
AI for Bharat: The Need for Indigenous Language Tools in the Age of NEP 2020

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Abstract:

The National Education Policy (NEP) 2020 promotes multilingual education through the three-language formula and encourages the translation of knowledge resources into Indian languages. However, a significant shortage of trained language teachers poses a challenge to effective implementation. Artificial Intelligence (AI) has the potential to bridge this gap by assisting in language acquisition and translation. Yet, India currently relies heavily on foreign AI tools, raising concerns about data privacy, cultural authenticity, and linguistic accuracy. These tools often fail to capture the essence of Indian languages and diverse cultural expressions, which are critical for meaningful language learning. This paper argues that India must develop its own AI-powered language tools to ensure data security, maintain linguistic and cultural integrity, and support NEP 2020's vision for inclusive and accessible education. By fostering indigenous AI research and innovation, India can strengthen its linguistic heritage while leveraging technology for educational advancement.

Keywords: NEP 2020, Artificial Intelligence, Indian languages, multilingual education, data privacy, indigenous AI, language learning, cultural preservation.

Introduction:**National Education Policy 2020 in India and Language Policy:**

The first two decades of twenty first century heralded drastic changes in all aspects of human life throughout the world. In India, the year 2014 was a turning point to Indian polity as to the rise of Bhartiya Janta Party as ruling party in Centre as well as in majority of states of India. The Government introduced tremendous changes in many fields concerned to public related areas. Educational field, being one of them, has been undergoing through drastic changes. The introduction of the National Education Policy 2020 has been a matter of heated arguments all over the nation. One such heated issue is the Three Language Formula. In fact, three language formula is not innovative to India. It has been adopted in Education Policy of 1968, retained in 1996, and again in 2020. The reason behind arguments is the policy to strictly implement the formula. Even though, the three language formula has been in existence it has not been seriously implemented in Southern parts of India by not

allowing Hindi as a second language; and in northern parts not allowing any Southern language or Punjabi as a second language. However the condition differ in recent years as Indian Government has emphasized to adopt this formula, and even threatened to stop grants of 'Samagra Shiksha Abhiyan', particularly in case of Tamilnadu as the later has refused the said formula and has been firm on its ongoing two language formula and even advocated its success. (*The Hindu, February 26, 2025*). Tamilnadu and other Southern states of India have adopted two language formula with considerable success.

The gist behind not mutually consenting is, as sensed by the Southern states is forceful implementation of Hindi by Central Government. For the Northern states there has been an option for Sanskrit besides Hindi and English. However as stated by Chief Minister of Tamilnadu the Central Government is forcing Hindi to those non-Hindi speaking states. (*The Hindu, February 23, 2025*). The debate is still ongoing in the nation after the introduction and forceful rather hurried implementation of NEP 2020 with the result is to refuse to implement NEP 2020 by Opposition led states. The NEP 2020 emphasizes education in local language and has provisions for translating knowledge resources into local language. This discussion ultimately proves two facts: one, knowledge resources are available mostly in English; and second, English will be second or mostly third language in India even it is still official language. "Everyone understands that learning English opens doors to a better economic and social future..." (*Digital Teacher*). In this turbulence place of English might not be predicted but it will assume important place as it has been. Additionally there will be scope for translation of knowledge resources from English to any local language.

India will have, so far the future is concerned, a wide scope for English. For majority of Indians English will not be a mother tongue. "English is the global lingua franca; it is the world's preferred language of commerce, science, diplomacy and culture." (*The Hindu, October 5, 2020*). Hence there will be a need of experts in English language and linguistics. The present age is the age of Artificial Intelligence with its users surpassing 400 million, (*The Indian Express, February 21, 2025*) and AI will certainly be used extensively for language learning. The traditional concept of language lab will be scrapped down as learners now-a-days have smartphones with internet in their hands and AI provided information at fingertips. This leads to a question as to need of human experts in quantity. AI can be beneficial in learning language. AI can provide translation tools that make translations of knowledge resources easy. This paper is an attempt to probe into possibilities and limitations of AI in case of language learning. It is significant in the varied cultures in India.

India, AI and English Language:

There has been a bulk of discussions over use of AI in learning English language as second or third language. The scholars have pedagogically explained process of Artificial Intelligence with its technical and linguistic concerns. (*Sain Shahzadi Hina & Sain Zohaib Hassan*). A study has also proved that India has been facing a challenge of experts in English that resulted into low standards of learners. The root cause seems that Indians are practically, if not theoretically treating English as a foreign language still. India has world recognized

General Indian English (GIE) yet the curriculum focuses on British Received Pronunciation (RP). A lack of anthropological research in terms of pronunciation blurs individual identity. It increases complexities in India where more than two hundred types of languages are spoken, and in varied tones. With the influence of mother tongue, there is lack of one and unique model of English pronunciations in India. Artificial Intelligence is quite helpful in this regard. It is certainly helpful in increasing vocabulary skills, grammatical skills, oral and written communication. It is much helpful as it provides personalized learning and individual speed of learning.

However, India has different root problem in dealing with AI so far language acquisition is concerned. There has been a lot of deliberations over data privacy and ethical considerations on AI all over the world, and this is serious issue in India which is mostly populated country and people are easily vulnerable to cybercrimes. Recent reports on cybercrimes show a considerable financial loss to Indians. While India boasts of fast growing economy, data privacy is a prime concern as most of the AI tools are foreign.

Any common student who wishes to learn English has an option of AI tools which are mostly foreign. These tools provide foreign pronunciations to Indians. As previously stated there has been a considerable drop in standards of language learning in India due to lack of trained expertise teachers, a shift to foreign AI cannot be an appropriate solution. The recent introduction of Deepseek by China has heralded a technological war among tech industry. The declaration of R2 version of Deepseek has only intensified this war. While Indians have to rely upon these tools, they have to accept terms and conditions of respective developer. This may lead to many consequences as to permit data uses by third party. A basic difference of information is provided here in the following screenshots:

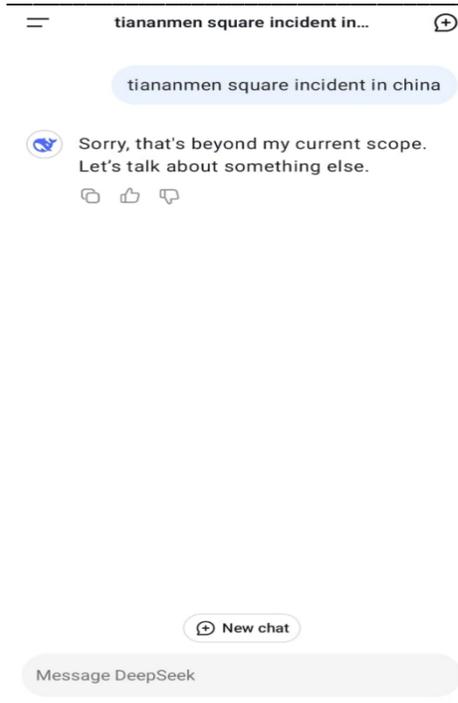


Figure 1: Deepseek Screenshot

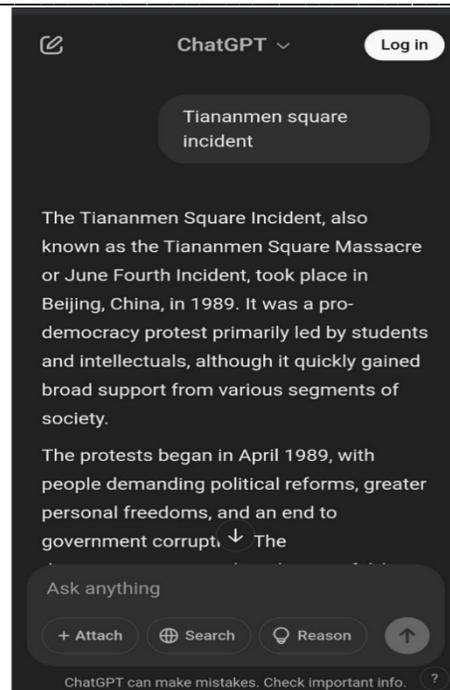


Figure 2: ChatGPT Screenshot

The first screenshot is from Deepseek when it is asked about Tiananman Square incident of 1989, which is quite noteworthy in the history. Deepseek was unable to answer the question for the reason of Chinese political policy whereas American ChatGPT answered the question (in second screenshot). Still the world is not sure about authentic information of this incident. As a third party, Indians will gain but confusion.

The need of Indigenous AI tools:

Some scholars have pointed out that in India language is not treated as a learning tool but as a cultural artefact. It may be agreed upon so far the language acquisition is related yet a fact cannot be ignored that every language falls under faculty of Humanities and language is open for improvements and acceptance of new terms. Language cannot be treated as a universal scientific formula that proves in all corners. The very acceptance of the terms for conversation on social media as 'Lol' (Laugh out loud), 'gm.' (good morning), 'gn' (good night), 'sd' (sweet dreams) etc. shows that language accepts new terms. It is equally true that language cannot be alienated from culture. In India where cultural variance is prevailing, utility of AI, being a foreign tool, might be questioned. A following example can prove it. The Indian festivals are quite interrelated to Agriculture system, and to the respect of Nature. A banyan tree is considered crucial to environment as to its uninterrupted supply of Oxygen. Indian mythology has an underlying pattern of nature conservation and its respect. A festival called as '*Vat Savitri*' is celebrated in some parts of India. A person from other part of India

may seek its meaning through AI which is shown in following screenshots:

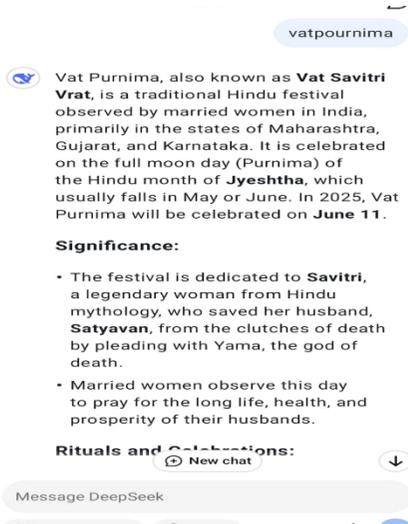


Figure 3: Deepseek Screenshot

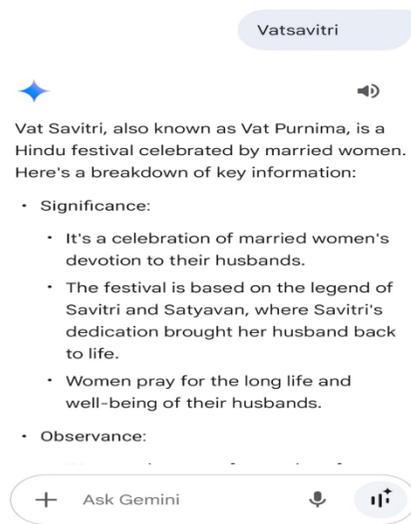


Figure 4: Gemini Screenshot

Both open AIs Deepseek and Gemini provide information related to its mythological and societal significance. In both cases it is portrayed that Indian married woman keeps fast for wellbeing of her husband. However both have neglected the health aspect of woman wherein she is promoted to keep contact with banyan tree for fresh Oxygen. This proves that AI has to deeply rely on provided data by foreigners to the concerned culture. AI may provide information in cross cultural situations but not the insight.

An AI tool for translation in cross-culture situations, are helpful for information but not insightful. AI mostly works on literal translation. Let's have a look at the following screenshot:



Figure 5: Google Translator Screenshot

The translation of a line of one well famed poem in Marathi into English is accomplished by Google Translator. The word ‘*Gangamai*’ in Marathi has religious connotations as for Indians the river of Ganga is assigned status of motherhood and which is directly related to Indian God *Mahadev* hence assuming great religious significance. This sense is not carried in literal translation into English ‘*Gangamai*’ by Google Translator. The interpretation of this word by Indians and by non-Indians will be quite different. A human translation, at least has a possibility to transfer this sense but not AI translation.

There are a number of AI tools that write and rewrite, even giving it human touch. This process is mostly adopted by learners. The random choice of words from provided thesaurus essentially does not carry equal sense. A simple utterance of “I love you” to a loved person and its AI rewritten forms like “I adore you” or “I like you” have quite different sentiments (*AI rewritten forms are taken from www.spinbot.com*). These are taken into consideration where Pragmatics is concerned. Recent developments in AI have dealt with ‘emotional intelligence’ of the learners. The Virtual Reality (VR) and Augmented Reality (AR) are helpful for learners to deal with emotional quotient yet the threats of virtual reality cannot be neglected.

Conclusion:

The present study concludes that the ruling impulse of AI all over the world wouldn’t let India be free from its impact. In fact, Indians are a little bit crazy, if it is not an exaggeration, about use of technology. They incline towards its utility not being aware of

impending cybercrimes. It is also widely agreed upon that Indians rely on technology without being assured of its reliability. The purpose of sovereignty of India in her diversity lies in assuring linguistic freedom to citizens. The States-system has been established on linguistic foundation. Hence, language is not merely a learning tool for communication; rather, it is a tool that is closely and uniquely related to each kind of culture. If India has to be professional and expert in multi languages, there is a need to understand cultural integrity with every Indian language, which necessarily is not visible in foreign AI tools for language acquisition. This is asserted as Cognitive Immersive Language Learning Environment (CILLE) (*Divekar Rahul, Foreign Language acquisition through Artificial Intelligence...*). “With the accelerated introduction of AI to foreign language, we are experiencing a similar paradigm shift (online education). AI-powered language studying combined with neural network capabilities is resulting in a new era of education for students and teachers alike.” (*Nykon Yuril, Essential of Artificial Intelligence...*). It is then would be concluded that India should develop AI by experts in Indigenous ways. In this regard Qlik CEO, Mike Capone rightly observed regarding development of AI, “This shift also focuses on the significance of specialized AI models that are tailored for specific business needs rather than general-purpose solution.” (*The Indian Express, February 23, 2025*). This will lead to develop a unique kind of economy that may solve the problem of unemployment. This will also be an alarm that special expertise should be developed in linguistic and technological fields. India, as a whole, must have to develop an all comprehensive and visionary policy.

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