Children with Learning Difficulties and Support Systems in Elementary Schools of Nagaland: A Quantitative Investigation

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ABSTRACT

Learning difficulties constitute a major barrier to equitable and quality education, particularly in contexts with limited resources and low levels of teacher preparedness. This study examined the prevalence, characteristics, and severity of learning difficulties among elementary school students in Nagaland, along with the availability of support systems intended to meet their needs. Using a quantitative descriptive survey design, data were collected from 99 schools across nine districts using two validated digital checklists. A total of 659 students (10.74% of 6134 enrolled students) were identified as experiencing learning difficulties across five domains: language, reading, writing, mathematics, and attention. Prevalence was substantially higher in government schools (17.48%) than private schools (6.69%). Skill-specific analyses revealed high rates of mild to moderate difficulties, particularly in reading fluency, writing mechanics, mathematical reasoning, and sustained attention. School support systems were found to be largely inadequate, with significant gaps in infrastructure, teaching-learning materials, assistive devices, curriculum accommodations, and professional support services. The findings underscore the urgent need for comprehensive, multi-tiered interventions at the policy, school, and classroom levels to align with national frameworks such as the Rights of Persons with Disabilities Act (2016) and the National Education Policy (2020).

Keywords: Learning Difficulties, Inclusive Education, Elementary Schools, Support Systems, Nagaland

INTRODUCTION

Inclusive education has emerged as a central tenet of educational reform in India over the past two decades, shaped by the global discourse on the rights of children with disabilities and the moral imperative to ensure equity in schooling. The National Curriculum Framework (2005) and the National Focus Group on the Education of Children with Special Needs (NCERT, 2006) explicitly emphasized the responsibility of schools to recognize learner diversity and remove structural, curricular, and attitudinal barriers. Learning difficulties (LD)—including challenges related to language processing, reading, writing, mathematical reasoning, and attention regulation—represent one of the most pervasive but under-identified categories of educational need.

Nagaland, a linguistically diverse state in Northeast India, reflects unique socio-cultural and infrastructural challenges that influence the experience of children with learning difficulties. According to Census 2011, Nagaland recorded the highest percentage of disabled children in India who had never attended an educational institution. Against this backdrop, the State Coordination Committee (SCC) meeting of 2017 raised concerns regarding the absence of systematic identification procedures for students with LD in elementary schools. The present study emerged as a response to this policy gap and the need for empirical evidence to inform interventions.

Learning difficulties, as defined in this study, refer to problems in reading, writing, mathematics, language comprehension, and attention that are not attributable to sensory, motor, or intellectual impairments. These align with widely used international definitions, such as those offered by the Individuals with Disabilities

Education Act (IDEA, 2004) and the DSM-5 (American Psychiatric Association, 2013), which conceptualize LD as neurodevelopmental in origin, heterogeneous in nature, and often co-occurring across domains.

Early identification of LD is essential for preventing academic decline and promoting psychosocial wellbeing (Lerner & Johns, 2014). When left unaddressed, students may experience cumulative difficulties, disengagement, and reduced long-term educational outcomes (Moll et al., 2014). Effective support systems—ranging from classroom accommodations to specialized resource rooms—are critical components of inclusive schooling (Mitchell, 2015). In India, however, research has consistently highlighted gaps in teacher preparedness, infrastructure, and access to specialist services (Jha, 2002; Singal, 2018).

The present study provides a systematic quantitative analysis of learning difficulties among elementary school students in Nagaland and assesses the availability of school-level support systems. As one of the few large-scale studies of its kind in the Northeast region, it contributes significantly to the empirical base required for decentralized educational planning and teacher capacity building.

Conceptualizing Learning Difficulties

Learning difficulties are typically understood as specific deficits in acquiring foundational academic skills despite adequate instruction, intelligence, and sensory functioning (Lyon et al., 2003). They encompass challenges with phonological processing, reading decoding, spelling, written expression, quantitative reasoning, and attention regulation. While LD is distinct from intellectual disability, it may overlap with attention deficit/hyperactivity disorder (ADHD) and expressive language disorders (Pennington, 2009).

The DSM-5 (APA, 2013) groups reading, writing, and mathematics difficulties under "Specific Learning Disorder" (SLD), characterized by persistent academic struggles for at least six months, significantly below age expectations. International prevalence estimates range from 5% to 15%, depending on assessment tools and socioeconomic context (Snowling & Hulme, 2012).

Learning Difficulties in the Indian Context

Indian classrooms, particularly in government schools, are marked by multilingual environments, teacher shortages, and limited specialized training. These contextual factors influence the early detection and remediation of LD (Karande & Kulkarni, 2005). Studies conducted across Indian states have frequently reported gaps in teachers' understanding of LD and insufficient institutional support (Mukhopadhyay & Mani, 2002; Alur, 2010).

In Northeast India, characterized by tribal languages, limited teacher training institutions, and geographical constraints, the identification of LD presents unique challenges. Despite policy mandates under Samagra Shiksha and the Rights of Persons with Disabilities Act (RPwD Act, 2016), resource rooms, special educators, and diagnostic services remain limited.

Impact of Learning Difficulties on Academic Trajectories

Research indicates that early deficits in phonological awareness and reading fluency strongly predict later academic struggles (Stanovich, 1986). Writing difficulties can impair students' ability to express ideas, affecting performance across curricular areas (Graham & Harris, 2009). Mathematics difficulties may stem from weaknesses in working memory, numerical sense, and procedural knowledge (Geary, 2013). Attention-related challenges further compound these difficulties by affecting task completion, organization, and classroom engagement (Barkley, 2014).

School Support Systems and Inclusive Education

Inclusive education frameworks emphasize multi-tiered systems of support (MTSS), differentiated instruction, universal design for learning (UDL), and specialist interventions (Mitchell, 2015). Effective support systems incorporate:

- Physical accessibility
- Adaptive and assistive technologies
- Individualized education plans (IEPs)
- Curriculum accommodations
- Continuous progress monitoring
- Teacher training and collaboration

However, numerous studies point to systemic barriers in low-resource settings, including absence of assistive devices, insufficient funding, and limited professional development (Singal, 2018; Sharma & Salend, 2016).

Rationale for the Present Study

Despite the growing emphasis on inclusive education, there is limited empirical documentation of learning difficulties in Nagaland. This study fills an important gap by providing systematic data across multiple domains of academic functioning and evaluating school preparedness. The findings have implications for state level educational planning, teacher education reforms, and implementation of NEP 2020.

METHOD

Research Design

A quantitative descriptive survey design was adopted, appropriate for estimating prevalence and describing characteristics of learning difficulties across a large population. This design aligns with similar largescale LD screening studies internationally (e.g., Fletcher et al., 2019).

Participants

The study included 99 elementary schools across nine districts of Nagaland, comprising:

- 57 government schools
- 42 private schools

Across these schools, 6134 students from Classes I to VIII were enrolled. Using the checklist process, 659 students (10.74%) were identified as having learning difficulties.

Students' identities remained confidential; numeric codes were assigned.

Instruments

Proforma A: Checklist for Identifying Children with Learning Difficulties

Developed for class teachers, this instrument assessed learning difficulties across five domains:

1. Language Skills (13 items)
2. Reading Skills (16 items)
3. Writing Skills (20 items)
4. Mathematics Skills (23 items)
5. Attention (11 items)

Each item used a five-point frequency scale: Always, Frequently, Sometimes, Never, Not Noticed.

The tool included open-ended space for additional teacher observations.

Proforma B: Checklist for Identifying Support Systems

Designed for school administrators, this checklist examined five domains:

- Infrastructure
- Teaching–Learning Processes
- Additional Educational Supports
- Inclusivity and Equality
- Moral and Emotional Support

Items assessed availability and suitability of supports such as ramps, signage, learning materials, resource rooms, assistive technology, curriculum accommodations, and professional consultation.

Validity

Both instruments were validated during a two-day workshop with five experts from the field of special education, disability studies, and teacher education. Items were refined based on expert feedback.

Procedure

The Director of School Education, Nagaland issued an official circular instructing schools to participate. Checklists were distributed digitally, and teachers and administrators completed them online.

Additionally, the project team visited Kohima, Mokokchung, and Dimapur to observe school environments and interact with stakeholders. Data were compiled in Microsoft Excel and analysed using SPSS 21.

Data Analysis

Frequency distributions and cross-tabulations were used to describe:

- Prevalence of LD
- Distribution across gender, grade, school type
- Severity levels across domains
- Support system adequacy

Descriptive statistics (percentages, charts, tables) were used throughout.

RESULTS

Prevalence of Learning Difficulties

Across 6134 enrolled students from 99 schools, 659 students (10.74%) were identified as having learning difficulties. Prevalence differed significantly across school types: 17.48% in government schools and 6.69% in private schools. This indicates that government schools serve a disproportionately larger share of students with unmet learning needs.

Gender distribution showed 368 boys (55.84%) and 291 girls (44.16%), suggesting a slightly higher prevalence among boys, consistent with international trends (Lerner & Johns, 2014).

By grade levels:

- 27.77% were from Classes I–III,
- 15.48% from Classes IV–V,
- 56.75% from Classes VI–VIII.

The high proportion in upper primary indicates cumulative academic difficulties that become more visible as curricular expectations increase.

Socioeconomic analysis revealed that only 3% of students with learning difficulties belonged to above average SES families, while 53% were from average SES and 44% from below-average SES backgrounds. This overlap between LD and economic disadvantage is well documented in educational research (Morgan et al., 2016).

Skill-Specific Findings

Language Skills

Of the 659 students:

- 37.78% had mild difficulties,
- 20.49% moderate difficulties,
- 8.65% severe difficulties.

Common challenges included:

- Difficulty using appropriate vocabulary (75.3%),
- Trouble following instructions (78.4%),
- Limited ability to narrate or summarize (73–79%).

Boys showed slightly higher rates of severe difficulty than girls, although both genders displayed substantial mild-to-moderate challenges.

Reading Skills

Reading difficulties were characterized as:

- 38.24% mild,
- 19.58% moderate,
- 6.83% severe.

Observed patterns:

- Slow reading speed (80.1%),
- Problems with punctuation and intonation (83.9%),
- Omissions or additions of letters/words (71.2%),
- Difficulty recognizing sight words (69.2%).

These findings align with the phonological deficit and processing speed theories of reading disability (Snowling & Hulme, 2012).

Writing Skills

Writing difficulties were widely reported:

- 40.52% mild,
- 17.6% moderate,
- 8.04% severe.

The most common issues included:

- Poor grammar and sentence structure (89.5%),
- Ignoring punctuation (84.4%),
- Illegible handwriting and uneven spacing (73%).

These reflect weaknesses in both transcription skills and written expression, consistent with the literature on dysgraphia (Berninger & Richards, 2010).

Mathematics Skills

Mathematics showed the highest rates of moderate-to-severe difficulties:

- 38.24% mild,
- 18.06% moderate,
- 9.86% severe.

Key challenges included:

- Applying formulas (89.3%),
- Difficulty with multiplication tables (86.9%),
- Ignoring place value during operations (80.4%),
- Difficulty understanding shapes, measures, and spatial organization.

These findings reflect deficits in conceptual understanding, procedural knowledge, and working memory (Geary, 2013).

Attention Difficulties

Attention challenges were also present:

- 38.09% mild,
- 11.68% moderate,
- 3.95% severe.

Common behaviours included:

- Difficulty sustaining attention (72.6%),
- High distractibility (64.4%),
- Misplacing materials (59.8%),
- Poor organizational skills (47.5%).

Such profiles align with international descriptions of attentional regulation difficulties common in learning disability populations (Barkley, 2014).

Support Systems Available in Schools Infrastructure

Only about 32% of schools had buildings suitable for accommodating students with learning difficulties. Major gaps included:

- Few accessible ramps (over 69% lacked them),
- Poor signage (81% unsuitable),
- Lack of visual contrast in classrooms (93% inadequate).

While wide entry doors and corridors were present in many schools, internal accessibility and classroom layout often hindered effective movement and engagement.

Teaching–Learning Processes

Teaching–learning support showed critical gaps:

- 65.3% of schools lacked appropriate learning materials for children with LD.
- 77.54% used traditional teaching methods unsuitable for diverse learners.
- Only 19.58% provided resource room teaching.
- Curriculum accommodation was absent in 79.72% of schools.
- Evaluation methods were not adapted in 75.7% of schools.

These findings indicate that teachers lack both materials and training necessary for inclusive pedagogy.

Additional Educational Supports

Availability of specialized support was extremely low:

- Reading assistive tools: 10.94%
- Writing assistive tools: 14.02%
- Mobility or computation aids: 3.1%
- Expert consultation (special educators, psychologists): 3.09%

Such gaps significantly restrict opportunities for tailored interventions.

Moral and Emotional Support

Despite infrastructural limitations, schools showed moderate willingness to provide emotional support:

- 33% fully supportive,
- 32% partially supportive.

Classroom teachers displayed similar patterns, suggesting positive attitude but limited capacity.

DISCUSSION

The findings reveal a substantial proportion of elementary school students in Nagaland experiencing learning difficulties, with mathematics, language, writing, and reading deficits most prominent. The prevalence of nearly 11% aligns with international estimates and underscores the need for systematic screening and intervention.

Interpretation of Skill-Specific Findings

Language and reading difficulties indicate foundational gaps in phonological awareness, comprehension skills, and linguistic exposure—areas often affected by multilingual teaching environments such as those in Nagaland.

Writing difficulties reveal weaknesses in fine motor coordination, orthographic knowledge, and expressive organization. Mathematics challenges reflect deficits consistent with developmental dyscalculia and broader working memory limitations.

Attention difficulties—though less severe in proportion—act as compounding factors that hinder academic performance across subjects.

School-Level Support Deficits

The study highlights systemic weaknesses:

1. Inadequate infrastructure despite policy mandates on accessibility.
2. Traditional pedagogy dominating classrooms, limiting differentiation.
3. Minimal availability of resource rooms or special educators.
4. Absence of curriculum accommodations, contradicting inclusive education frameworks.
5. Limited assistive technology, which is essential for compensatory strategies.

These gaps align with nationwide challenges reported by Singal (2018), indicating a persistent mismatch between policy and implementation.

Comparison to Existing Literature

The higher prevalence in government schools echoes studies linking socioeconomic disadvantage with academic risk (Morgan et al., 2016). The clustering of difficulties in multiple domains aligns with research suggesting that learning difficulties rarely exist in isolation (Pennington, 2009).

The lack of supportive infrastructure and specialist resources mirrors findings from other Indian states (Alur, 2010; Karande & Kulkarni, 2005). This underscores a systemic need for multi-level reform.

Implications For Policy

1. There is a compelling need to institutionalize statewide early screening through teacher-friendly tools.
2. Inclusion of learning difficulties under state planning must align with the NEP 2020 emphasis on foundational literacy and numeracy.
3. Funding must prioritize resource rooms, assistive technology, and professional staffing.

For Schools

1. Schools should adopt multi-tiered systems of support (MTSS).
2. Teacher professional development must focus on UDL, differentiated instruction, and remediation strategies.
3. Schools should establish collaborative teams including counsellors, special educators, and community workers.

For Teachers

1. Classroom teachers must be trained to identify early signs of LD.
2. Lesson planning should include flexible groupings, visual supports, structured tasks, and scaffolding.
3. Continuous progress monitoring should replace one-size-fits-all evaluation approaches.

Recommendations

Establishment of Resource Rooms

Each district should have well-equipped rooms with reading, writing, and mathematical manipulatives, staffed by trained special educators.

Statewide Capacity-Building Initiatives

Regular workshops on:

- Screening and identification
- Language and reading instruction
- Mathematical interventions
- Behaviour and attention management

Infrastructure Enhancement

- Ramps, railings, non-slip flooring

- High-contrast signage

- Classroom ergonomics and flexible seating

Assistive Technology Integration

- Text-to-speech tools

- Reading overlays and phonics software

- Writing aids and handwriting supports

- Basic calculation devices

Curriculum and Assessment Accommodations

- Modified worksheets
- Extended time
- Oral responses
- Reduced writing load

Development of Parent Engagement Programs

Parents should be oriented on:

- Home-based reinforcement strategies
- Encouraging reading practices
- Organizational and attentional techniques

Strengthening Monitoring and Evaluation

- School-level LD registers
- Annual progress reviews
- District data dashboards

Limitations and Future Research

The study's reliance on teacher-reported checklists may introduce subjective bias. Although validated, the instruments do not substitute for clinical assessments. Future research should include:

- Longitudinal tracking of student progress
- Qualitative investigations into teacher beliefs and classroom practices
- Experimental studies testing effectiveness of intervention models
- Comparative studies with other Northeastern states

CONCLUSION

This study provides one of the most comprehensive examinations of learning difficulties in Nagaland's elementary schools. With 10.74% of students identified as having learning difficulties and major gaps in support

systems, the findings highlight a critical need for coordinated reforms at the policy, institutional, and classroom levels.

Inclusive education in Nagaland requires not merely awareness but sustained investment in teacher capacity, infrastructure, specialized services, and evidence-based instructional strategies. As NEP 2020 envisions equitable and quality learning for all, addressing learning difficulties must become a central component of educational planning in the state.

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