Article

CADERNOS de TRADUÇÃO

Science communication in Indian languages: A case study of scientific reporting through translation

Shivangi Priya
Central Institute of Indian Languages
Mysuru, India
priyashivangi6@gmail.com
https://orcid.org/0000-0001-5023-5447

Narayan Kumar Choudhary
Central Institute of Indian Languages
Mysuru, India
nchoudhary.ciil@gmail.com
https://orcid.org/0000-0002-2116-5205

Abstract: Science is an integral part of our society, and modern technology has made the discovery of scientific phenomena commonplace. In India, most people learn about these discoveries through media reporting and translation into various languages. This makes scientific reporting in newspapers a daunting task, as it requires both subject knowledge and linguistic creativity to ensure accuracy in language translation. Whether discussing the frightening pandemic or celebrating the launch of the Chandrayaan, effective scientific reporting is crucial. The genre of popular science is primarily disseminated through newspapers, which are often filled with debates and discussions about science and technology that require equivalence and accuracy to educate the Indian population about the latest scientific breakthroughs. Translation plays a pivotal role in scientific reporting, as translating scientific registers, jargon, and technical terminologies is essential due to the distinct nature of scientific writing compared to creative writing or general communication. Media reporters are crucial in disseminating scientific awareness, but the mistranslation of technical jargon and scientific concepts can distort the content, leading to misinformation and disrupting the knowledge dissemination process. With new scientific discoveries frequently emerging, especially from the West, reporters face the dual challenge of ensuring linguistic and conceptual accuracy while meeting the urgency of news reporting. Demonstrable gaps exist in scientific reporting in translation, particularly in reporting key concepts, theories, policies and practices. This paper explores the extant theories and examines the policies that influence the reporting and translation of scientific literature in Indian languages. It discusses the practical challenges faced by translators. By addressing these issues, the paper aims to propose language and translation strategies to enhance the quality of translation in scientific communication.

Keywords: non-literary translation; scientific writing; India; popular science; regional languages.

1. Introduction

For the holistic development of a linguistically plural country like India, it is crucial to connect science with the general populace, especially through (science) communication in regional languages. While English has long been the lingua franca of science, spreading scientific knowledge across India's diverse linguistic landscape is essential for broader understanding and engagement. Recognizing this need, the government has initiated efforts to bridge the gap between scientific knowledge and the masses. In today's AI-driven era, translation offers an effective means to make scientific information accessible across languages. However, translating scientific content is far more complex than literary translation; it requires meticulous attention to linguistic accuracy, cultural relevance, and terminological precision.

To foster a meaningful connection with the audience, scientific translations must achieve functional equivalence, where scientific ideas are not only linguistically accurate but also culturally comprehensible. Translators must carefully address cultural nuances and adapt scientific terminology to resonate with regional beliefs, especially on sensitive topics like health and hygiene. This article examines how translation can facilitate scientific communication in regional Indian languages while navigating the challenges of maintaining linguistic precision, cultural adaptability, and terminological clarity.

This paper examines the current state of science journalism in India, tracing the historical development of science communication efforts in regional languages and the role of the media in promoting scientific awareness. It addresses the challenges faced by science journalism, including issues of content accuracy, accessibility, and engagement, particularly in regional and rural contexts. The analysis reveals significant barriers, such as limited dissemination of scientific knowledge in local languages, a lack of engaging content, and limited outreach to rural areas. Additionally, the paper highlights the tendency for science journalism to gain traction during crises or major scientific breakthroughs, underscoring the need for more consistent and inclusive reporting. To foster a culture of scientific awareness, it is essential to expand science journalism with regular coverage in local languages, reaching a wider audience and encouraging a scientific temper across diverse communities.

2. An overview of science and scientific communication in India

Ancient India is one the earliest civilizations in the world which is also recognized as one of the six cradles of civilization by scholars around the globe, along with Mesopotamia, Ancient Egypt, Ancient China, Afro-Eurasia, and Caral-Supe (Fuller, 2006). It has a rich history of cultural as well as scientific and technological advancements. The Indian history spanning from prehistoric, and medieval to modern history presents several examples of India witnessing scientific, technological, and cultural development.

To mention a few instances that highlight the development of science, the technique of Cataract Surgery was known to Sushruta somewhere between the 2nd to 4th century CE (Deshpande, 2000; Meulenbeld & Caraka, 2002). Brahmagupta in the 7th century CE described gravity as an attractive force using the Sanskrit term 'gurutvakarsanam' (Pickover, 2008). Nilakantha

Somayaji presented a revised version of Aryabhata's elliptical model for the motion of planets Mercury and Venus in the 15th century AD, which was the most accurate model until Johannes Kepler's model for elliptical orbit for the motion of planets (Joseph, 2000). The aforementioned discoveries are only a few examples of the rich scientific and technological heritage of India. However, a discussion on the history of Indian science is beyond the scope of this article. To get a deeper insight on the topic, there are several other literatures that cover it more in depth (Basham, 1968; Bose *et al*., 1971; Baber, 1996).

The post-independence government aimed at fostering science/scientific communication within India's linguistic landscapes. In large, science journalism spikes during times of crisis or when some event takes place. Unlike politics, movies, and entertainment, science journalism has not evolved significantly and does not find adequate coverage in the newspapers. Also, there is a need for science communication reporting in regional languages for better inclusivity in India's linguistic and culturally diverse landscapes. Moreover, to cater to the needs of local language speakers, there is a need for better translation strategies for effective science communication. Translating scientific content into local languages is important to promote inclusivity and wider access to scientific knowledge.

Mazzonetto (2005) identifies two types of science communications in India: the first being institutionalized communication, which is managed by government institutions like the National Council for Science and Technology Communication (NCSTC). It is tasked with communicating the updated trends in science and technology and stimulating scientific temper among the people of India. NCSTC undertakes various outreach activities at the country level, conducts training in science and technology communication, and motivates students and teachers to participate in scientific development by providing incentives, scholarships and grants at various levels (Government of India, 2025).

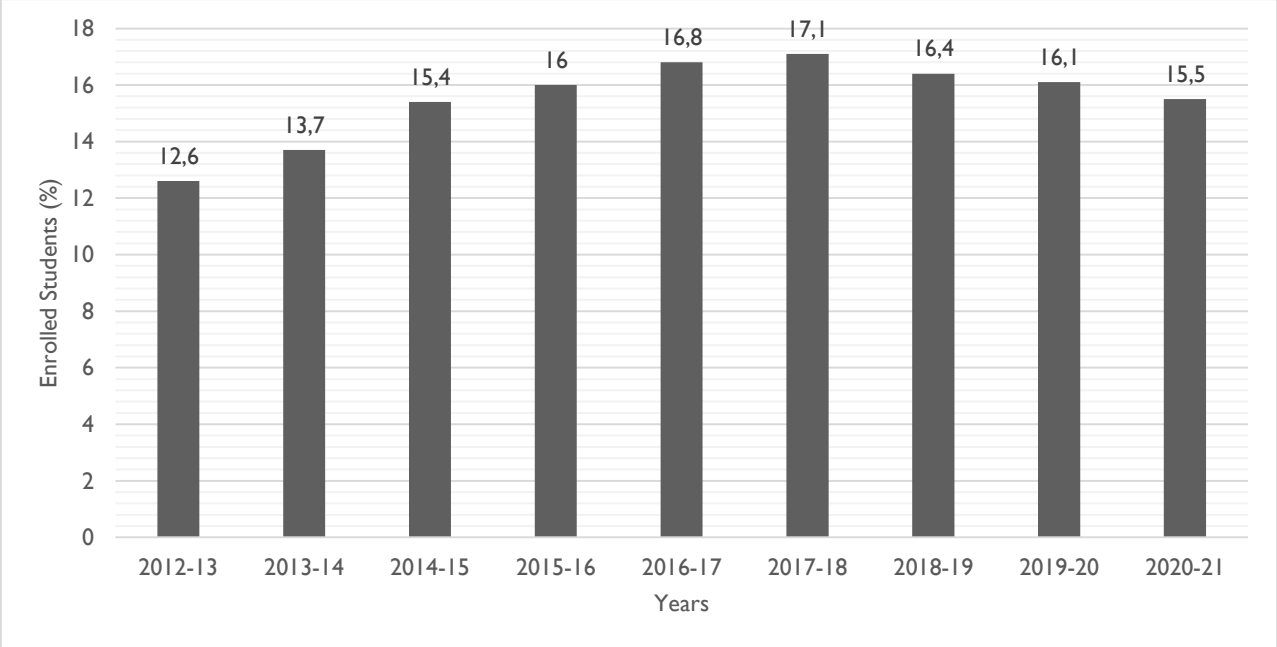
The other kind of scientific communication is an informal one, where the communication is at the level of the masses itself. Post-independence has targeted the dissemination of basic scientific knowledge that was limited to more privileged classes of the society until independence, among the rural population. These two kinds of scientific communications manifest due to social, economic and political conditions which are quite complex in a nation as diverse as India (Mazzonetto, 2005). And it would not be an overstatement that none of the two types would have been independently efficient enough in the dissemination of scientific knowledge to the diverse expanse that India represents.

As per the survey conducted by 'All India Survey on Higher Education (AISHE)' for the academic year 2021-22, about 27% of the total number of students are enrolled in science stream for their under-graduate studies. The number is at par with the developed countries like the United States of America where 20% of the total number of under-graduate students opted for science (National Center for Education Statistics, 2025), while in Europe countries such as the United Kingdom had 26% and France had 25% of their total number of students enrolled in under-graduate courses in science, in the year 2021-22 (European Commission, 2025).

The comparison between quality of education in India as compared to a developed nation is debatable and it is beyond the scope of this paper. However, the interest in science has revealed a growing trend in the last decade, especially in the basic science streams. This trend can be seen in

figure 1. Further, it is important to note that as per Unified District Information System for Education Plus (UDISE+) report released by the Education Ministry of India for the year 2019-20, only about 26% of total children enrolled in high school education study in English-medium schools, while the rest got their education in other Indian languages (Snigdha, 2021; UDISE+, 2023). Often, the major form of exposure to science for most of the students from vernacular medium are textbooks only, which put them at a disadvantageous position at a very early stage of their education.

Figure 1: Data on number of undergraduate students opting science as their choice for undergraduate studies



Source: National Informatics Centre (2025)[1].

In recent years, several measures have been taken to make science more accessible by facilitating communication in Indian regional languages. Scientists and policymakers are producing content such as articles, podcasts, and talks in multiple Indian languages, including Hindi, Marathi, Kannada, and Tamil, to expand scientific outreach. Digital platforms and social media have played a vital role in this movement, enabling easier distribution and collaboration. Initiatives like '*Janasuddi*', a Kannada science podcast, and projects such as TED Talks India and India Science are helping to bridge this gap (Barath, 2019). Events like The Jigyasa Project, provide interactive science sessions in regional languages, reinforcing the importance of making science feel tangible and local (Barath, 2019).

3. A brief introduction to government initiatives to promote scientific communications

Post-Independence, the newly formed Indian government realised the need for the development of scientific temper among the masses, for a healthy and thriving democracy. Keeping the vision of scientific and technological development in sight, the government pushed for the

[1] AISHE Reports from 2012 to 2021.

widespread use of scientific knowledge to every section of society by means of science communication activities on different levels, publishing the translation of school and popular science books in several regional languages etc. (Mazzonetto, 2005).

In the year 1958, the government came up with its first major science policy, the Scientific Policy Resolution (SPR 1958). The primary objective of this policy was to provide a basic and rational amount of social, economic and cultural infrastructure to every citizen of the country so that the newly born democracy that India was at the time could aspire to compete on the global stage (Kaushik *et al*., 2020). SPR laid the foundation for the current state of science in India, and while still a work in progress, holds a good reputation on the global stage. Several scientific organisations and research laboratories of national importance were established that laid the foundation of higher education and research and development in India.

Following SPR 1958, the Indian government took the next steps in the policy-making for scientific development by passing the Technology and Policy Statement (TPS 1983), and Science and Technology Policy (STP 2003) (Kaushik *et al*., 2020), which were pivotal in the development of institutions like various Indian Institute of Technology (IITs), Indian Institute of Science (IISc), India Institute of Mathematical Sciences (IMSc), Indian Statistical Institute (ISI), Tata Institute of Fundamental Research (TIFR), Tata Institute of Social Sciences (TISS) to name a few, that hosted the development of Science, Social Science, and Technology in India. These institutions play a pivotal role in the pursuit of dissemination of scientific knowledge through various outreach and training programmes across India. The outreach programme by these institutions ranges from audiences at the school level to more general audiences along with more expert-level programmes for researchers and scholars.

The National Council of Science Museums formed in 1978 has been entrusted with the responsibility of coordinating bodies for 26 science museums and centres across India. In 1980, the National Council for Science and Technology Communication (NCSTC) was formed. The NCSTC has been entrusted with communication and popularisation at both the regional and national levels in India. In 1985 the Indian Science Writers' Association (ISWA) was formed with the objective to promote the profession of scientific writing in India. It collaborates with various government agencies in India to promote and encourage science communication activities (Patairiya, 2017).

The inception of Vigyan Prasar, an autonomous organisation of the Department of Science and Technology (DST) in 1989 by the Indian government is one of the most focussed initiatives to coordinate with not only various educational, academic and scientific institutions but also with museums, industries, and laboratories to aid effective exchange of scientific and technological ideas and advancements at various levels. It also organises various programmes such as debates, workshops and lectures at the state and national level in India (Patairiya, 2017).

4. Gaps in the current scene of Indian scientific reporting

In the current scenario, despite India's rich history of science, medicine and technology, the cultural heritage of India often takes centre stage in public discourse, while the scientific and technological history of India often finds itself backstage and rarely discussed in detail on public forums. The rare few attempts that are made to discuss Indian science history are often plagued

with mythological anecdotes which can at best be considered as metascience or pseudoscience as they lack scientific conviction in the modern context (Dadawala, 2014; Basu, 2015; Shrivastav, 2015).

One of the major gaps in Indian science reporting is the lack of scientific communication in languages other than English. Although scientific reporting is still not at par in India with the standards of reporting in developed countries, there is a concerning lack of scientific reporting in regional languages. To the best of our knowledge, there is only one science journal that is published in Hindi, namely, *'Bhartiya Vaigyanik Evam Audyogik Anusandhan Patrika'* while there are no science journals that are published in any other local Indian languages as per the current UGC-Care list (University Grants Commission, 2025). This lack of science communication could have its roots in the underdeveloped scientific vocabulary, concepts and jargon which are a result of the confinement of science and education to a limited section of societies in India since the time of pre-independence. There is no doubt that the spread of science education has significantly increased from post-independence until recent years. However, science is often looked upon as a tool to get better employment opportunities. And, particularly the chance of employability is perceived to be better with fluency in English communication. Thus, the incentives to put effort into communicating science in languages other than English like most other developing countries seem less in India.

Another challenge that India faces is the scarcity of proper educational infrastructure for a large section of the population. There is no doubt that several pockets of the country, mainly the urban regions have competing and world-class education institutes, while simultaneously, the sizeably populated rural regions of the country population still lack the basic infrastructure required for quality education. Tribal areas in particular are still waiting for basic life amenities to reach them (Patairiya, 2017). Superstitions, casteism, religion and class divides, still pervade a majority of the Indian population, which presents more complex challenges to get the masses on the same page in terms of the need for scientific temper. This hampers the effectiveness of the scientific communication and outreach programs created by government as well as private organisations. Considering this scenario, the need for efficient and effective scientific communication becomes imperative. Levin (2024) highlights the importance of balancing technical detail with comprehensibility to ensure effective public health messaging across diverse groups. To effectively communicate the messages related to public health, the scientific technical terms must be translated in local Indian languages in such a way that they retain the meaning and spirit of the message while being accessible to laypeople.

5. Role of translation in bridging the gaps existing in the current state of science reporting in India

India is a nation of linguistic and cultural diversity with 122 major languages and 1369 dialects as per the 2011 Census of India (Census Commissioner, 2011). This makes the reporting of science communication in Indian languages essential to have an impactful and meaningful reach to a wider section of society. Mostly, scientific knowledge is disseminated in English, which leads to the isolation of the majority population who speak local and regional languages. This has created an access barrier to scientific knowledge and awareness for a large section of Indian society as the majority of scientific

communication is neither translated into regional languages nor tailored to the cultural contexts of the diverse audience (Naik, 2022).

Science journalism plays a pivotal role in shaping the scientific temper of any nation. However, it remains underdeveloped in India. Since it is mostly in English, knowledge dissemination has not reached beyond the urban population (Patairiya, 2007). To overcome this challenge, the translation of scientific reporting into Indian languages works as an essential tool and ensures wider dissemination of scientific temper and awareness among non-English speakers. Moreover, the translation of scientific knowledge does not only involve language accessibility but also encompasses cultural adaptation to make the science relevant and understandable to local audiences. T. V. Venkateswaran, a senior journalist at Vigyan Prasar, DST, India, in a round table interview of translators, expressed his views that reflect on the need of skills that a translator requires to carry out high-quality translations as, "[...] fluency in both languages is, of course, a must, but not enough. Most engaging articles will have cultural elements that make connections with the readers. Adages, idioms, and allusions to myths or legends abound in popular science writing. This means the translator must be widely read—beyond science" (Raman, 2021).

Many regional media houses have started translating global and national scientific news into regional languages like Bengali, Hindi, Tamil and Telugu, among others but the challenges persist in maintaining accuracy and engagement. Kapoor and Ravi (2021) have highlighted the role of Indian media during the COVID-19 pandemic and discussed how it influences public perception and government policy. Speaking of the Indian scenario, it's important to understand the intersection of media, scientific awareness and policy during a crisis. Media coverage can affect public response to the crisis, as in the case of COVID-19, and how the government deals with any emergency situation. Jeff (2024) highlights the importance of balancing technical detail with comprehensibility to ensure effective public health messaging across diverse groups. Effective science communication in public health requires translating technical terms into language that retains meaning while remaining accessible to laypeople.

Literature reflects that there are infrastructural challenges in science journalism in India. One of the challenges is the lack of science communications in local languages which can foster scientific temper among the prelinguistic population. However, when it comes to regional and local outreach in other fields of journalism such as politics, sports, and movies, Prasar Bharti is doing a great job through All India Radio (AIR) and Doordarshan (DD) which serves linguistically diverse populations by presenting content in more than 23 regional languages and 146 dialects (Prasar Bharati, 2021). However, not much is done in the case of science journalism.

6. Recommendations to tackle the challenges of scientific reporting

To tackle the challenges in the translation of scientific concepts and scientific reporting, we suggest a few measures which could be critiqued and considered for implementation. These measures are as follows.

6.1. Effective use of AI

With the arrival of artificial intelligence and significantly enhanced translation tools like the early adopted Google Translate, the communication and information sector has radically changed. These tools have simplified the tasks for writers and translators by reducing the time taken to finish a task. However, these advancements in the job of scientific translation must be taken with a grain of salt. The articulation for any of these tools has improved significantly, but they are not completely accurate in casual and official translations. Also, scientific translation has an added layer of complication for these artificial intelligence and translation tools to cope with. These complications lie in the fundamental design of these tools. T. V. Venkateswaran's comments during the translator's round table reflect on the common mistakes in scientific translation,

> When common words are used as technical words, it causes confusion to some who are not familiar with the subject. For example, the word force means a specific concept in physics but can mean police force, violence, etc., in everyday usage. Also, nowadays when people use Google Translate, amusing mistakes can occur. Take the word migration. When it is a change of residence due to a new job or studies, the Tamil word used is '*iṭampeyarvu*'; however, it is not appropriate for bird migration. The term used for the seasonal migration of birds or animals is '*valacaipōtal*' (Raman, 2021).

Fundamentally, the AI algorithms are based on Large Language Models (LLMs), which basically means that these programs have learned over years of training the model. However, scientific writing especially in the Indian context has not matured enough. As mentioned previously due to the diverse social, economic and political factors, scientific knowledge has not percolated effectively in non-English speaking sections of society. Therefore, the vocabulary for regional languages often finds itself lacking when it comes to scientific reporting or translations. There is a need for the development of scientific concepts and jargon in local regional languages. Therefore, looking at the current scenario, the effective usage of AI in translation could perhaps be idea generation or understanding concepts. The concepts can be further utilized to simplify and develop the concepts in local regional languages instead of completely relying on the AI tools.

6.2. Involvement of science faculties from various institutes in science communication in their local regional languages

The early 20th century has seen a mammoth rise in science and technology. The discoveries and advancements came at a much more rapid rate and shaped the current state of life across the world. At the same time, Indian Science also emerged on the global stage. There were notable contributions from India in the global science arena such as the works of one of the great Indian scientists, Meghnad Saha who translated Einstein's work on the theory of relativity into Bengali to introduce complex physics concepts to the Indian public. There are also examples of translation work on Darwin's Theory of Evolution, and medical and health sciences work in various regional languages such as Kannada, Telugu, Marathi, Hindi, etc.

At present, India has successfully established various institutions and organizations such as IITs, NITs, NIPERs, NISERs, Universities etc., in different states of the country (All India Council for

Technical Education, 2017). These organizations have competent faculties across a broad spectrum of scientific areas. A sizable number of faculties from these institutes can contribute to the initiative of translating scientific works corresponding to their respective research area into their respective mother tongues will enrich scientific literature in local Indian languages.

Also, the institutes in different states of India could organize state-level science conferences in the regional languages of their respective states. In these conferences, the participants across the respective states could come together to present their work in local languages. This would in turn enhance the richness of science in the regional languages of the respective Indian states. Another benefit of such a program would be to aid the exchange of ideas in these languages which will greatly benefit the development of the field of science in the corresponding region. It will also lead to the percolation of science deeper into the society of the corresponding region and motivate more people to understand science and hence develop a scientific temper.

6.3. Programmes based on scientific themes at school levels in regional languages

The role of mother tongue-based school education has often been considered as one of the effective ways of imparting effective education to children. Children taught in their mother tongue often fare better in academics in the long run. Currently, in India, there are numerous programmes that are held at the school level, state level and national level to promote science culture and education among children, especially those who are in classes below high school. These programmes have been serving as a platform to integrate, assess, and recognize efforts taken by children in their pursuit of science. However, the programmes often attract students from good infrastructure and exposure which are a few in number in different states of India.

The inclusivity of such programmes could be enhanced by creating space for the marginalized vernacular schools that struggle to convey their ideas at large stages by organizing such events in local regional languages. It is very understandable that using regional languages to communicate on national forums might not be a practical idea due to the diversity that exists in India. However, such measures could be taken at the state and district levels. It has also been observed that it is easier for children to express their ideas and concepts in any other language once they thoroughly understand the scientific idea. Learning scientific ideas in their mother tongue is comparatively advantageous at a younger age, which could effectively help the children to unleash their full potential in academics (Ahmad, 2024; McCaffrey & Jhingran, 2024).

6.4. Including translation projects as part of school curriculums

In India, more than 30 percent of children have been reported to be enrolled in English medium schools (UDISE+, 2023; Education for All in India, 2025). Now, except for a large section of Indian society, English is not the primary language used in households which is the first place of experience and learning for a child. Thus, English is naturally not the first language of the children enrolled in these English medium schools (Ahmad, 2024). Also, it has been seen that most of the English medium schools lack competent and able faculties who can teach in English. This lack of faculties effectively reduces these schools to vernacular English schools where the students are half

taught in vernacular and English language, which leads to misunderstandings of concepts and poorly learnt school curricula (Chowdhury, 2019).

Organising translation as a part of the curriculum would provide a basis for students to test their understanding of the scientific concepts in their own mother tongue as well as help improve their English communication. These days, the internet is readily available in most parts of the country. Students can be guided to use the internet for doing studies related to the project they take up, such as translating books or research papers. The faculties at the school should also be encouraged to take part in such projects which could later be presented at various programmes in India. Such an effort will also contribute to the translation of scientific articles into regional languages which will build up the literature base for future generations to add upon. Such a trend will hugely boost the richness of scientific knowledge in Indian regional languages.

7. Conclusion

Due to its huge cultural, social and linguistic diversity, India presents a huge challenge in scientific communication and reporting. One of the key solutions to effectively disseminate scientific knowledge to a diverse section of Indian society can be the translation of scientific knowledge into the regional languages of India. The government has taken up several initiatives for the dissemination of common scientific knowledge at various levels and some of the efforts of recent have been commendable and must be lauded for their success. For example, the campaign for '*Swaccha Bharat Abhiyaan'* has been able to reach most parts of India. Due to its versatility, it could bring a lot to the table as a result of the translation of the campaign into various regional languages. Also, reaching out to the Indian government to the masses by means of various regional news outlets about coronavirus awareness was a commendable success.

Some initiatives by the government are aimed at promoting science education and authorship in Indian languages are worth mentioning here. For instance, the recently launched project named Augmenting Study Materials in Indian Languages by Translation and Creative Writing (abbreviated as ASMITA project) aims at creating pedagogical content in regional languages. The Commission for Scientific and Technical Terminologies works for creating technical terms in Indian languages and the National Translation Mission translates textbooks including that of science.

However, the same cannot be said about the translation of scientific knowledge. The translation of scientific content and scientific reporting in Indian regional languages has not been able to garner interest amongst the masses. It has not been able to build a base in the audience and hence, the reach of scientific knowledge apart from academic curriculum has been limited to a significantly smaller section of the society. The lack of scientific reporting in regional languages can be attributed to the dearth of scientific terminology, jargon and words in most Indian languages. One of the major challenges that translators face is putting together the scientific concepts in the regional languages with the limited scientific vocabulary in regional languages. To mitigate such challenges, translators need to adopt various strategies and involve in a lexical task known as coining or transliteration whereby they borrow the scientific words from English and localize them by altering their spellings. However, the coinage of new terms and transliteration have their own challenges, especially that of standardization.

One can argue that science like in most cases at present could be studied and understood in English. And the debate about using resources in translation could be a matter of argument. However, one must not ignore the advantage of getting science education in one's mother tongue during a child's early days. This could fundamentally impact the way children learn and understand. And, in the present age, we have witnessed instances of several Asian countries like Japan, China, South Korea and many more that support education in the language people speak in those countries.

To conclude, we have made recommendations based on our knowledge to enhance and aid the translation and dissemination of scientific knowledge in the regional languages in India. Matching with the state-of-the art technological development, we suggest a judicious use of Artificial Intelligence to gather scientific information at the primary stage to understand scientific concepts. We also point out the caveat in trusting AI completely for the job of translation in regional languages.

Further, we recommend the contribution of scientists and faculties from various Indian scientific organizations to contribute to their own regional languages which will add to the existing amount of scientific knowledge in Indian regional languages. This, in turn, will make science more accessible to the remote and marginalized sections of the society which struggle to access science due to the language barrier. The recommendations on introducing various translation programmes have been made keeping in mind the importance of scientific understanding at an early age. The active participation at the school level will help to set the groundwork for the development of a scientific attitude correctly, which will enhance the scientific temper of our future generations. All of these recommendations could be critiqued and implemented effectively to aid the cause of scientific reporting in India.

Acknowledgements

The authors wish to thank the anonymous reviewers and the editorial team.

References

Ahmad, I. (2024, February 21). *Learning in the mother tongue is the best start to education*. UNICEF for Every Child.

All India Council for Technical Education. (2017). *Institutions*. AICTE. https://www.aicte-india.org/education/institutions

Baber, Z. (1996). *The science of empire: Scientific knowledge, civilization, and colonial rule in India*. Suny Press.

Barath, H. (2019). Indian initiatives aim to break science's language barrier. *Nature*, *571*(7764), 289–289. https://doi.org/10.1038/d41586-019-01815-1

Basham, A. L. (1968). The Wonder that was India: A Survey of the History and Culture of the Indian Sub-continent Before the Coming of the Muslims. ACLS History E-Book Project.

Basu, M. (2015, January 03). *At Science Congress, Vedic aeroplanes and virus-proof suits*. The Indian Express.

Bose, D. M., Sen, S. N., & Subbarayappa, B. V. (1971). *A concise history of science in India*. Indian National Science Academy.

Census Commissioner. (2011). *Census of India 2011 - Language Atlas – India*. Census Digital Library. https://censusindia.gov.in/nada/index.php/catalog/42561

Chowdhury, S. R. (2019, January 04). *'Huge mismatch' between what Indian parents seek from private schools and what they get, finds study*. Scroll.In.

Dadawala, V. (2014, December 31). *Pseudo-science must not figure in Indian Science Congress*. Mumbai Mirror.

Deshpande, V. (2000). Ophthalmic surgery: a chapter in the history of Sino-Indian medical contacts. *Bulletin of the School of Oriental and African Studies*, *63*(3), 370–388. https://doi.org/10.1017/S0041977X00008454

Education for All in India. (2025). *Analysing the Education Landscape in India: School Numbers, Enrolment & Teacher Distribution (2023)*. Education for All in India.

European Commission. (2025). *Actions, results and services delivered by the European Commission*. European Union. https://commission.europa.eu/index_en

Fuller, D. Q. (2006). Agricultural origins and frontiers in South Asia: a working synthesis. *Journal of World Prehistory*, *20*, 1–86. *https://doi.org/10.1007/s10963-006-9006-8*

Government of India. (2025, February 14). *Schemes for Communication and Popularisation of Science & Technology*. Government of India.

Joseph, G. G. (2000). *The Crest of the Peacock: Non-European Roots of Mathematics*. Penguin Books.

Kapoor M., & Ravi, S. (2021). *Making waves in India: Media and the COVID-19 pandemic*. The Brookings Institution.

Kaushik, A., Basha, B. C., & Ganesan, L. (2020, January 02). *Science Technology and Innovation (STI) Policies in India: A Flashback*. IndiaBioscience.

Levin, J. (2024). The challenges of epidemiologic translation: communicating with physicians, policymakers, and the public. *Frontiers in Public Health*, *12*, 1–8. https://doi.org/10.3389/fpubh.2024.1270586

Mazzonetto, M. (2005). Science communication in India: current situation, history and future developments. *Journal of Science Communication*, *4*(1), 1–6. http://dx.doi.org/10.22323/2.04010901

McCaffrey, C., & Jhingran, D. (2024, February 17). *Learning in the mother tongue is the best start to education*. UNICEF for Every Child.

Meulenbeld, G. J., & Caraka, S. (2002). *A history of Indian medical literature*. Brill.

Naik, P. (2022). Science Journalism in India: Strengths, Weaknesses, Opportunities, and Threats. *Science Communication*, *44*(5), 656–664. https://doi.org/10.1177/10755470221134253

National Center for Education Statistics. (2025). *Empowering Education with Accurate, Timely, and Nonpartisan Statistical Products*. U. S. Department of Education. https://nces.ed.gov/

National Informatics Centre. (2025, March 05). *Welcome to AISHE*. Department of Higher Education. https://aishe.gov.in/

Patairiya M. K. (2007). *Science journalism in India*. Pantaneto Press.

Patairiya, M. K. (2017). *A Journey of Science Communication in India*. Technical Today.

Pickover, C. (2008). *Archimedes to Hawking: laws of science and the great minds behind them*. Oxford University Press.

Prasar Bharati. (2021). *Growth & development*. Government of India.

Raman, S. (2021, November 16). *Translators' Roundtable: Bringing Science to New Audiences*. The Open Notebook.

Shrivastav S. (2015, January 14). *Outlandish claims diminish respect for ancient Indian science: Narlikar*. The Times of India.

Snigdha, A. (2021, July 03). *UDISE+ Report: More than 42% children study in Hindi, over 26% in English*. NDTV Education.

UDISE+. (2023). *Home*. National Informatics Centre. https://udiseplus.gov.in/#/en/home

University Grants Commission. (2025). *Consortium for Academic and Research Etics (UGC-CARE)*. University Grants Commission.

Notes

Authorship contribution

Conceptualization: S. Priya
Data collection: S. Priya
Data analysis: S. Priya
Results and discussion: S. Priya & N. K. Choudhary
Review and editing: S. Priya & N. K. Choudhary

Research dataset
Not applicable.

Funding
Not applicable.

Image copyright
Not applicable.

Approval by ethics committee
Not applicable.

Conflicts of interest
Not applicable.

Data availability statement
The data from this research, which are not included in this work, may be made available by the author upon request.

Publisher
Cadernos de Tradução is a publication of the Graduate Program in Translation Studies at the Federal University of Santa Catarina. The journal *Cadernos* de Tradução is hosted by the Portal de Periódicos UFSC. The ideas expressed in this paper are the responsibility of its authors and do not necessarily represent the views of the editors or the university.

Guest editor
Umarani Pappuswamy

Section editors
Andréia Guerini - Willian Moura

Technical editing
Alice S. Rezende – Ingrid Bignardi – João G. P. Silveira – Kamila Oliveira

Article history
Received: 10-11-2024
Approved: 11-02-2025
Revised: 22-02-2025
Published: 03-2025