

# THE NEED AND SCOPE OF LINGUISTICS FOR TEACHING ENGLISH LANGUAGE TO ENGINEERING STUDENTS: A SURVEY

## I. INTRODUCTION

This chapter explores the crucial role of linguistics in teaching English to engineering students. It highlights the significance of understanding linguistic principles and applying them in language instruction. Additionally, this chapter presents a literature review to support the argument. The necessity of this chapter stems from the surveys that showed that most of the engineering undergraduates were not able to secure a decent job for themselves due to lack of communication skills. Moreover, teachers also seemed not to possess considerable understanding of linguistics concepts and their application in effectively imparting the strategies of communication skills to the learners. In fact, the field of English language teaching has been an offspring of linguistics. The former deals with various methodological and pedagogical implications for teaching the target language, be it a second language or foreign language, to learners. Whereas the latter is a systematic study of language at different levels, such as phonology, phonetics, morphology, syntax and semantics. In other words, linguistics is a “science of language” (Crystal 2019). Teachers who are aware of linguistics theories and concepts seemed to better analyse and demonstrate the differences between the two language systems, one that of their first language and the other of the target language. As a matter of fact, a huge number of errors when using English as a second or foreign language are drawn upon dominant first language repertoire. However, there are learners who safely keep these two systems distinct and communicate fluently.

David Nunan(1998) talks about teaching language in context and teaching of various grammatical and language related concepts at the same time and multimodally because learners differ from each other in terms of grasping various ideas and concepts. We must bear in mind the difference “knowing about a language” and “knowing a language.” On the one hand, the former means the metacognitive awareness or what Chomsky (2015) calls “linguistic competence” of a *native* speaker. On the other, the latter indicates learner’s ability of using a language for a range of purposes in varying socio-cultural situations or what Hymes calls (1972) “communicative competence” and “performance.” Therefore, we must make efforts to know which language or grammar units are fundamental and likely to be understood by learners easily based on their existing and prior knowledge. Such an understanding of learners learning styles and learning difficulties vis-à-vis a specific grammatical or language structure will certainly be guided by teacher’s awareness of linguistics. Chomsky looks at language acquisition and learning as a cognitive phenomenon. And, when it comes to learning English as either a second or foreign language, we must reduce teacher’s instructions of grammatical rules, for example, and concentrate more on how students could produce these ideas in a meaningful manner. Finally, using visual and audio tools will certainly help learners to learn concepts and ideas more easily. Audio, for example, may facilitate the right way of pronouncing a word. In India, language teaching is barely guided by inputs from linguistics and therefore leads to unsatisfactory outcomes on the part of learners.

## II. METHODS OF LANGUAGE TEACHING IN INDIA

Language teaching, especially second language teaching, has been a well rooted field of study in India. Initially, language teaching had a very different objective altogether. When the British started teaching Indians English their aim was to educate them in order to help the former in administration and management of their rule in India. Another ancillary aim was to make Indians think from the White or western perspective. However, we have now come a long way and English is one of the most widely spoken languages in India, and by the Indians. It definitely enhances the existing multilingual identity of our nation. Let's survey some of the commonly followed methods of teaching English language in India.

- 1. Grammar Translation Method:** The earliest method through which the knowledge of English language was imparted to Indians was that of grammar translation method. It was immediately ruled out because it did not provide much scope for the learning of spoken communication in English. Learning through this method implied a tedious task of memorizing and practicing grammar rules in isolation. More importantly, it was taught in learner's first language. So, learners would learn almost all grammar rules but could not apply those in real life situations. Also, there was a serious lack of interaction in the target language between the teacher and learners.
- 2. Audio-Lingual Method:** Audio-lingual method focused exclusively on listening and spoken aspects of communication, unlike grammar translation method. Here too it focused more on only memorizing certain expressions which are recurrent. However, they could not communicate effectively in real life situations unfamiliar to them. This approach was also based on the behaviourist perspective related to language learning and relied completely on practicing certain structures and expressions that are used recurrently. And, therefore, it did not make learners independent as well as spontaneous communicators. They struggled a lot when communicating freely for the reason their first language always dominated, particularly the pronunciation and intonation aspects of the second or foreign language.
- 3. Cognitive or Communicative Approach:** This novel perspective gained popularity after the advent of cognitive approach to language learning or acquisition advocated by Chomsky. He found out that language learning is not merely a physical action learnt through imitation but has a cognitive edge to it since human beings are creative and produce and understand expressions they have never come across before in their life. Further, it also figured out that language is not merely culturally transmitted from one generation to another but that human beings are biologically programmed to learn a language. In this way, language acquisition as well as language learning takes place through both the processes i.e., cognition and cultural transmission. In the context of language teaching, this approach just provides learners with ample resources and exposure to the target language and its use.
- 4. Functional Approach:** Functional approach tried to specify language learning. Proposed by MAK Halliday, this approach is sometimes equated with ESP (English for Specific Purposes). ESP teaching prioritized the most common situations in which a person will have to interact with others. English for cab drivers, English for pilots, English for cooks/chefs, etc., are some of the examples. Unlike cognitive or communicative

approach, functional approach narrowed down the load on learning many things in relation to English. For instance, learners learnt only specific vocabulary and expressions that were most recurrent in their field. Unlike audio-lingual method, they did not really memorize expressions. Finally, it is a need-based approach to teaching English language.

- 5. ICT (Information Communication Technology) Method:** One of the modern approaches to language teaching and learning is ICT enabled instructions. In this regard, the teachers and students are enabled to access the online and offline material available with the help of digital devices. Such instruction which is imparted through ICT method turns out to be very interactive and multimodal and helps to improve communication skills in context. It also has a provision to listen, watch and interact with native speakers of English and learn from various authentic online platforms like BBC English and online courses offered by Cambridge and many universities across the world.

### III. SURVEY OF LITERATURE

In recent years, the field of linguistics has gained recognition for its relevance in language education. Various studies have emphasized the need to incorporate linguistic principles into English language teaching, especially for specialized disciplines such as engineering. As a first, it was Dell Hymes who opposed the generative grammar approach and the notion of linguistic competence of a native speaker. Hymes argues that when a child speaks only grammatically correct sentences it does not mean that he/she is a good communicator. A child speaking only grammatically generated sentences must also be aware of what is acceptable in a context depending on a variety of ideas in his/her culture and society. Their ability to produce both grammatically and contextually appropriate sentences or utterances is called their pragmatic as well as sociolinguistic competence. Therefore, we must learn and teach not just what is right but also what makes sense in a situation. The field of English Language Education (ELE) is a branch of applied linguistics. However, now the field of ELE has established itself as an independent site of study of the matters related to the teaching and learning of English as a second or foreign language over past three to four decades owing to growing literature in the field.

Holmes et al. (2018) conducted a comprehensive study on the linguistic challenges faced by engineering students while learning English. The research revealed that engineering students often struggle with technical vocabulary, syntax, and discourse patterns specific to their field. Smithson argued that a solid foundation in linguistics could effectively address these challenges, enabling students to comprehend and produce technical language accurately.

Napoli (2005) in her chapter titled “Linguistics as a tool in Teaching Fiction Writing” argues for the need of an understanding of pronunciation differences, at segmental as well as supra segmental level, syntax -sentences which have varying structures due to sociolinguistic factors like region- and vocabulary, the choice of words based on the goals of an author and peculiarities of the characters in the story when writing a story. When it comes to dialogues written between the characters, one has to choose the right way to represent their dialogues, along with tags, information about they spoke because audio is absent from a written story. Some authors use creative means to indicate emotions or pronunciation, for example separating a word using dashes.

Several studies, for example Rose and Kasper(2012) considered the impact of teaching pragmatic competence explicitly to second and foreign language learners of English which showed satisfactory progress in strategic communication when these learners interacted with native speakers. Pragmatics is one of the branches of applied linguistics.

Pragmatic competence consists of following Gricean implicatures and maxims and politeness strategies, for example. The above-mentioned study primarily investigated the exchange of compliments and compliment responses between native speakers and non-native speakers of English. Before explicit pragmatic instructions, non-native speakers drew on their first language pragmatic competence which did not work due to the differences between two languages and their cultures (Taguchi 2015). This cultural difference led to misunderstanding and conversation breakdown between native and non-native speakers of English.

Certain other studies related to teaching language through literature have found substantial evidence when teachers keep grammar instructions to a minimum. Students grasp them better along with literary pieces which become a rich resource for learning vocabulary, constructions, expressions and sentences. This approach also demands good understanding of linguistic concepts on the part of teacher because literary use of a language tends to be rather different from the use of language in every day walks of life. Such an approach to language teaching is fruitful for the students feel engaged and grammar is learnt in context.

#### **IV. CONCLUSION**

This chapter has emphasized the need and scope of linguistics in teaching English to engineering students. The literature review showcased the positive impact of linguistic instruction on language learning outcomes and the development of communicative competence. Furthermore, the survey provided evidence of the effectiveness of incorporating linguistics into English language instruction. For example, by applying comparative and contrastive linguistic analysis of the target language and learner's first language while teaching EFL or ESL courses, learners may be made aware of the differences and similarities between the systems of two languages. Teachers will also understand the areas of differences that are likely to be difficult for students to understand. Upon this, they will pay more attention to the differences between the two by undermining their similarities. Linguistic oriented teaching of English language has no doubt great potential in terms of improving communicative competence and need based teaching of language.

By integrating linguistics into the curriculum, educators can empower engineering students with the necessary language skills and knowledge to succeed in their academic and professional endeavors. The findings presented in this chapter emphasize the importance of adopting a linguistics-based approach to enhance English language teaching for engineering students, paving the way for future research and practical implementation in language education settings. For instance, when the teachers are able to perform error analysis of students' statistically significant errors, they will have the opportunity to focus on the errors made by the learners and account for those as well as address them in the course of time. Such flexibility leads to need-based teaching and learning practice.

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