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COVER STORY

# The Wonder of Language



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## The Wonder of Language

The Science of Linguistics to be taught in schools and colleges to make language lessons engaging.



*Studying linguistics boosts cognitive skills, reveals cultural depth, and highlights AI's limits in translation, urging inclusive, data-rich language education.*

Will children who study two languages develop better cognitive abilities than those who learn only in the mother tongue? Why certain words are feminine in one language while masculine in another language? Are languages entirely different from each other or share some common characteristics such as morphology, semantics and syntax?

Linguistics or the science of language if taught to children from early learning can help them better understand the common patterns in language and create a sense of wonder in them, according to Dr Prakash Chandra Mondal, Associate Professor in Liberal Arts at IIT Hyderabad. He was a panelist at the **119th Rajagiri Round Table Conference (RRT)** held

on August 13, 2025, online on the topic, Linguistic Diversity: A Blessing in Disguise in the AI Age.

He pointed out that study of languages and pedagogy throws up some interesting insights for educators. Some doctoral scholars under him who did a study on the cognitive scores of children who learn through mother tongue and those who learn two languages showed that children who learnt only through mother tongue had better cognitive scores.

The language we speak shapes how we think and perceive reality. It can help rewire the brain to see the world differently, according to the linguistic theorists of the 20th century, Edward Sapir and Benjamin Lee Whorf. According to Sapir-Whorf hypothesis, the grammatical and verbal structure of a person's language influences how they perceive the world. It emphasises that language either determines or influences one's thoughts.

Mr Aravindan SS, expert panelist at 119th RRT pointed out the subtleties of various languages in the world. In Russian language, blue has different expressions- light blue, dark blue which makes a Russian native to understand the subtleties of colour much better than an English native. In English language time travels horizontally- before and after. But in Mandarin it is up and down. In Spanish, the word Bridge is masculine - so they are built to be strong and sturdy not on aesthetics. In German language, bridge is feminine which requires such constructions to be aesthetically good.

## **Language and AI**

It is not just the advances in machine learning that helped in machine translation of languages but the linguistic theories developed by Noam Chomsky, considered the Father of Modern Linguistics. His formal theories of language helped shape machine learning and computational linguistics, according to Dr Prakash Chandra Mondal. But as time passed by Chomsky became disillusioned with the emergence of modern technologies and algorithms developed for machine translation of languages. The training of Large Language Models using datasets actually evolved from the computational linguistics developed by Noam Chomsky and not based on technological advancements. Chomsky's theories helped developed those technologies.

AI tools are taught to understand the morphology, syntax using large sets of data and certain patterns or regularities are identified by machines. This makes it easier to predict the next word in a sentence and this is the basis on which LLM models are built.

Linguistics has to be taught as a science of language. The tone, syntactical structure, morphology has to be taken into account. Indian languages especially, Dravidian languages are morphologically rich. Each word has a lot of affixes attached to them, marking tense. When you teach a learner how a language can mark certain things in a particular manner, how such things can also be observed in other languages, so understanding that regularity or uniformity helps appreciation of various languages. "Mark" refers to how certain grammatical or semantic features such as tense, aspect, gender, number, case politeness

are expressed in languages. In English past tense is marked as 'ed' while in Japanese, it is marked as Aruita. In English plural is marked by 's' while in Arabic internal vowel changes are used

### **Limitations of AI**

The nuances involved in the human thinking process, which are represented in literature, are not yet understood by AI tools, according to Peer Mohamed Azees, translator, literary agent who was an expert panelist at the 119th RRT.

When using AI tools for translation and understanding other languages, the limitations are created by hallucination and catastrophic forgetfulness. In the former case, it fabricates information or meaning, while in the latter, it forgets something it has recently learned. AI has acquired a monocultural character as it was trained in a few dominant languages, which produces a homogenized worldview. Therefore, it lacks cultural depth, according to Mr Aravindan SS.

Banu Mushtaq who won the Booker International Prize for 2025 for her Kannada short stories, **Heart Lamp** calls herself a villager without any intellectual pretense. The translator should be able to convey this in the translation. This is what the international literary community appreciates according to Peer Mohamed Azees. When translating the Booker Prize winning Tomb of Sand by Gitanjali Shree, Daisy Rockwell had to expand a lot of passages from Hindi to make the theme understandable to UK natives. The context may have to be explained in the translation. In such cases it may take upto 10 drafts before it goes to print.

### **Language Pedagogy**

Dr Hari Madhab Ray, Asst Professor of Linguistics at JNU, who was a panelist at the 119th RRT pointed that language was earlier considered as a certain kind of behaviour and practice can help master it. However, modern linguists such Chomsky pointed out that language cannot be viewed as a set of behaviour alone and this led to the development of new teaching methods beyond Grammar Translation Method. He pointed out that educators must be trained in modern language teaching methods:

- Communicative Language Teaching (CLT),
- Duolingo and blended learning approaches and AI-assisted language learning tools.
- Encourage multi-method teaching combining traditional and AI-enhanced strategies.

Prof Dr Dilip Sarkar, Dept of English at Maharaja Bir Bikram University in Tripura, expert panelist at the 119th RRT pointed out that despite the importance given to mother languages in the Constitution and also in the New Education Policy 2020, students are denied the privilege to learn in their mother language. In Bengal and Assam, the language people have been using for many years has been suppressed and a predominant language emerges sidelining Tribal languages and dialects.

The expert panel was of the view that AI native education models that support linguistic diversity and contextual understanding must be adopted in schools and in higher education. Corpora for minority languages should be developed to enrich the AI data sets and to prevent monocultural bias.

#### About the author

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*Sreekumar Raghavan is an experienced media professional and trainer. He is presently Editor of Pallikkutam, The Education Observer and hosts the monthly event, Rajagiri Round Table Conference.*