Learning Difficulties in Reading, Writing, And Mathematics Among Primary School Children with Learning Problems in Assam and Manipur

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ABSTRACT

Inclusive education remains a central priority in India's educational reform agenda, particularly in light of the Right to Education Act (2009) and Sustainable Development Goal 4, which emphasize equitable and quality education for all. Despite policy commitments, many primary school children continue to experience persistent learning difficulties, particularly in foundational academic domains such as reading, writing, and mathematics. The present study investigates the nature and extent of learning difficulties among primary school children identified with learning problems in Assam and Manipur. A quantitative descriptive research design was adopted. Eighty-four students from Classes I to V were assessed using a researcher-developed tool aligned with NCERT textbooks and grade-level learning outcomes. A three-point scoring system was used to categorize responses: unable to answer, able to answer with support, and answered appropriately. Descriptive statistical analysis was employed to identify grade-wise and gender-wise trends. The findings indicate that learning difficulties increase with grade progression, with Class V students demonstrating the highest difficulty in reading (50.65%) and writing (49.67%), while mathematics difficulty peaked in Classes IV (50.81%) and V (50.23%). Girls demonstrated slightly higher difficulty levels across domains compared to boys. The study highlights the urgent need for early identification, structured remediation, and inclusive pedagogical practices at the primary level.

Keywords: learning difficulties, inclusive education, primary education, reading difficulty, writing difficulty, mathematics difficulty

INTRODUCTION

The discourse on inclusive education in India has undergone significant transformation over the past two decades. With the enactment of the Right of Children to Free and Compulsory Education Act (2009) and India's commitment to Sustainable Development Goal 4 (SDG 4), the educational system has been mandated to ensure equitable access and quality learning opportunities for all children. However, inclusion extends beyond enrolment; it requires ensuring meaningful participation and academic success for diverse learners.

The National Focus Group on Education of Children with Special Needs (NCERT, 2006) emphasized the need to dismantle systemic barriers embedded within curriculum design, pedagogy, assessment, and institutional practices. Barriers to learning are not confined to physical accessibility but include structural and instructional constraints that disproportionately affect children with learning problems.

Children with learning problems often exhibit persistent difficulties in core academic skills such as reading, writing, and mathematics, despite having no sensory, intellectual, or physical impairments. These difficulties may manifest as slow decoding, poor comprehension, weak written expression, difficulty in number operations, or problems in mathematical reasoning. If unaddressed, such challenges can accumulate over time, leading to widening achievement gaps and increased risk of school disengagement.

While national-level assessments highlight concerns about foundational learning, there is limited micro-level empirical data from North-Eastern states such as Assam and Manipur regarding children with learning problems. Building upon earlier exploratory work conducted in Nagaland, the present study aims to generate evidence based insights into learning difficulties among primary school children in Assam and Manipur.

REVIEW OF LITERATURE AND CONCEPTUAL BACKGROUND

Understanding Learning Difficulties in Primary Education

Learning difficulties in primary education are widely recognized as persistent challenges in acquiring foundational academic skills despite adequate intelligence and conventional instruction (American Psychiatric Association [APA], 2013). These difficulties are often domain-specific, manifesting prominently in reading (dyslexia), writing (dysgraphia), and mathematics (dyscalculia). However, in classroom contexts—particularly in low-resource settings—children may not carry formal diagnostic labels but still demonstrate observable learning problems that significantly impede academic progress.

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; APA, 2013) defines Specific Learning Disorder as difficulties in learning and using academic skills that persist for at least six months despite targeted interventions. These difficulties include inaccurate or slow reading, poor written expression, and problems mastering number sense or mathematical reasoning. While clinical frameworks provide diagnostic clarity, educational research emphasizes classroom-based identification and instructional responsiveness (Fletcher et al., 2018).

In the Indian context, many children with learning problems remain unidentified due to limited screening mechanisms, large classroom sizes, and insufficient teacher training in recognizing early warning signs (Singal, 2019). Consequently, learning difficulties are often misinterpreted as lack of motivation or poor academic effort rather than as instructional mismatches or developmental challenges.

Theoretical Foundations of Learning Difficulties

The conceptual understanding of learning difficulties is grounded in multiple theoretical perspectives, including cognitive theory, constructivism, sociocultural theory, and ecological systems theory.

Cognitive and Information Processing Perspectives: Cognitive theories suggest that learning difficulties arise from deficits in underlying cognitive processes such as working memory, processing speed, phonological awareness, and executive functioning (Swanson & Siegel, 2001). In reading, phonological processing deficits hinder decoding and word recognition, leading to comprehension challenges (Snowling, 2013). In mathematics, working memory limitations and difficulties in number sense affect arithmetic performance (Geary, 2011).

Information processing models emphasize that effective learning requires accurate encoding, storage, and retrieval of information. When these processes are compromised, children struggle to integrate new knowledge with prior understanding. Persistent failure in early grades may compound into broader academic underachievement.

Constructivist Perspectives: Constructivist theorists argue that learning is an active process in which learners construct meaning through interaction with content and environment (Piaget, 1970). From this perspective, learning difficulties may arise when instructional methods do not align with children's developmental stages or prior experiences.

Vygotsky's (1978) concept of the Zone of Proximal Development (ZPD) is particularly relevant. Children learn most effectively when guided within their zone of potential development through scaffolding.

High levels of "answering with support" observed in many studies suggest that children may operate within their ZPD but lack adequate scaffolding to transition toward independent mastery.

Sociocultural and Ecological Perspectives: Sociocultural theory emphasises that learning occurs within social and cultural contexts (Vygotsky, 1978). Language exposure, home literacy practices, socio-economic status, and school climate significantly influence foundational learning. Bronfenbrenner's (1979) ecological systems theory further highlights the interplay between individual, family, school, and societal systems.

In regions such as Assam and Manipur, linguistic diversity, socio-economic disparities, and resource limitations may contribute to learning challenges. Research suggests that children learning in a second language medium often experience initial reading and writing difficulties (Cummins, 2000).

Reading Difficulties: Foundational Literacy Concerns

Reading is a complex cognitive activity involving decoding, fluency, vocabulary, and comprehension (National Reading Panel, 2000). Early reading difficulties are strong predictors of later academic struggles (Stanovich, 1986). The "Matthew Effect" in reading describes how early disadvantages accumulate over time, widening achievement gaps.

Phonological awareness deficits are consistently identified as primary contributors to reading difficulty (Snowling, 2013). Children who struggle to map sounds to letters experience slow decoding, which impedes fluency and comprehension. Additionally, limited vocabulary exposure and inadequate reading practice further hinder comprehension development (Perfetti & Stafura, 2014).

In India, national surveys such as ASER (Annual Status of Education Report) repeatedly highlight concerns regarding foundational reading skills in primary grades. Although not all children with low reading proficiency have specific learning disorders, many exhibit classroom-level learning difficulties requiring targeted support.

Gender differences in reading achievement have been reported in international literature, often favouring girls (OECD, 2019). However, contextual factors such as language exposure, classroom participation, and sociocultural expectations may influence these patterns differently across regions.

Writing Difficulties: Expression and Mechanical Challenges

Writing is often considered more cognitively demanding than reading because it requires idea generation, organization, transcription, and revision (Graham & Harris, 2000). Writing difficulties may involve:

- Poor spelling and grammar
- Weak sentence construction
- Limited vocabulary
- Poor handwriting (dysgraphia-related challenges)

Berninger and Winn (2006) argue that writing integrates multiple neural systems involving language processing and motor coordination. Deficits in any component can compromise overall written expression.

In primary education, writing development progresses from copying and simple sentence formation to paragraph construction and narrative development. As curricular expectations increase in upper grades, children with weak foundational skills experience greater difficulty (Graham et al., 2012).

Research also indicates that writing proficiency is closely linked to reading development; poor readers often struggle with writing due to limited vocabulary and comprehension (Shanahan, 2016). Therefore, reading and writing difficulties frequently co-occur.

Mathematics Difficulties: Conceptual and Procedural Gaps

Mathematics learning involves both procedural fluency and conceptual understanding (Kilpatrick et al., 2001). Early number sense—including magnitude comparison, counting, and sequencing—is foundational for later arithmetic and problem-solving (Geary, 2011).

Children with mathematical learning difficulties often struggle with:

- Understanding number relationships
- Memorising arithmetic facts
- Multi-step problem solving
- Translating word problems into equations

Dyscalculia, a specific mathematics-related learning disorder, involves deficits in number processing and calculation (Butterworth et al., 2011). However, classroom-level mathematics difficulties may also arise from instructional factors, language barriers, and insufficient conceptual grounding.

Research shows that mathematics anxiety can further impair performance, particularly in upper grades (Ashcraft & Krause, 2007). As mathematical tasks become abstract, students with weak foundational understanding experience increasing difficulty.

Inclusive Education and Response to Intervention (RTI)

Inclusive education frameworks advocate systemic reforms to accommodate diverse learners. The Response to Intervention (RTI) model proposes a tiered support system involving universal screening, targeted small-group instruction, and intensive intervention (Fuchs & Fuchs, 2006). Early intervention has been shown to significantly reduce long-term academic failure.

In India, inclusive education policies under Sarva Shiksha Abhiyan and Samagra Shiksha emphasise teacher capacity building, curricular flexibility, and community involvement (MHRD, 2018). However, implementation gaps remain, particularly in early screening and continuous monitoring.

Gender and Learning Difficulties

Research on gender differences in academic achievement presents mixed findings. While international assessments often report girls outperforming boys in reading (OECD, 2019), contextual studies indicate variability depending on socio-cultural and educational conditions. Mathematics performance patterns also vary, with differences narrowing in supportive educational environments (Else-Quest et al., 2010).

Observed gender-based difficulty patterns must therefore be interpreted cautiously, considering instructional quality, classroom climate, and socio-cultural expectations.

Conceptual Framework of the Present Study

The present study is conceptually grounded in:

Cognitive Processing Theory – recognizing the role of underlying cognitive skills in literacy and numeracy development.

Constructivist Learning Theory – emphasizing scaffolding and developmental readiness.

Inclusive Education Frameworks – advocating equitable access and differentiated instruction.

Ecological Systems Perspective – acknowledging contextual influences on learning.

Learning difficulty is operationally defined in this study as observable challenges in reading, writing, and mathematics tasks aligned with grade-level expectations, categorized through levels of independence and support dependency.

The conceptual assumption guiding the study is that:

- Foundational skill deficits in early grades may escalate if not addressed.

- Increased curriculum complexity may amplify existing learning gaps.
- Support dependency patterns may indicate instructional misalignment rather than inherent inability.

Objectives of the Study

The study was guided by the following objectives:

i. To examine the extent of reading difficulties among primary school children with learning problems.
ii. To analyze writing difficulties across Classes I–V.
iii. To investigate mathematical learning difficulties.
iv. To compare grade-wise patterns of difficulty.
v. To analyses gender-based differences in learning difficulties.

RESEARCH DESIGN AND METHODOLOGY

Research Design

A quantitative descriptive research design was adopted to systematically analyse the extent and patterns of learning difficulties across three academic domains.

Sample

The target population comprised primary school children (Classes I to V) identified as having learning problems in the domains of reading, writing, and mathematics.

For the purpose of this study, children with learning problems were operationally defined as students who exhibited persistent academic difficulties in classroom tasks related to literacy and numeracy, as observed by teachers and reflected in academic records, but who did not have identified sensory, intellectual, or physical disabilities.

Tool Development

A structured assessment tool was developed by the researcher based on:

- NCERT textbooks
- Grade-specific learning outcomes
- Foundational literacy and numeracy indicators
- The tool consisted of tasks covering:
- Reading comprehension and oral reading
- Writing comprehension and copying tasks
- Mathematical problem-solving and number sequence tasks

Scoring Procedure

A three-point scoring scale was adopted:

0 – Unable to answer

1 – Able to answer with clue/support

2 – Answered appropriately

This scale allowed categorization of performance based on independence and support dependency.

Data Analysis

Data were entered into Microsoft Excel and analyzed using descriptive statistics, including:

- Percentage distribution
- Grade-wise difficulty scores
- Severity categorization
- Gender-based comparison

Results and Analysis *Reading Difficulties*

The percentage difficulty scores revealed a clear pattern of increasing difficulty with grade progression.

- Class I: 25.79%
- Class II: 30.31%
- Class III: 43.26%
- Class IV: 34.56%
- Class V: 50.65%

Class V exhibited the highest reading difficulty. While early grade students demonstrated relatively stronger decoding ability, upper-grade students struggled with comprehension and fluency.

Severity analysis showed that:

- Class V had the highest percentage of students requiring support (68.43%).
- Class III and IV showed notable levels of inability (around 19%).
- Girls (40.10%) exhibited slightly higher reading difficulty compared to boys (35.19%).

Oral reading tasks revealed that pronunciation, intonation, and fluency declined in higher grades, indicating gaps in sustained reading development.

Writing Difficulties

Writing difficulty followed a similar upward trajectory.

- Class I: 23.86%
- Class II: 30.30%
- Class III: 49.66%
- Class IV: 41.91%
- Class V: 49.67%

Class III and V showed particularly high difficulty levels.

In copying tasks:

- Class IV performed best in accurate copying.
- Class III showed maximum errors (69.30% committing 1–3 errors).
- Class V showed significant dependence on support.

Gender comparison revealed slightly higher writing difficulty among girls (38.56%) than boys (37.65%).

Mathematics Difficulties

Mathematics demonstrated a mixed yet concerning pattern.

- Class I: 33.29%
- Class II: 43.10%

- Class III: 38.33%
- Class IV: 50.81%
- Class V: 50.23%

Difficulty peaked in Classes IV and V.

The proportion of students unable to answer independently increased steadily from Class III to V. Conceptual gaps appeared more pronounced in higher classes. In the number-sequencing task (Class I), 66.67% performed appropriately, indicating stronger early number recognition skills but weaker higher-order mathematical reasoning in later grades. Girls (48.19%) demonstrated slightly higher mathematical difficulty than boys (44.23%).

DISCUSSION

The findings of the present study reveal a consistent and concerning pattern: learning difficulties in reading, writing, and mathematics increase progressively across grade levels, with upper primary students demonstrating significantly higher levels of difficulty than those in early grades. This pattern aligns with the well-documented "cumulative deficit" phenomenon in educational research, where early learning gaps, if unaddressed, intensify as curricular complexity increases (Stanovich, 1986). While Classes I and II exhibited relatively lower difficulty scores in reading and writing, the sharp rise observed in Classes III, IV, and particularly V suggests that foundational skills may not be sufficiently consolidated during early schooling.

In reading, the escalation of difficulty in higher grades may reflect a transition from basic decoding to comprehension-based tasks. Early grade students often focus on letter recognition and simple word reading, whereas upper-grade students are expected to interpret, analyse, and infer meaning from texts. The high percentage of students in Class V requiring support (68.43%) indicates dependency rather than mastery, suggesting that instructional strategies may not adequately support the shift from "learning to read" to "reading to learn." This finding is consistent with research emphasizing that comprehension difficulties often emerge when decoding skills are not accompanied by vocabulary development and fluency (Snowling, 2013; Perfetti & Stafura, 2014).

Writing difficulties demonstrated a similar upward trend, particularly in Classes III and V. Writing, being cognitively demanding, requires coordination of linguistic, cognitive, and motor processes (Graham & Harris, 2000). The decline in independent writing performance in higher grades suggests that as tasks shift from copying to expressive writing and structured responses, students struggle to organize ideas, maintain grammatical accuracy, and construct coherent text. The high proportion of responses falling under the "answer with support" category implies that many students operate within their Zone of Proximal Development (Vygotsky, 1978) but lack sufficient scaffolding to achieve independent proficiency.

Mathematics results revealed a slightly more complex pattern. Although Class I showed relatively lower difficulty levels in basic numeracy tasks, difficulty increased significantly in Classes IV and V. This trend suggests that while early number recognition and sequencing skills may be established, conceptual understanding and multi-step problem-solving become challenging in later grades. The decline in independent performance in upper grades indicates possible gaps in conceptual foundations, particularly in number sense and arithmetic reasoning (Geary, 2011). The mixed pattern across grades further suggests that mathematics difficulties may be influenced not only by cognitive factors but also by instructional approaches and curriculum pacing.

Gender-wise analysis revealed marginally higher difficulty levels among girls across domains. While the differences are not substantial, they warrant cautious interpretation. Existing literature presents mixed evidence regarding gender differences in literacy and numeracy (OECD, 2019; Else-Quest et al., 2010). Contextual factors such as classroom participation, socio-cultural expectations, and confidence levels may influence these outcomes. Therefore, the observed gender variation should be examined further through qualitative inquiry rather than interpreted as inherent disparity.

A particularly significant finding across domains is the high proportion of students performing tasks with support. This pattern suggests that many children possess partial competence but are unable to function independently. From an instructional perspective, this indicates potential inadequacies in scaffolding, differentiation, and formative assessment practices. The results reinforce the importance of early screening, structured remediation, and responsive teaching strategies aligned with inclusive education principles.

Overall, the study underscores that learning difficulties are not static deficits but dynamic outcomes shaped by instructional quality, curricular demands, and support systems. Without systematic early intervention, minor learning gaps in lower grades can transform into substantial academic barriers in upper primary classes. These findings highlight the urgent need for sustained, grade-sensitive, and inclusive pedagogical interventions within primary education systems.

Educational Implications

The findings of the present study carry significant implications for primary education policy, classroom practice, and teacher professional development. The progressive increase in learning difficulties across grade levels indicates the urgent need for early identification and structured intervention mechanisms beginning in Classes I and II. Systematic screening tools aligned with foundational literacy and numeracy benchmarks should be institutionalized to detect emerging learning gaps before they intensify in upper primary grades.

The high proportion of students performing tasks “with support” suggests that many learners operate within a transitional stage of competence. This highlights the importance of scaffolded instruction, differentiated teaching strategies, and continuous formative assessment. Teachers must be equipped to design learning experiences that gradually move students from supported performance toward independent mastery. Structured small-group instruction, peer-assisted learning, and targeted remedial sessions can be integrated within regular classroom practices.

The sharp increase in difficulty in higher grades underscores the need to strengthen conceptual foundations rather than focusing solely on procedural completion of tasks. In reading, greater emphasis should be placed on vocabulary development, comprehension strategies, and fluency-building practices. In writing, guided writing exercises and structured feedback mechanisms are essential. In mathematics, conceptual understanding and number sense must be reinforced through activity-based and experiential approaches.

Gender-related variations, though modest, indicate the importance of creating inclusive and confidence building classroom environments. Teachers should ensure equitable participation, encourage collaborative learning, and address potential socio-cultural factors influencing engagement.

At the systemic level, teacher education programmes should incorporate modules on identifying learning difficulties, implementing inclusive pedagogy, and using data-driven instructional planning. Policymakers must prioritise resource allocation for remedial support and monitoring mechanisms under inclusive education frameworks.

Overall, addressing learning difficulties requires a multi-tiered, preventive, and responsive educational approach that aligns curriculum, pedagogy, and assessment with the diverse needs of primary school learners.

CONCLUSION

The study reveals a concerning trend of increasing learning difficulty across grade levels in reading, writing, and mathematics among children with learning problems in Assam and Manipur. While early grades show relative strength in foundational tasks, upper primary grades exhibit significant decline, particularly in reading comprehension and mathematical reasoning.

The slightly higher difficulty levels observed among girls warrant further investigation but should be interpreted cautiously. The findings underscore the need for early identification, structured academic support, and inclusive pedagogical reform to prevent widening learning gaps. Addressing learning difficulties at the

primary level is not merely an academic necessity but a policy imperative aligned with inclusive education goals and sustainable development commitments

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