

DESIGNING AN INCLUSIVE ENGLISH LANGUAGE CURRICULUM FOR INDIAN HEARING-IMPAIRED STUDENTS: A COMPREHENSIVE APPROACH

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Abstract

In India, hearing-impaired students face profound challenges in acquiring English due to auditory-centric teaching methods and a lack of inclusive educational materials. This study aims to design and assess a specialized English curriculum that integrates Indian Sign Language (ISL), visual pedagogy, and multi-sensory strategies to support language acquisition. Through a mixed-methods research framework, the curriculum was piloted in special schools in Tamil Nadu. Quantitative assessments and qualitative interviews demonstrate significant gains in vocabulary, comprehension, and learner engagement. This article proposes a practical, replicable curriculum model and recommends policy reforms to institutionalize inclusive English instruction nationwide.

Keywords: Hearing-impaired education, Indian Sign Language, visual pedagogy, inclusive curriculum, English language acquisition, multi-sensory learning, bilingual education, educational policy

1. Introduction

English proficiency plays a crucial role in the socio-economic development of individuals in India. It grants access to quality education, professional careers, and global communication. However, hearing-impaired students face systematic disadvantages in acquiring English due to a lack of tailored pedagogical resources and curriculum design.

Conventional classrooms rely on auditory methods, which marginalise hearing-impaired learners. Although Indian Sign Language (ISL) is gaining recognition, its incorporation into mainstream language education remains limited. This research addresses the educational disparity by developing a visual and kinesthetic learning curriculum embedded with ISL. It emphasizes a rights-based and inclusive approach in line with the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and India's National Education Policy (NEP) 2020.

The primary objective of this study is to provide an evidence-based, context-sensitive English curriculum tailored to the cognitive and communicative needs of hearing-impaired learners, enabling them to acquire functional literacy and self-expression skills in English.

2. Literature Review

2.1 Global Practices in Deaf Education

Bilingual-bicultural (Bi-Bi) education models have proven effective internationally. These models position sign language as the first language and the dominant written/spoken language as the second (Marschark & Hauser, 2016). In the U.S., the use of American Sign Language (ASL) in deaf education has shown improvements in comprehension and literacy (Humphries et al., 2019). Similarly, Sweden and Norway integrate native sign languages into public education.

2.2 Indian Context and Challenges

India officially recognized ISL in 2020, and the Indian Sign Language Research and Training Centre (ISLRTC) is working to develop a standard lexicon. However, ISL is not yet integrated into most English language curricula. According to Sharma & Raghavan (2021), over 80% of Indian hearing-impaired students rely on rote oral training, which limits conceptual understanding and fluency.

Despite advances in inclusive education policies, the infrastructure, teacher training, and pedagogical resources remain inadequate. Kumar and John (2020) note that curriculum design in special education often lacks cultural and linguistic sensitivity.

2.3 Research Gaps

Few Indian studies have empirically evaluated structured English curricula tailored for hearing-impaired learners. Most existing research remains theoretical or anecdotal. There is a paucity of data-driven evaluations that examine the use of ISL, visual media, and multi-sensory strategies in classroom settings.

3. Research Objectives

- To design a structured English language curriculum integrating ISL and visual pedagogies.
- To evaluate its effectiveness in improving literacy and engagement among hearing-impaired students.
- To analyse the challenges and opportunities of implementing this curriculum in schools in Tamil Nadu.
- To provide policy recommendations based on research outcomes.

4. Methodology

A mixed-methods research design was employed to ensure a robust and comprehensive evaluation of the curriculum. This approach allowed the researchers to triangulate data from both quantitative and qualitative sources, offering deeper insights into student outcomes and instructional effectiveness.

Sample: The study was conducted in Chennai, Tamil Nadu, with a sample of 25 hearing-impaired students aged between 10 and 15 years from two special schools. Three trained English teachers participated as facilitators.

Tools Used:

- ISL-Embedded Lesson Plans: Developed with language experts and ISL interpreters.
- Visual Aids: Posters, animated videos, pictorial vocabulary cards, and interactive digital storyboards.
- Assessment Tools: Pre- and post-tests focusing on vocabulary, grammar, reading comprehension, and writing.
- Feedback Mechanisms: Structured interviews, observation checklists, and focus group discussions.

Research Phases:

- 1. Development Phase (Weeks 1–3):**
 - Collaborative design with ISL experts and visual curriculum developers.
 - Preparation of culturally relevant modules tailored to Indian contexts.
- 2. Teacher Training (Weeks 4–5):**
 - Conducted two-week intensive workshops focusing on ISL, visual pedagogy, and empathy-oriented strategies.
 - Modules included sign-supported grammar instruction, visual cue usage, and classroom simulations.
- 3. Implementation Phase (Weeks 6–17):**
 - Weekly 4-hour instructional sessions for 12 weeks.
 - Activities included ISL-integrated lessons, role-plays, digital storytelling, flashcard-based drills, and interactive language games.
- 4. Evaluation Phase (Weeks 18–20):**
 - Administered standardized assessments.
 - Conducted classroom observations and student-teacher reflection meetings.

Ethical Considerations: Institutional review board approval was obtained. Informed consent from parents/guardians was secured. Data was anonymized and stored securely.

5. Curriculum Model: Inclusive English Language Modules

The curriculum was organized into six modular units aligned with CEFR (Common European Framework of Reference) A1 level competencies. Each unit incorporated ISL, visual scaffolding, and culturally contextualized themes.

Module	Theme	Key Vocabulary	Activities
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1	My Family	Mother, Father, Sister	Family tree poster, ISL storytelling
2	My Daily Routine	Wake, Brush, Eat, School	Flashcard sequencing, sign-to-word matching
3	Food and Health	Fruits, Vegetables, Water	Pictorial recipe book, gesture games
4	My School	Teacher, Class, Friend	Role-plays, classroom tour with sign narration
5	Festivals and Culture	Diwali, Pongal, Holi	Festive posters, vocabulary charades
6	Community Helpers	Doctor, Police, Shopkeeper	Dress-up dialogue skits with visual support

Each lesson began with a sign demonstration, followed by vocabulary building through images, and concluded with interactive application using games or pair activities.

6. Implementation Strategy

Teacher Training

- Delivered via hands-on workshops with ISL experts.
- Emphasized role-modelling ISL-supported English.
- Incorporated sample lesson rehearsals and collaborative lesson planning.

Curriculum Delivery

- Conducted by trained teachers using multimedia content and ISL-based explanations.
- Involved use of portable smart screens, vocabulary mats, and storytelling cubes.
- Encouraged student-to-student visual explanations to build collaborative learning.

Monitoring and Support

- Weekly evaluation by academic coordinators.
- Lesson plan adaptation meetings every fortnight.
- Mid-course review with student feedback incorporated into content revision.

7. Results and Analysis

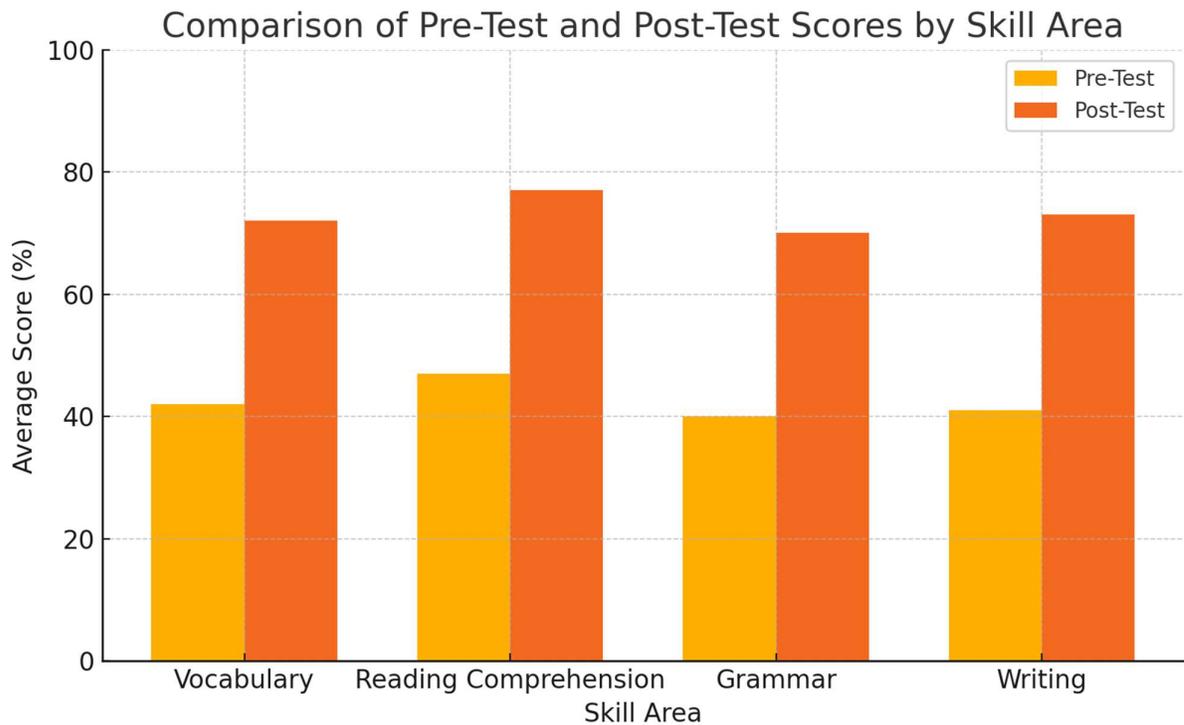
7.1 Quantitative Data

Table 1: Detailed Score Comparison by Skill Area

Skill Area	Pre-Test Score (%)	Post-Test Score (%)
Vocabulary	42	72
Reading Comprehension	47	77
Grammar	40	70
Writing	41	73

Overall, there was a 30-32% improvement across all measured skill areas. Vocabulary and comprehension gains were the most significant.

Graph 1: Pre- and Post-Test Performance Across Skill Areas



7.2 Qualitative Insights

- Student Engagement: Students expressed excitement and interest in learning English through signs and games.
- Confidence Building: Use of visual aids and ISL improved students' ability to express personal stories and opinions.
- Teacher Observations: Teachers noted better retention of grammar structures and vocabulary.

Student Quote: "I love making posters and telling stories. I can talk about my day using signs and English now."

Teacher Quote: "I've seen real progress. Visual storytelling and ISL make students remember and use what they learn."

8. Discussion and Innovative Findings

This study revealed that visually immersive and culturally resonant curriculum modules significantly enhance language acquisition for hearing-impaired learners. The modular approach provided predictable, scaffolded instruction that built linguistic confidence and encouraged independent communication.

Key Innovations Identified:

- Integration of ISL into core grammar lessons allowed learners to make real-time semantic connections.
- The use of visual storyboards for everyday themes boosted expressive vocabulary.
- Peer-to-peer ISL narration built not only linguistic skills but also social communication.
- Culturally embedded content improved student motivation and contextual understanding of English usage.

The inclusive curriculum not only closed language proficiency gaps but also contributed to emotional and cognitive development. These findings contribute to the growing literature on multimodal and inclusive ELT practices in the Global South.

9. Conclusion and Policy Recommendations

This research affirms that a structured, visually supported, and culturally responsive English curriculum can empower hearing-impaired students in India. Grounded in ISL and innovative visual pedagogy, the model promotes sustainable inclusion in English language education.

Policy Recommendations:

1. Curriculum Integration: Institutionalize ISL-inclusive English modules within state and national syllabi.

2. **Teacher Capacity Building:** Incorporate ISL certification and visual pedagogy into B.Ed. and special education programs.
3. **Infrastructure Development:** Equip schools with multimedia resources, tactile tools, and ISL-friendly materials.
4. **Community Involvement:** Engage families and local NGOs in the language learning journey through ISL awareness workshops.
5. **Monitoring and Research:** Establish longitudinal studies and monitoring systems to measure long-term outcomes and scale successful models nationally.

This inclusive framework represents a transformative step toward bridging equity gaps in language education for deaf and hard-of-hearing learners across India.

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