Analysis of Intercultural Proficiency in Speaking Skills among Final-Year Engineering Students of Private Technical Institutes in Delhi NCR

Mr. Abhishek Rai*

Research Scholar, School of Humanities and Social Sciences, Sharda University, Greater Noida, Uttar Pradesh

Dr. Gurpyari Bhatnagar

Associate Professor, School of Humanities and Social Sciences, Sharda University, Greater Noida, Uttar Pradesh

Dr. Priti Sarmah

Assistant Professor, Department of English and Foreign Languages, Girijananda Chowdhury University, Guwahati, Assam

Dr. Rashmi Verma

Assistant Professor, Department of Applied Science, GL Bajaj Institute of Technology and Management, Greater Noida, Uttar Pradesh

Abstract

This study focuses on the challenges faced by final-year engineering students from private technical institutes in the Delhi NCR region regarding their English-speaking skills. It is expected that engineering students need to work on their communication skills, which will help them emerge as efficient technocrats and secure placements in reputable companies. However, it has been observed often that a student may be technically proficient, but unable to communicate effectively in the target language in real-world situations due to specific cultural barriers. This study aims to focus on improving speaking proficiency and ensuring intercultural communication as a factor that may hinder mental and professional growth. The research study also focuses on and emphasizes how to overcome specific challenges through its analysis study and results.

1. Introduction

In today's global work environment, intercultural communication is of utmost importance, as it enables organizations to successfully navigate diverse marketplaces, build stronger teams, and foster creativity and innovation. Businesses can enhance their level of success in the global market by tailoring their products, services, and marketing strategies to resonate with diverse cultures and markets. This can be accomplished by understanding and respecting any cultural differences that may exist.

When it comes to the role that Indian technocrats play in international collaborations, it is impossible to deny that they play a significant role. They achieve this by leveraging their expertise and innovative thinking to address global challenges, particularly in the areas of science, technology, and innovation (STI). They contribute to the sharing of information, encourage joint research, and propel technological developments that benefit India as well as the nations with which it collaborates.

Having stated that, we cannot ignore the challenge presented by gaps in speaking skills in intercultural contexts. This dilemma cannot be ignored. These gaps in speaking skills develop in multicultural contexts due to differences in language, cultural norms, and varying communication styles. These differences can lead to misconceptions and potential hurdles to effective communication. In addition to challenges in expressing oneself, difficulties in interpreting nonverbal cues, and difficulties in adapting to social settings, this may manifest in various ways.

2. Aim of the Study

This research study aims to investigate the struggles faced by final-year engineering students of private technical institutes in Delhi NCR in speaking the English language and to identify the barriers that hinder their ability to express their thoughts and ideas in formal situations. The study aims to propose recommendations to enhance their spoken English skills, thereby improving career opportunities and overall professional development.

3. Objectives

The following three research objectives serve as the impetus for this paper:

- To assess the present level of intercultural speaking competency among engineering students who are in their fourth year of study at private engineering colleges in Northern India and are working toward obtaining their Bachelor of Technology degree
- To identify specific obstacles encountered in intercultural communication
- To recommend strategies that can be implemented in the realm of education or training for improving English speaking skills among Engineering students

4. Literature Review

To conduct this study, the researchers and authors reviewed various research articles and studies in this area to identify their implications and to pinpoint research gaps.

The capacity to interact between people of different cultures in a way that is both successful and suitable is referred to as intercultural competence (ICP). Assessing this competency, particularly through speaking abilities, has gained significant relevance in English Language Teaching (ELT), especially in multicultural contexts such as India. This is especially true in India. Research on intercultural education has several significant goals, one of which is to lay the groundwork for pedagogical approaches that are both innovative and suitable for classroom use. Because of this, it is necessary to conduct an in-depth analysis of the theoretical frameworks that serve as a foundation for learning and teaching, as well as those that provide the foundation for our study.

- Speaking is regarded as a productive skill and a significant indicator of one's ability to communicate effectively. Due to the emphasis on technical abilities over soft skills, insufficient practice-based language training, and linguistic and psychological hurdles, engineering graduates often lack adequate speaking fluency (Anand & Kaur, 2021). Speaking abilities are essential in technical situations since they contribute to clarity, confidence, and cultural appropriateness. This is especially true when working with a wide variety of stakeholders.

- According to research conducted by Kumaravadivelu (2008) and Sharma (2022), the majority of technical colleges in India provide English classes that are linguistically focused rather than culturally inclusive in their curriculum. The incorporation of multicultural topics into speaking practice is relatively uncommon among teachers. When participating in group discussions and interviews, students from rural backgrounds often struggle with intercultural cues, such as tone, courtesy, and eye contact, due to their upbringing.

- Mishra and Verma (2019) conducted a study on engineering students in the Delhi National Capital Region (NCR). They found that, although the students had a good understanding of technical jargon, they struggled with culturally sensitive communication when addressing conflict, providing criticism, or public speaking in diverse groups.

- Frameworks for Assessing Intercultural Speaking Competence. Research conducted by Jin and Cortazzi (2013) emphasizes the integration of self-perception tools (such as reflective journals) and performance-based assessment methods (such as role-plays and presentations) to evaluate intercultural competency.

- The research conducted by Gupta and Mehta (2020), Rani and Joshi (2018), and Chakraborty and Singh (2023) is some noteworthy examples of earlier research. As a result of cultural misunderstandings, Gupta and Mehta (2020) discovered that 68 percent of students attending engineering institutes in the National Capital Region experienced communication breakdowns in group assignments. As of 2018, Rani and Joshi highlighted the paucity of cross-cultural scenarios incorporated into speaking practice, such as discussions, negotiations, or collaborations, which brought this issue to the attention of individuals. In their 2023 study, Chakraborty and Singh proposed a hybrid assessment technique that combined peer input with rubrics based on intercultural characteristics.

Apart from these, the researchers believe that the Common European Framework of Reference (CEFR) promotes language learning through fluency, correctness, engagement, and sociolinguistic appropriateness.

- The ICC Model, developed by Byram, assesses a person's understanding of themselves and others, as well as their proficiency in interpretation, discovery, and critical cultural awareness.
- The Intercultural Can-Do Statements (2021), developed by the American Council on Teaching and Learning (ACTFL), offer a task-based scale for practical intercultural speaking performances.

About the current research investigation, the researchers have taken into consideration the theoretical frameworks listed below:

- Vygotsky's Sociocultural Theory

Within the realm of language acquisition, Vygotsky's Sociocultural Theory emphasizes the significance of social interaction and scaffolding. By this approach, the development of speaking abilities can be achieved through collaborative learning, where students participate in discussions with one another or in groups that involve culturally diverse technical problems. Additionally, the theory emphasizes the zone of proximal development (ZPD). This framework provides learners with organized support as they engage in progressively more challenging intercultural speaking activities.

- Hofstede Cultural Dimensions Theory

Hofstede's Cultural Dimensions Theory is a conceptual framework that aims to understand how cultural variations influence the attitudes and behaviors of individuals from different nations. It was designed by Geert Hofstede, a Dutch social psychologist, based on an extensive survey conducted with IBM employees worldwide. Power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, long-term versus short-term orientation, and indulgence versus restraint are the six key elements of culture identified by the theory.

- Byram's Intercultural Communicative Competence:

The highly prominent model of intercultural communicative competence (ICC), developed by Byram in 1997, has been the focus of growing examination in the context of intercultural education over the past decade. This paradigm has been particularly influential within the field of foreign language (FL) education, and it has had an impact

on the design of curricula and teaching materials in several nations. The fact that it was developed in conjunction with the initiative that was undertaken by the Council of Europe (CoE) in the late 1990s to construct the Common European Framework of Reference for Languages (CEFR) (2001) is a significant reason for this.

- Furthermore, the ICC model was one of the existing competence schemes that served as a foundation for constructing the conceptual model, which in turn forms the basis of the Reference Framework of Competences for Democratic Culture (RFCDC) (2018) (Council of Europe, 2016). Although the influence of Byram's model has been felt most strongly in Europe, it has also been observed in other regions of the world, particularly in South and East Asia, Australia, and the United States (Kramsch & Whiteside, 2015). Additionally, it has been observed in other parts of the world.

- Intercultural Communicative Competence comprises the following components, as stated by Byram (1997): language abilities, socio-linguistic skills, discourse skills, intercultural attitudes, and awareness. Engineering graduates who are expected to operate in multicultural or multinational teams are expected to have these components, which are becoming increasingly crucial.
- Canale and Swain Model of Communicative Competence

The model of communicative competence proposed by Canale and Swain suggests that effective communication is dependent on four interconnected components: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. In the field of language education and evaluation, this model is highly renowned for its emphasis on the practical application of language skills in real-world communication situations. Specifically, it provides a framework for understanding the various aspects of communicative competence and their contributions to effective communication.

Although some progress has been made, the majority of research does not focus on students in their final year, who are the most likely to enter intercultural workplaces. When it comes to engineering education, there has been minimal effort put into systematically evaluating ICP through speaking activities. Despite its diversity, the Delhi National Capital Region (NCR) remains under-researched as a distinct regional entity.

Our research is significant because it fills a void in the Delhi National Capital Region (north area). Speaking activities are used as performance-based evidence of intercultural preparation, and they are directed toward a critical transition group, which consists of students in their final year of schooling. This information can inform the revision of the curriculum for the Technical English and Employability Skills modules.

5. Methodology

Research methodology plays a crucial role in developing and examining the research area. "Understanding 'Research Methodology in Language' is crucial as it provides a critical foundation for the exploration, analysis, and interpretation of language phenomena… It supports innovation in research approaches and enriches our understanding of language diversity," opined Jurnal Pendidikan Indonesia (Ju-Pendi), 2023. For the analysis, the researchers believe that evaluating student responses is crucial for identifying common obstacles and proposing actionable solutions. A clear study design is one of the most crucial factors in ensuring the success of a research effort, ultimately leading to results that are reliable and legitimate. The researchers have chosen to employ a mixed-methods research design for this study. This decision was made to gain a more comprehensive understanding of the research challenges and to capitalize on the opportunities presented by both methods.

When it comes to the validity and reliability of study findings, selecting the appropriate participants is of the utmost importance. One hundred students in their final year of engineering, enrolled in Bachelor of Technology programs at private technical colleges in northern India, are the participants chosen for this research.

The instruments used to collect data included self-evaluation and peer review surveys, followed by semi-structured interviews and speaking exercises, during which English language specialists evaluated the participants.

Following the collection of data, descriptive statistics were used for the analysis of quantitative data, while thematic analysis was employed to analyze the qualitative data.

6. The Study

This discussion helps determine the maximum number of students who experience difficulties with communication. When students interact with their classmates, they encounter

difficulties with their verbal expressions and feel hesitation because language creates problems due to the semantic gap that also exists among them. At their workplace, they also face the same problem and fall behind in their growth.

India is a country famous for its integrity, unity, and multicultural proficiency. However, every blessing indeed comes with some problems. It is not easy to carry all these different cultures and environments smoothly. Students from Jammu and Kashmir often have a distinct accent and mind set. If we see north-eastern students, they are noticeably different in their physical appearance, as well as their accent. So, it is not easy to make them understand in the same way and change their accent and understanding of their language. In a multicultural workplace, communication problems frequently arise from disparities in language, cultural norms, and communication styles, especially between Indian and foreign co-workers. If not adequately addressed, these discrepancies may result in miscommunications, a decline in productivity, and even conflict.

In the Delhi NCR region, we can observe that students often face conflicts due to their dialects, and during communication, they frequently use jargon that can be difficult to understand. At every place, the jargon is different, and other students are unable to understand their words and their meaning. In a multicultural workplace, communication problems frequently arise from disparities in language, cultural norms, and communication styles, especially between Indian and foreign co-workers. If not adequately addressed, these discrepancies may result in miscommunications, a decline in productivity, and even conflict. Although, as teachers and researchers, it has been observed that students face various challenges in speaking skills. It is critical to evaluate a situation by contrasting it with both local and international norms. Global standards are frequently widely recognized criteria for performance, quality, or best practices, whereas expectations are more culturally, contextually, or group-specific.

The standards, convictions, and presumptions that a particular community, culture, or group has about what is appropriate, desirable, or attainable are known as local expectations.

To justify the arguments and hypothesis, a survey was conducted, and based on the responses to the questionnaires and interviews, the results are mentioned in the tables below:

7. Survey Findings

Table 1: Students' Responses to the questionnaire on English Speaking and Intercultural Communication Survey

Q. No.	Survey Question	Response Summary	Percentage (%)
1	Do you believe you are skilled in English speaking?	Yes	70%
		Not that proficient	25%
		No response	5%
2	Do you feel like you have to translate sentence structure from your native language every time you speak?	Yes	75%
		Sometimes	20%
		Very rare	5%
3	Which part of the country are you from?	North India	75%
		Other than the north of India	25%
4	What challenges do you encounter when speaking English?	Sentence construction, vocabulary, and fluency	60%
		Pronunciation and understanding fluent English	30%
		Accuracy	10%
5	How can speaking activities promote intercultural understanding among second-language learners?	Help understand cultural implications in various contexts	65%
		Believe it helps, but unable to identify the cultural significance	30%
		Strongly agree with the intercultural benefit	5%
6	In what ways can technology promote intercultural understanding through speaking practice?	Strongly believe in online tools (forums, social media, and virtual exchange).	80%
		Prefer offline and real-time conversations.	20%
7	How can a second language classroom be made more inclusive during speaking activities?	Include topics on customs, food habits, and use of the target language.	76%
		Prefer not to answer	24%

8	What challenges do second language learners face in intercultural communication?	Inability to find appropriate communicative expression	40%
		Accent and pronunciation to a considerable extent	60%
9	How do storytelling activities contribute to exploring cultural perspectives?	Strong agreement on the value of mythology, folklore, and fables	90%
		Prefer not to answer	10%

Based on the responses, Figure 1.0 presents the combined results in a pie diagram.

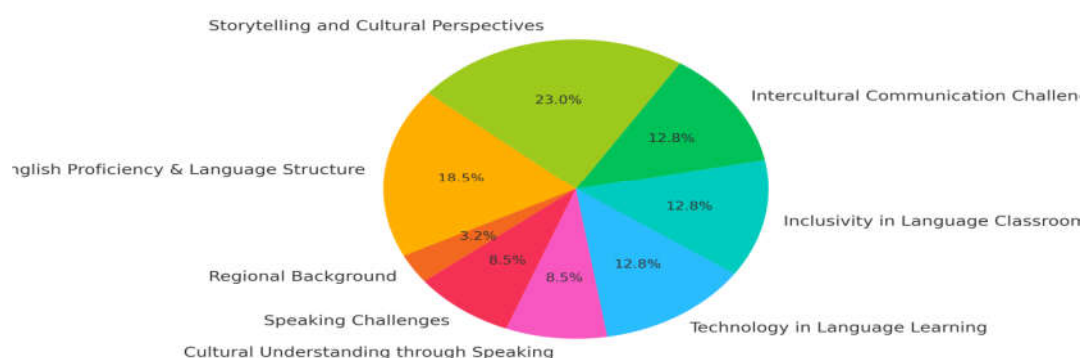Combined Overview: English Proficiency, Speaking Challenges, and Intercultural Understanding

Figure 1.0

8. Key Findings

- Many technically proficient students struggle to communicate their ideas due to poor English speaking skills, such as difficulties with constructing simple sentences.

- Language barriers often prompt students to seek private speaking institutes, highlighting a gap in regular education support.

- The lack of spoken English proficiency is a significant obstacle to securing good placements and professional success.

- Intercultural communication issues also play a role in limiting students' confidence and career growth.

After the survey, it has been observed that there is a strong need to integrate spoken English training into the engineering curriculum to enhance students' communication competencies.

9. Conclusions

It appears that the engineering curriculum needs to place a greater emphasis on training practical capabilities in intercultural communication. Providing these technocrats with better communication methods that can be used across cultural barriers, such as active listening, empathy, and culturally sensitive language, can significantly contribute to developing their intercultural proficiency. Additionally, there is a need for a deeper understanding of cultural nuances. It would be beneficial for students to acquire knowledge regarding the cultural distinctions that exist in communication methods, nonverbal signs, and beliefs.

Additionally, fostering connections with individuals from diverse backgrounds through collaborative projects, case studies, and virtual exchange programs can be a valuable aid in developing intercultural competency. During training, it is essential to incorporate scenarios that closely resemble real-world settings. Some examples of these scenarios include working with international clients, presenting at international conferences, and engaging in multicultural teams.

When developing training programs for intercultural communication, it is essential to consider the diverse backgrounds and varying degrees of English proficiency among the students receiving the training. To accomplish this, the curriculum may be modified to accommodate a range of requirements, and additional support may be provided to students with lower English proficiency levels. To properly administer such programs and create meaningful interactions, teachers and instructors may require additional training in intercultural communication. The development of practical methodologies for evaluating students' intercultural communication skills is also an important consideration. Students may encounter difficulties, such as language barriers, cultural differences, and concerns, when

interacting with others from diverse backgrounds. Addressing these concerns is essential to establishing a constructive learning environment.

Essentially, the conclusion that can be drawn from this analysis is that although a significant number of students may be aware of the importance of intercultural communication, they may still lack the specific skills and knowledge necessary to navigate these interactions successfully. These proposals should be incorporated into the engineering school curriculum so that students can be better equipped to succeed in a professional environment that is increasingly global.

10. Limitations and Scope of the Study

The purpose of this study was to investigate the level of intercultural proficiency in speaking skills among fourth-year undergraduate engineering students enrolled in private technical colleges in northern India. Specifically, this research was conducted in the Delhi National Capital Region (NCR), a metropolitan region in India.

Among the elements investigated were the current state of intercultural speaking ability among urban Indian technocrats, the obstacles they encounter when interacting with non-Indian counterparts, and the educational and professional interventions designed to address these challenges.

Although the findings of this study reflect the current state of communicative competence in intercultural speaking skills in engineering colleges located in urban areas, institutions in rural areas may face significant challenges in improving and implementing intercultural competence. This is because students attending these institutions require more intensive training and practical exposure in order to improve their communicative proficiency. As a result, further research is needed among students living in rural areas to identify practical solutions for these problems.

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Appendix A. Students' Semi-Structured Questionnaire on English Speaking and Intercultural Communication

1. Do you believe you are skilled in English speaking?

2. Do you feel like you have to translate sentence structure from your native language every time you speak?

3. Which part of the country are you from?

4. What challenges do you encounter when speaking English?

5. How can speaking activities promote intercultural understanding among second-language learners?

6. In what ways can technology promote intercultural understanding through speaking practice?

7. How can a second language classroom be made more inclusive during speaking activities?

8. What challenges do second language learners face in intercultural communication?

9. How do storytelling activities contribute to exploring cultural perspectives?