

Current Significance of English in Indian Education and Analysis on the Capability of Artificial Intelligence to Replace the Linguistic Medium

M. Nakulan¹

¹Class: 11 – E2
KRM Public School

Publication Date: 2026/07/30

Abstract: This study examines the evolving status of English within India's education sector, highlighting its historical significance, current trajectory, and projected influence on national development. English has long functioned as both a medium of instruction and a tool for upward mobility, shaping access to higher education, employment opportunities, and India's global economic integration. By analysing statistical data and performing required data regression, the research evaluates the extent to which English proficiency contributes to educational advancement and economic growth, while also considering whether its dominance is inevitable in the Indian context.

In parallel, the study investigates the potential role of Artificial Intelligence (AI) in reshaping linguistic practices in education. With the rapid advancement of AI-driven translation systems, adaptive learning platforms, and natural language technologies, questions arise regarding the capacity of AI to reduce reliance on English as the primary medium of communication. The research assesses both the technical feasibility and socio-cultural implications of such a shift, exploring how AI adoption could influence educational accessibility, cultural identity, and economic opportunities. Ultimately, the study offers evidence-based predictions on the future interplay between English and AI in India's education system, situating these findings within broader debates on globalization, technological disruption, and linguistic diversity.

Keywords: *Linguistic Medium, Percentage Enrolment Ratio, English Proficiency, Natural Language Processing Domain (NLP Domain), Low-Resource Languages, Digital Empowerment.*

How to Cite: M. Nakulan (2026) Current Significance of English in Indian Education and Analysis on the Capability of Artificial Intelligence to Replace the Linguistic Medium. *International Journal of Innovative Science and Research Technology*, 11(7), 1993-1999. <https://doi.org/10.38124/ijisrt/26jul1202>

I. INTRODUCTION

English continues to be the lingua-franca of the global stages and has become important for every country to have basic proficiency of. In India, it serves as the common medium for most official communications and publications, since the British colonial history, in which the activities of European and American missionaries and facilitations made by the East India Company to promote the western culture and language slowly incorporated English into the country. Repressions failed against the language, especially the Orientalist movements, The students who learnt English in the missionaries and English schools of the company were later on given government jobs.

In 1854, After the Charter Act of 1953, The East India Company's Board of Control an educational policy under the

presidentship of Charles Wood, thus known as Wood's Despatch, which re-formulated the entire education system (whose model is considered as the prototype of the current educational model of India), where he focused on science, technology and modern studies which were taught in the western format. This policy was mandated for every province under the Company.

After Independence, English was no longer the only official language of India, along with the other 22 official languages. In education, English is not mandated as the medium of schooling. Also, the emerging Artificial Intelligence, through the domain of Natural Language Processing, is apparently limiting the linguistic barrier between people, decreasing the necessity of a common language. This research studies the status of the language in

our country, the ability of AI to replace it and possible changes that may take place in our country.

II. REVIEW

The structural foundation of English in Indian education is historically rooted in colonial policy, specifically the 1854 Wood's Despatch, which established a westernized framework prioritizing science and technology. Following independence, English maintained its institutional dominance, evolving into an indispensable tool for inter-state governance, parliamentary proceedings, and judicial operations. Economically, English serves as the primary currency for India's global market integration; the multinational corporations driving the tertiary sector—which contributed roughly 54% to India's GDP in 2024—rely heavily on English for data storage and corporate communication. Consequently, public demand has surged, with English-medium school enrolment doubling from 15 million to 29 million between 2008 and 2014, eventually comprising 26% of all school-going children by 2020. This trajectory demonstrates that English proficiency remains tightly coupled with upward social mobility and premium employability skills within the subcontinent.

Concurrently, rapid advancements in Natural Language Processing (NLP) and Neural Machine Translation (NMT) are challenging the traditional necessity of a unified *lingua franca*. State-of-the-art AI translation systems currently achieve between 82% and 96% accuracy, drastically reducing real-time communication barriers. In the domestic sphere, the Indian government's deployment of the "BhashINI" platform highlights the viability of real-time, cross-lingual synthesis, as demonstrated by live translations of executive speeches into regional vernaculars. However, significant technical bottlenecks persist, particularly regarding data asymmetry. High-resource languages enjoy superior translation fidelity, whereas "passive," low-resource regional dialects often suffer from high two-way translation error rates due to inadequate training datasets. Thus, while AI demonstrates localized technical feasibility, its capacity to entirely replace a standardized linguistic medium is bounded by algorithmic bias and data scarcity.

The intersection of these two forces presents complex socio-cultural and regional implications for India's educational landscape. While English education remains deeply saturated and resilient in the southern states, parts of northern and eastern India show lower English literacy, remaining highly reliant on vernacular media like Hindi and Bengali. If AI translation tools are integrated unevenly into these education systems, it could paradoxically worsen existing disparities. The literature warns of a potential "linguistic split," where a technologically mediated northern region operates primarily via vernacular AI, while the south retains direct English proficiency. Because high-value corporate and global economic sectors remain structurally anchored in English, such a division threatens to create an economic imbalance, concentrating premium employment opportunities within English-proficient zones and fracturing national cohesion.

➤ Hypotheses

- H_0 – English has a significant role in the Indian Education and cannot be replaced by Artificial Intelligence
- H_1 – English has a significant role in the Indian Education but Artificial Intelligence could replace it effectively
- H_2 – English has become less significant in the Indian Education and can be replaced by Artificial Intelligence

III. METHODOLOGY

- A proper indicator for determining the status of English in Indian Education is searched based on the criteria that reliable official data must be available and could be mapped versus time period.
- Analysis and regression are performed based on the mapping to predict current and future statistics. Limitations of the predictions are discussed.
- Different or same indicator(s) is/are used to study the status of English in schools of the Indian states and proper reasoning with reliable evidences are extracted.
- Using the developed mapping and observed state-wise data, the quality and significance of English proficiency of regions are assessed and potential changes are predicted.
- Using the latest reports of Artificial Intelligence tools and evidences of their applications in real world, mainly in India, the reliability on and capability of AI is studied, such to answer the basic question of the research whether it can replace the necessity of a *lingua-franca* or not.
- Using the analysis, future trends and possibilities are discussed, accordingly measures
- and further research concepts are proposed.

IV. DATA COLLECTION AND ANALYSIS

➤ Enrolment in English Medium Schools

The Department of School Education & Literacy of the Union Ministry of Education of India released the data about the enrolment of students in schools of different language medium of education during only 3 years since 2008, namely the academic years of 2008-09, 2013-14 and 2019-20. This data is accessed by means of journals, reports and research publications.

The enrolment of students in English medium increased from 15 million to 29 million from 2008-09 to 2013-14^{[1][2]}. The overall enrolment of students in school increased by just 7.5% between 2008-2009 and 2013-14^[2]. The highest growth of enrolment in English medium was observed in Hindi-speaking states, namely Uttar Pradesh, Bihar, Haryana, Jharkhand and Rajasthan. ^[2]. In 2019-20, the overall enrolment of students in school was 250.9 million ^[3] out of which 26% study in English medium ^[4].

This data just gives the overall and unspecific information about the importance given by people to English Education across regions. Reports suggest that English education is preferred in all southern states and the states of Haryana and Punjab along with Delhi. Specific northeastern states like Manipur, Nagaland and Arunachal Pradesh have

their people interested in English language and literature due to strong historical impact of American-Baptist Missionaries and other European Christian missionaries right from the colonial era ^{[5][6][7]}.

Correlative study of the states with increasing enrolment in English Education gives the following results as follows:

Table. 1 Comparison of Selected Metrics with High Percentage Enrolment Ratio in English medium of Indian States

States	Percentage in Students Enrolled in English Medium (2019-20)	English Proficiency Index (2024) (out of 800)	English Literacy Rate (2011)	Human Developmental Index Rank (2022-23)
Delhi	60	406	31.7	
Haryana	50.6	511	15.6	12
Telangana	73.8	535	13.1	15
Andhra Pradesh	>67	523		20
Kerala	65	537	20.1	2
Tamil Nadu	57.6	540	18.5	4
Karnataka	46.5	517	11.8	14
Punjab	51	498	30	8

[4][8][9][10]

Apart from these states, Goa stands alone as a special case which remains at HDI Rank 1 among all other states ^[10], and had the highest rate of English literacy as per 2011 Census, of 41.8% ^[9], whose English proficiency Index lies on 501/800^[8], which is less than that of West Bengal, 526/800^[8], which is the state of least proportion of students enrolling in English medium ^[4].

While the states like West Bengal, Odisha, Bihar, Tripura ^[4] and Rajasthan ^[11], English is given very less significance, and the enrolment in Hindi and Bengali is observed to significant.

V. RESULT

➤ Regression Based on Enrolment Ratio

As per the data of English Enrolment Ratio collected, following points can be plotted with graphical regression approach.

Lagrange Interpolation or Polynomial Regression Approach:

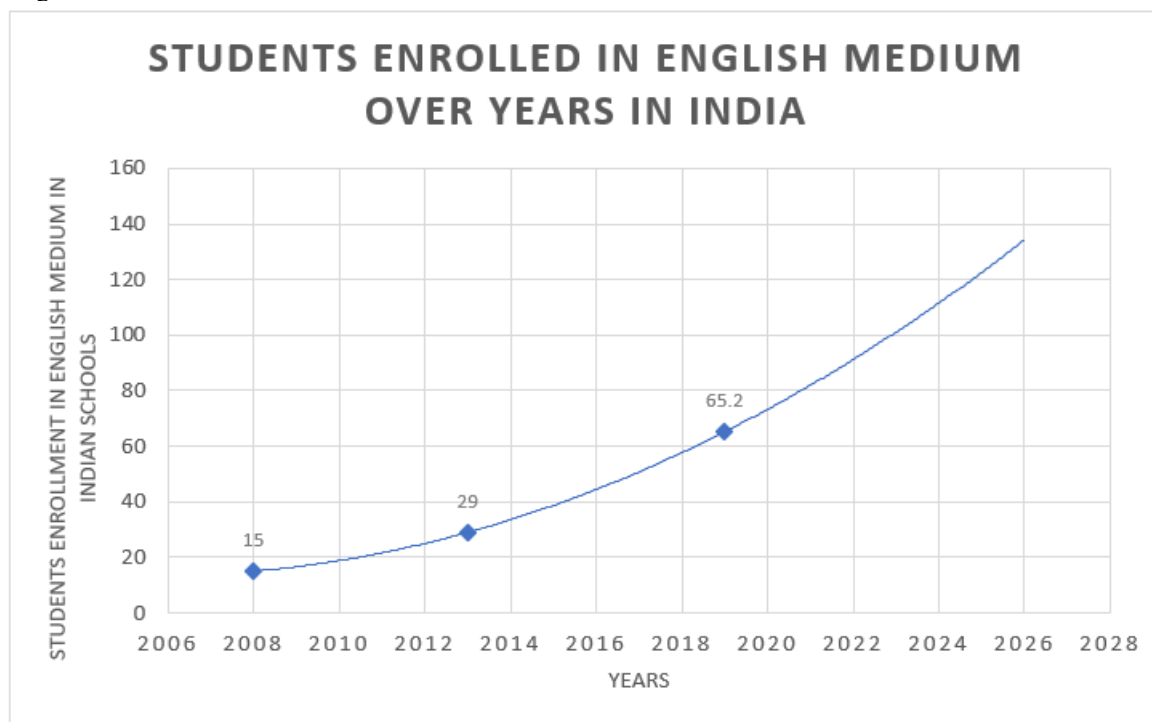


Fig 1 Students Enrolled in English Medium Over Years in India – Polynomial Approach
Regressed Value for 2025: 122.56 million; 2026: 134.18 million

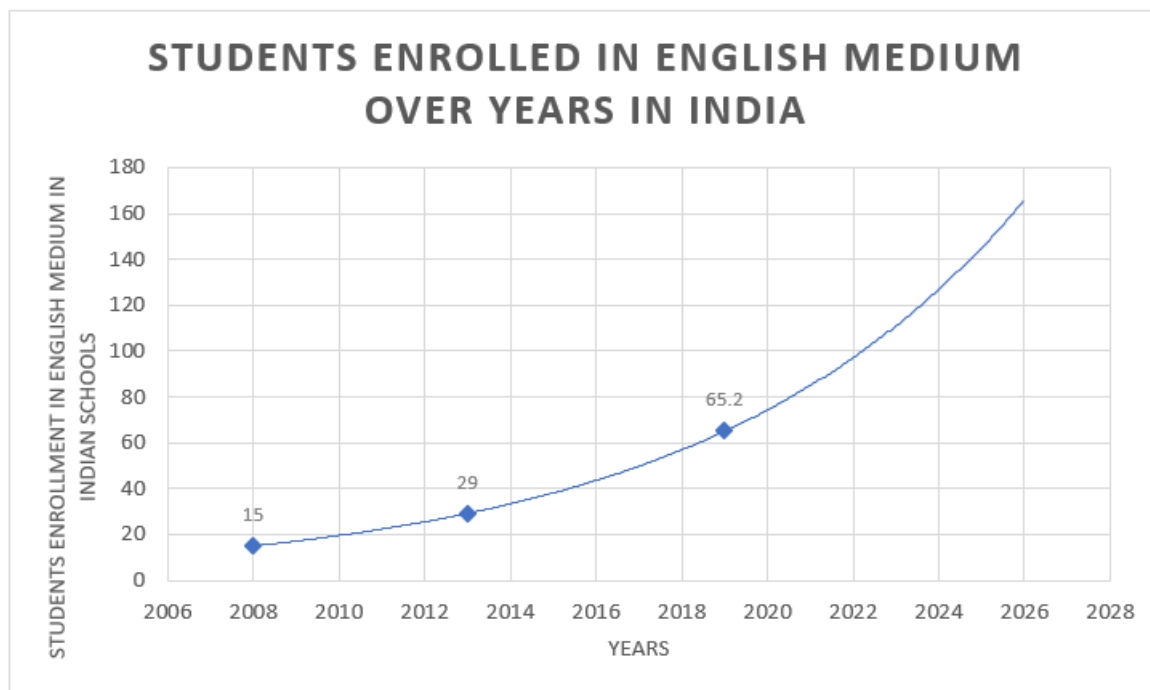
➤ *Exponential Regression Approach:*

Fig. 2 Students Enrolled in English Medium Over Years in India – Exponential Approach
Regressed Value for 2025: 144.98 million; 2026: 165.7 million

This trend predicts that the rate of growth of the language in Indian Education is increasing over time. However, this doesn't suggest any possible interpretations about the enrolment ratio of students in English medium, which is a more crucial factor to consider, rather than the total number of students enrolling in English, as the ratio is the indicator which provides the insight about the priority given by people amidst the other linguistic media of education. Also, increase in enrolment count doesn't mean precedence but maybe decreasing ratio hidden due to high increase in total enrolment, driven by population and birth rates. This model has a very big limitation and thus requires the disclosure of more data by the Government of India officially.

➤ *Analysis on the Necessity of English in India*

Considering the contribution of the MNCs to the Indian Economy that is 54% in GDP, employment opportunities and development of urbanization, the usage of the language as an official medium of communication by the Union Government with the people and the state government and inter-state affairs and judiciary system, along with evidences that the proficiency of English is a considerable factor of economic development with the presence of proper economic policies, we can observe that it is difficult to eliminate the usage of the language entirely with any other tool or language.

However, AI can replace the language in places of real-time communication and eliminate language barrier between people of different linguistic origin.

➤ *Empowerment of Education by AI*

Capability of AI to replace the requirement of a common linguistic medium is depends on the accuracy of the AI tool

in the process of translation. Among today's AI tools, there is a great bias between the languages, that languages with high-resources (has more data available about and more used in Internet) are translated properly, while the other 'passive' languages in the context of Internet can be expected to yield considerably less accuracy. Also, two-way translation error – the error when we obtain a phrase by translating a phrase from one language to another, and again back to original language, doesn't match with the original – is highly anticipated and can be observed from practical testing. In case of those languages, AI needs large datasets to comprehend. As of current scenario, AI is not capable of mediating translations to or from such languages with excellent accuracy. However, it can be achieved by training the model with sufficiently large datasets and can be implemented into action.

Our regression model relies on the count of the enrolments in the particular language, but not on the overall proportion. However, there is no evident decline in the ratio of enrolment of students in English medium, but still very low English literacy and low English enrolment ratios are observed in particular states, which are mostly saturated by Hindi and Bengali medium students.

The states which are low in the English enrolment ratio such as West Bengal, Orissa, Bihar, etc., and low but increasing ratio like Himachal Pradesh and Uttarakhand are observed to be behind in the developmental index. Thus, the schools may not get the accessibility of AI in education completely. If these states are provided with the accessibility to AI, it can completely worsen the condition of English language in their systems. Thus, this would divide India into two – South India with priority to English and North India

with priority to their vernacular language (Hindi and Bengali the most). This leads to a social diversity within the country, which would emerge as regional diversity under adverse circumstances.

Also, though the requirement of English-skilled youths remains same in many other fields but decline in English literacy and proficiency in specific states would result in rising demand for English-skilled individuals. And most of these opportunities might rest with the hands of South India, worsening the diversity economically as well.

VI. DISCUSSION

➤ *Role of English in Economy and Development*

As of 2015, United States of America stood as the country where maximum Indian settled overseas, which was around 2.25 million ^[12].

Also, Globalization is an essential factor which enabled the economic growth and establish a strong position in the global market. By enabling globalization, or the establishment of Multi-national Corporations in India, has significant effect on the economy. These MNCs are majorly operated in the linguistic medium of English, in which the communication and storage of data is taking place, which creates the educated, English-speaking population of India employment opportunities. Today, the share of globalization in the Indian Economy is huge, especially in the tertiary sector ^[13].

‘Increased access to modern technologies through globalisation and reduced import restrictions gave rise to modern services industries, like Information Technologies, engineering design and telecommunications. In 2024, the sector contributed nearly 54% to India's GDP.’

- CleaarTax.in

As per the Official Languages Act of 1863, English is the language indefinitely used for all the Union purposes and in Parliament alongside Hindi. It acts as a common medium for inter-state communication and for the states that do not communicate in Hindi to communicate with the Union ^[14]. Also, it is the constitutionally authoritative language of the Supreme and High Courts of India ^[15].

Reports suggest that with support of good economic policies, higher proficiency of English leads to higher employability skills and salaries, over people of non-English speaking countries of Asia. In such countries, people believe high English-proficiency promotes economic development ^[16].

➤ *Capability of Artificial Intelligence – Growth of NLP Domain*

As per experimental researches carried on, on the domain of NLP (Natural Language Processing), AI tools empowered with Neural Machine Learning (NMT) to perform translations are assessed According to experimental research carried out assessing the top tier AI tools of big companies like Google, Microsoft, Meta, etc.,

- AI translation now reaches 82–96% accuracy depending on the engine, language pair, and content type.
- Human translators still achieve 98–99% accuracy, making them essential for high-stakes documents. ^[17].

For high-resource languages like English, Czech, Spanish, etc., the accuracy of AI tools was maximum around 95%, while for low-resource languages like Cambodian, Fidel, etc., the maximum 88% of accuracy, Accuracy of AI tools cannot be generalised further as some tools provide better results while some do not and have an accuracy lower than even 20% ^[18].

In 2022, The Ministry of Language and Information Technology launched an AI Platform called BhashINI (Bhasha Interface of India) which is capable of translating the diverse languages of India into one another. This model aims at providing digital empowerment to all states and primarily eliminating language barriers across India ^[19].

In 2023, Indian Prime Minister Narendra Modi used BhashINI to translate his real-time speech into Tamil at the Kashi Tamil Sangham held at Varanasi ^[20]. In 2024, Indian Finance Minister Nirmala Sitaraman used the same platform during her Union Budget of India speech, which translated her English speech into Hindi ^[19].

VII. CONCLUSION

In today's world surrounded by the impact of AI, the significance of English has not reduced considerably but it is replaceable by AI in some scenarios, particularly in education, usage of AI can decrease the presence of English on a great scale. Though such models are not widely anticipated to be created with intense data training and dedicated towards education, emergence of such models could result in the discussed consequences that AI overtaking English would result in many adverse effects, socially, regionally and economically.

Thus, the government must take measures to improvise the condition of English in the regions where it is declining and emphasize the learning of English in every state, along with vernacular languages. Many government schools should be converted in English medium through which quality education must be provided equally among all the states. Emphasis on any other language nationally must be moderated.

In the end of this research, it is concluded that English, as a language, has great importance in India, but not much as a medium of education and those cases, it can be easily replaced by AI, but only under facilitations and improvisations in the training of these AI models. In South India, English education has a strong place and cannot be shaken by any other factors. This research emphasizes the necessity of collecting the data about the enrolment of students in different media periodically to map the priority given to the language at different regions, ensuring better transparency of the government policies and changes

evolving in the nation, according to which new policies could be discussed.

RECOMMENDATIONS

- Current regression models rely on absolute enrolment counts, which are heavily skewed by population growth and birth rates. To capture true societal preferences, future research should track state-level data over a continuous ten-year period, focusing specifically on the changing *ratio* of English-medium to vernacular-medium students. Applying multi-variable logistic regression to these percentages will clarify whether a genuine preference for English is accelerating.
- While AI translation platforms achieve high general accuracy, their precision with complex academic terminology is unverified. Future studies should empirically stress-test translation engines using advanced scientific, mathematical, and legal texts in regional dialects to measure "two-way translation error" rates.
- The hypothesis that an unequal reliance on AI could create a regional split—where the South retains direct English proficiency and the North relies on vernacular translation—requires deep study. Research should evaluate if multinational corporations will accept AI-mediated translation, or if direct English fluency remains mandatory for high-paying jobs.
- If AI tools are integrated into education, the digital divide must be scrutinized. Future projects should investigate infrastructure disparities between well-funded private schools and under-resourced government schools to determine if AI bridges educational gaps or accidentally widens them.

REFERENCES

- [1]. British Council. (2015). *Increase in student enrolments in English medium schools in India, opportunities and insights*. <https://opportunities-insight.britishcouncil.org/short-articles/news/increase-student-enrolments-english-medium-schools-india>
- [2]. Nagarajan, R. (2015, September 27). Number of children studying in English doubles in 5 years. *The Times of India*. <https://timesofindia.indiatimes.com/india/Number-of-children-studying-in-English-doubles-in-5-years/articleshow/49131447.cms>
- [3]. Ministry of Education, Government of India. (2020). *Unified District Information System for Education Plus (UDISE+) 2019-2020 booklet*. https://dashboard.udiseplus.gov.in/udiseplus-archive/assets/images/pdf/UDISE+2019_20_Booklet.pdf
- [4]. Nagarajan, R. (2021, April 20). 26% of schoolkids in English medium, nearly 60% in Delhi. *The Times of India*.
- [5]. Pradhan, J. S., et al. (n.d.). *History of education in India*. Fakir Mohan University.
- [6]. Chasie, C. (2026). *The history of Nagaland reflected in its literature*. Kohima Education Trust. <https://www.kohimaeducationaltrust.net/resource-material/articles/the-history-of-nagaland-reflected-in-its-literature>
- [7]. Fuchs, R., et al. (2024). *The role of English in the linguistic ecology of Northeast India*. ResearchGate. https://www.researchgate.net/publication/385661752_The_role_of_English_in_the_linguistic_ecology_of_Northeast_India
- [8]. Signum International AG. (2024). *EF English Proficiency Index (2024): EF EPI fact sheet India*. <https://www.ef.com/assetscdn/WIBIwq6RdJvcD9bc8RMd/cefcom-epi-site/fact-sheets/2024/ef-epi-fact-sheet-india-english.pdf>
- [9]. Stats of India. (2011). *What percentage of people can speak English in every state of India?* [Post]. X. <https://x.com/ischools/status/>
- [10]. Mukherjee, S., et al. (2026). *Human Developmental Index (HDI) of Indian states: 2022-23* (Working Paper No. 442). National Institute of Public Finance and Policy. https://nipfp.org.in/media/documents/WP_442_2026_4cB6QdD.pdf
- [11]. Mehta, A. C. (2026). *School education in Rajasthan: Where do we stand? A comprehensive analysis based on UDISE+ data: 2021-22 to 2024-25*. Education For All India. <https://educationforallindia.com/school-education-in-rajasthan-where-do-we-stand-a-comprehensive-analysis-based-on-udise-data-2021-22-to-2024-25/>
- [12]. Factly. (2015). *Indians settled abroad – Top 10 countries* [Infographic]. <https://factly.in/indians-settled-abroad-top-10-countries-infographic/>
- [13]. AJ. (2024). *Globalization and the Indian economy: Impact, challenges & future outlook*. ClearTax. <https://cleartax.in/s/globalisation-and-indian-economy>
- [14]. *The Official Languages Act, 1963*. Department of Official Language, Ministry of Home Affairs, Government of India. <https://rajbhasha.gov.in/en/official-languages-act-1963>
- [15]. *Article 348, Constitution of India*. Constitution of India Archive. <https://www.constitutionofindia.net/articles/article-348-language-to-be-used-in-the-supreme-court-and-in-the-high-courts-and-for-acts-bills-etc/>
- [16]. Li, Y., et al. (2022). Does English proficiency support the economic development of non-English-speaking countries? The case of Asia. *International Journal of Educational Development*, 92. <https://www.sciencedirect.com/science/article/abs/pii/S0738059322000736>
- [17]. Elite Asia. (2026). *AI translation accuracy rate in 2026: What businesses need to know*. <https://www.eliteasia.co/ai-translation-accuracy-rate-in-2026/>

- [18]. Cheng, X., et al. (2024). SCALE: Synergized collaboration of asymmetric language translation engines. *Findings of the Association for Computational Linguistics (ACL)*. <https://aclanthology.org/2024.findings-acl.941.pdf>
- [19]. Wikipedia contributors. (2026). Bhashini. In *Wikipedia, The Free Encyclopaedia*. <https://en.wikipedia.org/wiki/Bhashini>
- [20]. Times of India. (2023, December 18). ‘This is a new beginning’: AI translation tool Bhashini used during PM Modi’s speech in Varanasi. *The Times of India*. <https://timesofindia.indiatimes.com/india/this-is-a-new-beginning-ai-translation-tool-bhashini-used-during-pm-modis-speech-in-varanasi/articleshow/106066973.cms>