages reading and language development.

Experiential Learning

Teachers connect classroom learning with children's daily experiences, making literacy and numeracy meaningful and relevant.

Competency-Based Assessment

Assessment focuses on children's demonstrated competencies rather than completion of prescribed content. Teachers provide regular feedback and remedial support.

Table 2: Primary Teachers' Responsibilities and Expected FLN Outcomes

Teacher Responsibility	Expected Learning Outcome
Storytelling and shared reading	Improved reading fluency and comprehension
Activity-based mathematics	Better conceptual understanding
Formative assessment	Early identification of learning gaps
Play-based learning	Higher engagement and motivation
Inclusive teaching	Equitable participation of all learners
Parent engagement	Improved home support for learning
Continuous professional development	Enhanced instructional effectiveness

Professional Competencies Required for FLN Teachers

Effective implementation of FLN requires teachers to possess multiple professional competencies:

- Knowledge of child development.
- Understanding of literacy and numeracy pedagogy.
- Competency-based lesson planning.
- Assessment literacy.
- Inclusive education skills.
- Classroom management.
- Communication skills.
- Digital literacy.
- Reflective teaching practices.
- Collaboration with parents and communities.

These competencies enable teachers to respond effectively to children's diverse learning needs.

Challenges in Implementing Foundational Literacy and Numeracy

Although India has introduced comprehensive policy initiatives to strengthen Foundational Literacy and Numeracy (FLN), effective implementation continues to face several challenges. These challenges exist at classroom, school, teacher, and system levels and require coordinated interventions.

Teacher-Related Challenges

Many primary teachers continue to face limited opportunities for sustained professional development. While orientation programmes under NIPUN Bharat and NISHTHA have expanded teacher training, follow-up mentoring and classroom-based support remain uneven across states. Teachers also experience heavy administrative responsibilities, reducing the time available for lesson planning, assessment, and remedial instruction.

Classroom Challenges

Large class sizes, multigrade teaching, and diverse learner abilities make it difficult to provide individual attention. In many schools, shortages of age-appropriate teaching-learning materials, inadequate infrastructure, and limited access to digital resources further constrain effective implementation of FLN.

Learner-Related Challenges

Children enter school with varying levels of school readiness, language proficiency, and socio-economic backgrounds. Learning loss resulting from school closures and irregular attendance has also widened achievement gaps in some contexts. Teachers therefore need flexible instructional strategies to address diverse learning needs.

Systemic Challenges

Variations in educational resources, teacher deployment, monitoring mechanisms, and institutional support across states influence the implementation of FLN initiatives. Sustained coordination among Governments, teacher education institutions, school leaders, and communities is required to address these systemic issues.

Discussion

The review demonstrates that Foundational Literacy and Numeracy is central to improving the quality of primary education in India. National initiatives such as NEP 2020, NIPUN Bharat, and NCF-FS (2022) have established a coherent policy framework that recognises the importance of early learning. However, successful implementation depends largely on the professional competence and sustained support of primary teachers.

Evidence from national and international literature consistently indicates that child-centred pedagogy, play-based learning, multilingual instruction, formative assessment, and continuous professional development improve literacy and numeracy outcomes. At the same time, challenges related to teacher preparation, classroom conditions, and institutional support continue to influence implementation.

The review highlights that investment in teacher capacity building is one of the most effective strategies for achieving universal FLN. Teacher education institutions, SCERTs, DIETs, BIETs, ETEIs, and school leadership all play significant roles in supporting teachers and strengthening classroom practices.

CONCLUSION

Foundational Literacy and Numeracy is the cornerstone of quality education and lifelong learning. The Government of India's initiatives through the National Education Policy 2020, NIPUN Bharat Mission, and National Curriculum Framework for the Foundational Stage have created a strong policy environment for improving early learning. However, the successful achievement of these goals depends primarily on the competence, commitment, and continuous professional development of primary teachers.

Teachers play a transformative role in fostering children's literacy, numeracy, critical thinking, creativity, and confidence through child-centred and inclusive pedagogical practices. Strengthening teacher education, improving classroom resources, promoting evidence-based teaching strategies, and ensuring sustained academic support will be essential for achieving universal FLN and improving educational quality in India.

Recommendations

The following recommendations emerge from the review:

- Integrate FLN pedagogy comprehensively into pre-service teacher education programmes.
- Strengthen continuous professional development through mentoring, coaching, and professional learning communities.
- Reduce administrative workload to allow teachers greater instructional focus.
- Ensure adequate availability of age-appropriate teaching-learning materials.
- Promote multilingual and inclusive pedagogical approaches.
- Encourage regular formative assessment and competency-based evaluation.
- Strengthen partnerships among schools, parents, and communities.

- Improve monitoring systems by focusing on classroom support and learning outcomes rather than administrative compliance.
- Encourage classroom-based action research by primary teachers.
- Strengthen collaboration among NCERT, SCERTs, DIETs, BIETs, and ETEIs for sustained academic support.

Future Research Directions

Future studies may:

- Examine the long-term impact of FLN interventions on student achievement.
- Investigate teachers' professional development needs across different states.
- Evaluate the effectiveness of multilingual pedagogical approaches.
- Study the role of technology in improving foundational learning.
- Explore school leadership practices that support successful FLN implementation.

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