

RESEARCH ARTICLE**WWW.PEGEGOG.NET****Introduction of Indian Sign Language (ISL) in Classroom Environments among Teachers and Students in India as per NEP 2020****Dr. B. Bharath Narayanan**

Special Educator, National Institute for Empowerment of Persons with Multiple Disabilities (NIEPMD), Muttukadu Chennai -600117

Abstract

Learning and teaching process in a classroom heavily depends on communication. It is an exchange process that both teachers and students participate in. For students to learn effectively, the teacher has to explain and demonstrate tasks using different audio-visual and teaching tools, including interactive graphics and digital platforms. Communication, however, is an enormous challenge to children with hearing impairments (CWHI). Hearing-related disabilities affect approximately 18.9% of children in India, presenting a significant challenge. The availability of sign language skills in rural and mainstream classrooms is also a concern (World Health Organization (WHO) 2021). Students with hearing impairments face significant challenges, primarily due to the lack of access to barrier-free education, as mandated by the Right to Education Act 2009, which stipulates that every child aged 6-14 years has the right to such education. NEP 2020 has highlighted the need to traverse nine goals with a sign to aid in teaching IS to NEP. Contact ISL to make ISL uniform across the country and to prepare ISL. Teaching aid to provide barrier-free education for the country. This paper examines the incorporation of ISL into conventional classrooms, emphasizing its contribution to facilitating accessible communication, enhancing educational outcomes, and reinforcing inclusive educational practices in India.

Keywords: Deafness, communication, Indian Sign Language, accessible education, inclusive

Introduction

According to the **Unified District Information System for Education Plus (UDISE+)** in 2021, India's school education system is among the biggest in the world, with almost 260 million pupils, 9.7 million instructors, and 1.5 million schools. In such a vast and diverse system, effective teaching requires more than subject knowledge; teachers must also inspire, motivate, and communicate in ways that foster meaningful student engagement. Teacher effectiveness, therefore, depends not only on instructional strategies but also on the ability to use clear, coherent, and inclusive communication methods (Gupta & Tiwari, 2020).

The classroom communication process generally involves four essential elements: the teacher, the message, the medium, and the student. Teachers must often adapt their role to function as initiators, coordinators, facilitators, and guides. To meet these roles successfully, they rely on strategies such as lectures, demonstrations, group discussions, and the integration of technology-enabled tools (Murphy, 1997). These methods are critical in inclusive

classrooms, where learners' diverse needs require flexible and accessible teaching approaches.

Learning additional languages has been shown to enhance cognitive and social development (Kemp, 2009). In this context, learning sign language provides unique benefits. It enhances students' communication abilities, fosters bilingual development, and facilitates the overcoming of social barriers for individuals with hearing impairments (Marschark & Hauser, 2012). Indian Sign Language (ISL) is a visual-gestural language with its own grammar and regional differences. Many deaf and hard-of-hearing people in India use it (Bhattacharya, 2021). However, not enough people are aware of it, teachers lack sufficient training, and there are insufficient certified interpreters, resulting in its limited use in regular classrooms.

The **NEP (2020)** says that ISL is an important way for deaf people to learn and a way for them to identify as a language. Promoting ISL not only encourages inclusivity, but it also helps break down communication barriers in schools. This introduction lays the groundwork for exploring the global and Indian contexts of sign language integration, the function of policy frameworks, and approaches for successfully incorporating ISL into educational settings.

Global Scenario

The World Health Organization (**WHO, 2021**) says that about 34 million children around the world have hearing loss that makes it hard for them to hear. This makes early intervention and accessible education very important. Almost 95% of deaf children have hearing parents, making it essential for them to know sign language to communicate effectively and support their children's social growth. In many low-resource countries, children with hearing impairments often begin school without adequate language exposure, creating challenges in both academic achievement and social integration (Marschark & Spencer, 2010).

There are only a few countries in the world that recognize sign languages as official languages. As of 2018, 41 countries had officially recognized it, including 21 in the European Union (Ethnologue, 2019). Recognition is often linked to educational rights and access, which can affect whether deaf kids can fully participate in school. Jamaica, for instance, added sign language to its national curriculum, and South Africa added it to adult literacy programs along with other official languages (UNESCO, 2018). The school system has established standards that facilitate the education of children with hearing deficiencies.

Many global agreements emphasize the value of sign language in education and accessibility. The United Nations Convention on the Rights of Persons with Disabilities (CRPD, 2006) and the Standard Rules on the Equalization of Opportunities for Persons with Disabilities (UN, 1993) emphasize the critical role of sign language in facilitating communicative equity. In 2018, the alterations made to the African Charter on Human Rights and the Charter on the Rights of Persons with Disabilities sought to consolidate these obligations further. These frameworks all agree that having access to sign language is an important part of getting a fair and high-quality education for everyone.

Indian Scenario

India has one of the largest populations with hearing problems. About 6.3 million people have some or all of their hearing loss, but only a small number of them have been formally trained in **Indian Sign Language (ISL)** (Ali, 2017; WHO, 2021). Even though there is a large deaf community, **ISL** is not used much in mainstream schools because there are not enough resources, teachers are not trained well enough, and there are not enough certified interpreters—fewer than 300 interpreters work in the whole country (Kumar & Rout, 2019). The lack of awareness among parents and educators often prevents children with hearing impairments from accessing **ISL** in their early years, leaving many isolated within mainstream classrooms. Teacher education programs rarely include **ISL** training, further limiting inclusivity in school environments (Bhattacharya, 2021). Recognizing this gap, the **Indian Sign Language Research and Training Centre (ISLRTC)** was established in 2015 as an autonomous body under the Ministry of Social Justice and Empowerment. Its mandate includes developing teaching materials, conducting research, and training professionals to promote **ISL** across educational institutions (ISLRTC, 2020).

Recent efforts show that things are getting better. Increasingly, **ISL** interpreters are being used in official meetings, on TV news shows, and at some colleges and universities. The National Education Policy (2020) also states that **ISL** should be consistent nationwide and that **ISL**-based materials should be incorporated into the school curriculum. **The NCERT and ISLRTC** have collaborated to create **ISL** videos of school books for grades I through XII. According to **NCERT and ISLRTC (2021)**, this represents a significant advancement in providing digital education access to users.

Still, the challenges are enormous. There is still a substantial gap in the ability to use **ISL** in rural communities, and the mobility of trainers to schools and teachers' training centers is still a challenge. Bridging these divides, the need to integrate **ISL** into the teacher education curriculum and public outreach actively promotes inclusive education.

Objectives of ISLRTC

On behalf of the Ministry of Social Justice and Empowerment, the **Indian Sign Language Research and Training Center (ISLRTC)** was established in 2015. The base of **ISLRTC** is to improve the use and outreach of **Indian Sign Language (ISL)** across the nation. Its goals encompass the refinement of bilingual education planning and teaching materials, the crafted instructional materials for students with hearing impairments, and the professional training and interdisciplinary practice of **ISL** sign language specialists (ISLRTC, 2020).

To help ensure that **ISL** evolves to meet the needs of the wider society, the institute has established specialized collaborations with deaf and other disability-focused organizations. Other specialized objectives focus on the global evolution of sign languages and using that knowledge to improve the teaching and learning of **ISL** in India (Kumar & Rout, 2019).

ISLRTC developed **ISL** videos for the textbooks in collaboration with the **NCERT**. These videos aim to reinforce the concept of students with hearing impairments integrating into the mainstream school system (ISLRTC & NCERT, 2021).

Research Studies in Sign Language

The early days of research surrounding Indian Sign Language revealed that it was indeed differentiated and complex, with notable differences from region to region. Vasishta, Woodward, and Wilson, for instance, describe "urban sign," which has relative standardization, versus "rural sign," which often comes from self-developed signs in more secluded areas. Jepson (1991) pointed out that a considerable part of India's deaf population is in rural areas, and that there is still no access to formal ISL there.

Research in ISL sign language, like other sign languages, is a complete language in its own right, possessing its own grammar and syntax peculiar to sign languages, distinct from phonologically based spoken languages (Bhattacharya, 2021). The array of languages discussed here abolishes the misconception that sign languages were a mere cluster of actions.

Some hearing people can understand sign language. This has been studied by Sharma and others working on computer-assisted sign recognition. They believe these technologies might be beneficial for improving IFIs' accessibility during teaching.

Other high-tech approaches have also attempted to digitize ISL. Sawant and Kumbhar created computer applications capable of real-time recognition of Indian Sign Language. Rajam and Balakrishnan created systems aimed at facilitating interactions between people who are deaf and people who cannot speak. These and numerous other works underline how ISL transcends the boundaries of a mere language. Sign language has complex and unresolved connections to modern technologies that can be utilized for educational and societal purposes.

Effective Integration of Sign Language

Technology has furthered the incorporation of different pedagogies espoused by constructivist learning theories around engagement in genuine tasks, collaboration, and learning by doing (Murphy, 1997). These aspiring scholars can learn with the assistance of support systems such as interactive videos, animations, computer graphics, and other multimedia resources that can convert spoken instruction into sign language or improve upon sign language instruction.

The National Council of Educational Research and Training (NCERT) and the Indian Sign Language Research and Training Centre (ISLRTC) have recently collaborated to demonstrate significant progress. Sign language videos have already been created from NCERT textbooks for class's I–V, and more of these projects are being developed for higher classes. The Ministry of Education has also just started a special sign language channel, channel 31. Schools are starting to use sign language apps so that students can use them on their phones (NCERT & ISLRTC, 2021).

To use ISL effectively, teachers must learn its application, and the curriculum must be adjusted accordingly. Teachers need to use different methods in the classroom, such as reflective teaching, cooperative learning, and hands-on activities, to make sure they are ready to create inclusive learning environments (Gupta & Tiwari, 2020). Technology is not just a way to teach; it is also a way to connect students who can hear with those who cannot, which makes the classroom fairer for everyone.

NEP 2020 Emphasis on ISL

The National Education Policy (NEP, 2020) makes a firm promise to support linguistic inclusion, with Indian Sign Language as its primary focus. The policy stipulates that ISL must be consistent nationwide and that both national and state-level curriculum materials are required for students with hearing difficulties. It also emphasizes the importance of preserving regional sign languages and teaching them alongside standardized ISL whenever possible.

NEP (2020, para. 4.22) recognizes that children with significant hearing impairments are entitled to receive ISL instructional materials and learning content in digital format. The Rights of Persons with Disabilities and The Right to Education describe accessible education to all regardless of the type of disability (Government of India, 2016).

A significant component of the ISL program is the partnership with the NCERT and ISLRTC. They are involved in producing sign language videos of school textbooks for students in classes I to XII. Furthermore, the policy shifts the status of ISL from peripheral usage to 'beyond functional' as an assistive language, acknowledging a cultural shift in India towards Deaf culture within the pluralistic context of India (Bhattacharya, 2021).

The goal of NEP 2020 is to break down communication barriers and create more inclusive classrooms across the country by incorporating ISL into teacher training, creating digital content based on ISL, and making its use standard across schools.

Recommendations

The **Indian Sign Language Research and Training Centre (ISLRTC)** is an independent organization within the Department of Empowerment of Persons with Disabilities. It has an essential job of making ISL more widely used in schools and in everyday life (ISLRTC, 2020). Several suggestions come up to make inclusive education better for kids with hearing problems:

1. **Capacity Building:** ISL training modules should be a part of teacher education programs at DIETs, SCERTs, and universities. This would give teachers the tools they need to talk to students who have trouble hearing.
2. **Interpreter Training:** India needs a lot more certified ISL interpreters. Expanding interpreter training programs will help with the current shortage of fewer than 300 professionals across the country (Kumar & Rout, 2019).
3. **Making the curriculum:** NCERT, ISLRTC, and state education boards should continue to collaborate on creating ISL textbooks, supplementary materials, and digital content. These materials should cover all subjects and grade levels so that everyone can use them.
4. **Public Awareness:** Campaigns to raise awareness should demonstrate that ISL is not merely a means for Deaf people to communicate, but also a way for them to define themselves as a distinct community. Promoting positive attitudes toward ISL can help schools and society be more accepting and less judgmental.
5. **Research and Innovation:** Universities and research institutions should conduct more research on ISL linguistics, pedagogy, and the application of technology. Creating tools like ISL learning apps or real-time sign recognition systems can facilitate inclusive teaching and make resources more accessible.

These ideas follow India's constitutional requirement that all students have equal access to education and the global frameworks that support fair and equal quality education (UNESCO, 2018; United Nations, 2006).

Conclusion

Adding Indian Sign Language to regular schools is both a necessary step and a chance to make education in India more inclusive. The current system faces several challenges, including a shortage of trained teachers, interpreters, and awareness. However, recent efforts under the NEP 2020 show that things are getting better. New digital tools and partnerships between NCERT and ISLRTC are making information more accessible.

This study shows that ISL is not just a way for Deaf people to talk to each other, but also a way for them to express their culture and language. Putting it in classrooms will help everyone learn fairly, encourage students to respect each other, and help break down social barriers.

Future research should employ experimental methodologies and validated instruments to assess the long-term impacts of ISL integration on academic performance, social inclusion, and teacher preparedness. If India continues to support policies, new technologies, and teacher training, it can build schools where deaf and hearing students can learn and do well together.

References

- Ali, S. (2017). Status of sign language in India: Policy and practice. *Journal of Disability Studies*, 3(2), 56–63.
- Bhattacharya, T. (2021). *Sign languages in India: Linguistic diversity and educational challenges*. Language in India, 21(3), 45–57.
- Ethnologue. (2019). *Languages of the world* (22nd ed.). SIL International.
- Government of India. (2016). *Rights of Persons with Disabilities Act, 2016*. Ministry of Social Justice and Empowerment.
- Gupta, R., & Tiwari, A. (2020). Effective communication in inclusive classrooms: Strategies for teachers. *Journal of Education and Practice*, 11(12), 55–62.
- Indian Sign Language Research and Training Centre (ISLRTC). (2020). *Annual report 2019–20*. Ministry of Social Justice and Empowerment, Government of India.
- Jepson, J. (1991). Perspectives on the structure of rural and urban sign languages in India. *Journal of Deaf Studies and Deaf Education*, 6(1), 23–35.
- Kemp, C. (2009). Defining multilingualism. In L. Aronin & B. Hufeisen (Eds.), *The exploration of multilingualism* (pp. 11–26). John Benjamins.
- Kumar, R., & Rout, N. (2019). The role of interpreters in promoting inclusive education for deaf learners in India. *International Journal of Special Education*, 34(1), 72–84.
- Marschark, M., & Hauser, P. C. (2012). *How deaf children learn: What parents and teachers need to know*. Oxford University Press.
- Marschark, M., & Spencer, P. E. (2010). *The Oxford handbook of deaf studies, language, and education* (Vol. 2). Oxford University Press.

- Murphy, E. (1997). Constructivism: From philosophy to practice. *Educational Resources Information Center (ERIC)*. <https://files.eric.ed.gov/fulltext/ED444966.pdf>
- National Council of Educational Research and Training (NCERT) & Indian Sign Language Research and Training Centre (ISLRTC). (2021). *MoU on ISL-based digital content development*. Ministry of Education, Government of India.
- National Education Policy (NEP). (2020). Ministry of Education, Government of India.
- Rajam, P. S., & Balakrishnan, G. (2011). Real-time Indian Sign Language recognition system to aid deaf-mute people. *Proceedings of the IEEE International Conference on Communication Technology*, 13, 737–742.
- Right to Education Act. (2009). Ministry of Human Resource Development, Government of India.
- Sawant, S. N., & Kumbhar, M. S. (2014). Real-time sign language recognition using PCA. *Proceedings of the International Conference on Advanced Communication Control and Computing Technologies*, 5, 65–69.
- Sharma, M., Pal, R., & Sahoo, A. K. (2014). Indian Sign Language recognition using neural networks and KNN classifiers. *ARPJ Journal of Engineering and Applied Sciences*, 8(4), 199–205.
- UDISE+. (2021). *Unified District Information System for Education Plus 2020–21 report*. Ministry of Education, Government of India.
- UNESCO. (2018). *Global education monitoring report 2018: Inclusion and education*. UNESCO Publishing.
- United Nations (UN). (1993). *Standard rules on the equalization of opportunities for persons with disabilities*. UN General Assembly.
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities*.