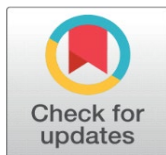


INTEGRATING TASK-BASED LANGUAGE TEACHING TO IMPROVE COMMUNICATION SKILLS AMONG FIRST-YEAR ENGINEERING STUDENTS: A CASE STUDY AT GOVERNMENT ENGINEERING COLLEGE, MODASA

Deven Bhayani ¹, Dr. Kiran Chauhan ²

¹Research Scholar, Gujarat Technological University, Ahmedabad

²Government Engineering College, Bharuch



DOI

[10.29121/shodhkosh.v5.i1.2024.4637](https://doi.org/10.29121/shodhkosh.v5.i1.2024.4637)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2024 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](#).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

The integration of Task-Based Language Teaching (TBLT) in language teaching for engineering students has gained distinction due to its focus on practical, meaningful language use. This study investigates the effectiveness of TBLT in improving the communication skills of first-year engineering students at Government Engineering College, Modasa. Specifically, the research addresses the linguistic challenges faced by students from vernacular backgrounds and aims to enhance their grammar, technical vocabulary, and writing fluency through a series of task-based activities designed to technical education. The results from pre- and post-tests indicate a significant improvement in the experimental group compared to the control group, highlighting the potential of TBLT to bridge communication proficiency gaps in technical education. These findings contribute to the broader discourse on effective syllabus design for engineering education and second language acquisition (SLA), while considering the linguistic dynamics specific to Gujarat.

Keywords: Task-Based Language Teaching (TBLT), Engineering Students, Writing Skills, Technical Communication, Second Language Acquisition (SLA), Vernacular Medium, English for Specific Purposes (ESP), Technical Education

1. INTRODUCTION

1.1. BACKGROUND

The increasing globalization of engineering and technological fields has raised the importance of effective communication skills, particularly in English, for engineering professionals worldwide. English serves as the lingua franca in many engineering firms, and engineers are frequently required to communicate complex technical ideas both verbally and in writing. These demands are particularly pressing in countries like India, where engineers are often required to collaborate with international teams or work for multinational corporations. Consequently, communication skills, especially writing proficiency, have become a core competency for engineers in global industries (Graddol, 2006).

Despite the critical need for these skills, many Indian engineering students face significant linguistic challenges due to their prior education in vernacular medium schools. For many of these students, the transition to English-medium higher education, where academic and technical writing is crucial, is challenging (Nair & Babu, 2020). These students

often struggle with formal writing tasks such as drafting technical reports, writing project proposals, and preparing other academic assignments (Zhao, 2011). Although some students possess conversational proficiency in English, this does not translate into the formal writing skills necessary for success in an academic and professional setting. A major issue is that traditional English language teaching in technical institutions primarily focuses on grammatical accuracy and rote memorization, often neglecting functional language use, critical thinking, and task-based applications (Paltridge, 2014).

In Gujarat, a large percentage of students in engineering programs come from vernacular medium backgrounds, with Gujarati as their primary language of instruction throughout schooling. These students often face significant linguistic challenges when transitioning to English-medium technical education, where academic writing and communication skills in English are critical for academic and professional success (Baldaniya & Patel, 2018). The disparity between spoken and written English proficiency is particularly evident, as many students have limited exposure to English outside the classroom. These regional challenges further compound the language barriers faced by engineering students in Gujarat (Patel & Joshi, 2020).

Task-Based Language Teaching (TBLT), which emphasizes the use of meaningful, real-world tasks to develop language skills, has emerged as a promising approach for addressing these gaps. TBLT provides a more practical and student-centered approach to language learning, where learners engage in tasks that mirror the types of communication they will encounter in their professional lives. By focusing on tasks that require students to use English in authentic contexts, TBLT can help students develop not only language proficiency but also the critical thinking and problem-solving skills needed in technical fields (Ellis, 2003).

1.2. RESEARCH GAP

While TBLT has been extensively studied in the field of second language acquisition (SLA), particularly for general English learning, its application in technical education contexts, especially within engineering programs, remains underexplored (Long, 2015). Existing studies on TBLT in higher education have largely focused on general language improvement rather than the specific needs of students in technical disciplines (Robinson, 2011). The ability to communicate technical information in a structured, coherent, and concise manner is a critical skill for engineering students, yet the effectiveness of TBLT in developing these skills has not been widely examined (Hyland, 2017).

Furthermore, in the Indian context, there is limited research on how TBLT can address the unique challenges faced by students from vernacular backgrounds, who may have a solid foundation in their native language but struggle with the technical vocabulary and formal structures required in English (Kumar, 2017). This study seeks to fill this gap by investigating the impact of TBLT on improving the writing proficiency of first-year engineering students at Government Engineering College, Modasa, with a specific focus on grammar, technical vocabulary, and writing coherence.

1.3. OBJECTIVES

The main objectives of this study are to:

- 1) Assess the current writing challenges faced by first-year engineering students from vernacular backgrounds at Government Engineering College, Modasa.
- 2) Implement a TBLT-based intervention designed to improve students' technical writing skills.
- 3) Evaluate the impact of this intervention on students' writing proficiency, with particular emphasis on grammar, technical vocabulary, and overall writing coherence.
- 4) Provide recommendations for integrating TBLT into the curriculum for technical education, particularly in English for Specific Purposes (ESP) courses, to address the existing communication skill gaps.

2. LITERATURE REVIEW

2.1. TASK-BASED LANGUAGE TEACHING (TBLT)

Task-Based Language Teaching (TBLT) is a learner-centered approach to language teaching that focuses on the completion of meaningful tasks as the primary mechanism for language learning. According to Ellis (2003), TBLT differs from traditional grammar-focused teaching in that it prioritizes the use of language in authentic, contextually relevant

ways. Learners engage in tasks that replicate real-world communication scenarios, helping them develop both fluency and accuracy by focusing on conveying meaning rather than on linguistic forms. As Nunan (2004) explains, TBLT encourages learners to use language as a tool for achieving specific outcomes, such as completing a project or solving a problem, rather than simply as an academic subject to be mastered.

In the context of technical education, TBLT aligns well with the practical demands of engineering students, who must be able to communicate complex ideas clearly and concisely in both written and spoken forms. Tasks such as writing technical reports, describing engineering processes, and conducting peer reviews can be integrated into TBLT curricula to help students develop the communication skills they will need in their professional careers (Skehan, 1998). Studies have shown that TBLT is effective in enhancing learners' ability to produce structured, coherent texts that are appropriate for academic and professional settings (Willis & Willis, 2007).

2.2. WRITING SKILLS IN SECOND LANGUAGE ACQUISITION (SLA)

Writing is one of the most challenging aspects of second language acquisition, particularly for students in technical disciplines who must produce highly structured and technically accurate documents. According to Hyland (2017), writing skills are essential for engineering students, as clear and concise writing is critical for communicating technical information effectively. Cognitive theories of language learning suggest that writing tasks can help learners consolidate their understanding of grammar, vocabulary, and sentence structure, while also improving their ability to organize and express their ideas clearly (Robinson, 2011).

Research by Zhang and Wang (2019) highlights the importance of task-based writing interventions in developing students' writing proficiency. Their study found that tasks designed to reflect real-world academic or professional contexts, such as writing technical reports or project proposals, significantly improved students' ability to produce well-structured and contextually appropriate texts. These findings are particularly relevant for engineering students, who must be able to write in a precise and structured manner to communicate complex technical information.

2.3. TBLT IN TECHNICAL EDUCATION

In technical disciplines, where communication often involves the use of domain-specific language, TBLT offers a practical and structured approach to language learning. According to Long (2015), task-based approaches are particularly effective in technical education because they allow students to practice the types of tasks they will encounter in their professional lives. For example, in an engineering context, TBLT can be used to teach students how to write technical reports, describe engineering processes, and review technical documents (Willis & Willis, 2007). By engaging in these tasks, students not only develop their language skills but also their ability to think critically and solve problems, which are essential skills for success in technical fields.

In the context of Gujarat, research has indicated that engineering students from vernacular backgrounds often struggle with technical writing and communication due to limited exposure to English in their primary education. Studies by Baldaniya and Patel (2018) and Patel and Joshi (2020) have highlighted the significant language gap in Gujarat's technical institutions, emphasizing the need for task-based approaches to bridge these gaps. These studies support the argument that TBLT, with its emphasis on meaningful tasks, could provide a practical framework for addressing the specific communication challenges faced by Gujarati-medium students in technical disciplines.

3. RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

This study utilized a true experimental pre-test post-test control group design to evaluate the impact of a TBLT intervention on the writing skills of first-year engineering students at Government Engineering College, Modasa. The experimental group received TBLT-based instruction, while the control group followed the traditional language syllabus, which focused primarily on grammar and vocabulary drills. The study employed a mixed-methods approach, using both quantitative and qualitative data collection techniques to assess the effectiveness of the TBLT intervention. Quantitative data were collected through pre- and post-tests, while qualitative data were gathered through needs analysis questionnaires for students, faculty surveys, and classroom observations.

The TBLT intervention programme was conducted over a 10-week period, from March 2023 to July 2023. The TBLT tasks were fully integrated into the experimental group's regular Language laboratory sessions, which were conducted once a week for two hours per session. The control group continued with the traditional curriculum during the same period, focusing on grammar exercises and textbook-based writing assignments.

3.2. PARTICIPANTS

The study involved 120 first-year engineering students enrolled in different engineering programmes at Government Engineering College, Modasa. Participants were randomly assigned to either the experimental group (60 students) or the control group (60 students). Most participants came from vernacular medium backgrounds, with Gujarati as their primary language of teaching throughout their schooling. All participants were classified as intermediate-level English learners based on a language proficiency test administered at the beginning of the study. The test assessed students' grammar, vocabulary, and paragraph development skills, providing a baseline measure of their writing proficiency.

3.3. TASK DESIGN

The TBLT intervention was designed to address the specific writing needs of engineering students, with a focus on technical communication and academic writing. The following tasks were included in the intervention:

1. Technical Writing:

Students were tasked with writing various forms of technical documents, including lab reports, project proposals, and technical correspondence. These tasks were designed to improve students' ability to communicate technical information accurately and clearly, while adhering to formal writing structures mainly includes letters, reports and proposals

2. Technical Descriptions:

In this task, students were asked to write detailed descriptions of engineering components and processes, improving their ability to convey complex technical information concisely. This task also helped students develop the technical vocabulary needed for effective communication in their field.

3. Writing Definitions and Paragraph Development:

Students were required to define technical terms and develop coherent paragraphs based on these definitions. This task helped students build their technical vocabulary and improve the overall coherence of their writing.

4. Special Grammar and vocabulary based Peer Review Exercises:

Students participated in specially designed grammar and vocabulary based tasks in peer review sessions facilitated by researcher followed by discussion, where they often provided feedback on their peers' writing. This collaborative task allowed students to engage in critical thinking, identify writing errors, and revise their own work based on peer input. Peer review is an essential component of professional engineering practice, and this task was designed to simulate real-world collaborative writing scenarios.

Each task was designed to progressively increase in complexity over the 10-week intervention period, providing students with ample opportunities to develop their writing skills through practice and feedback.

3.4. DATA COLLECTION TOOLS

1. Pre-Test and Post-Test:

The pre-test and post-test were used to assess students' writing proficiency before and after the intervention. Both tests focused on grammar, vocabulary, and technical writing skills, and a standardized rubric was used to ensure consistency in scoring across both tests.

2. Needs Analysis through Questionnaires for Students and Teachers:

At the beginning of the study, needs analysis questionnaires were administered to both students and teachers. These questionnaires were designed to identify the specific writing challenges faced by students and to gather teachers'

perceptions of students' writing abilities. The questionnaires also asked students to self-assess their strengths and weaknesses in writing.

3. Classroom Observation Diary:

A classroom observation diary was maintained throughout the intervention period to document student engagement, participation, and interaction during TBLT tasks. The diary provided qualitative data on classroom dynamics and the overall effectiveness of the intervention.

3.5. DATA ANALYSIS

Quantitative data from the pre-test and post-test scores were analyzed using descriptive statistics, including mean, median, and standard deviation. Paired t-tests were conducted to assess the statistical significance of improvements in the experimental group's writing proficiency, while independent t-tests were used to compare the post-test scores of the experimental and control groups. Qualitative data from the questionnaires and classroom observations were analyzed using thematic analysis to identify patterns related to student engagement, task performance, and writing improvement.

4. RESULTS AND DISCUSSION

4.1. QUANTITATIVE RESULTS

The pre-test and post-test results indicated a significant improvement in the writing skills of the experimental group. The mean pre-test score for the experimental group was 27.00, which increased to 33.16 after the TBLT intervention. In contrast, the control group's mean score saw minimal change (27.12 to 28.43). An independent t-test confirmed that the improvement in the experimental group was statistically significant ($p < 0.001$), indicating that the TBLT intervention had a meaningful impact on students' writing proficiency. Table 1 summarizes the pre-test and post-test results.

Group	Pre-Test (Mean)	Post-Test (Mean)	p-value
Experimental	27.00	33.16	< 0.001
Control	27.12	28.43	0.101

4.2. THEMATIC ANALYSIS OF FEEDBACK

Qualitative feedback from students indicated that the peer review tasks were particularly effective in improving writing fluency and technical accuracy. Students reported that reviewing their peers' work helped them reflect on their own writing mistakes, while the researcher observed increased engagement and confidence in students' writing abilities. Furthermore, the researcher noted that students in the experimental group demonstrated a greater ability to organize their ideas and use technical vocabulary accurately, compared to students in the control group.

The findings of this study are consistent with previous research conducted in Gujarat, which identified significant gaps in the technical writing abilities of students from vernacular backgrounds (Baldaniya & Patel, 2018; Patel & Joshi, 2020). The results suggest that the TBLT approach, which integrates real-world communication tasks, can effectively address these gaps. The peer review exercises, in particular, allowed students to critically engage with technical vocabulary and writing structures, areas that studies have shown to be particularly challenging for Gujarati-medium students (Nair & Joshi, 2017).

5. CONCLUSION

5.1. KEY FINDINGS

The results of this study confirm that integrating Task-Based Language Teaching (TBLT) into the English curriculum for first-year engineering students leads to significant improvements in writing skills. The TBLT intervention resulted in measurable improvements in grammar, vocabulary, and technical writing fluency, particularly in tasks that mirrored real-world engineering communication scenarios. These findings suggest that TBLT is a viable pedagogical approach for addressing the communication skill gaps faced by engineering students, particularly those from vernacular backgrounds.

5.2. IMPLICATIONS FOR SYLLABUS DESIGN

The findings of this study have important implications for the design of English for Specific Purposes (ESP) curricula in technical education. By aligning language tasks with real-world academic and professional demands, educators can help students develop both language proficiency and critical thinking skills. The use of TBLT in ESP courses can provide students with the opportunity to practice the types of communication tasks they will encounter in their engineering careers, thereby preparing them for success in both academic and professional settings.

5.3. FUTURE RESEARCH

Further research is recommended to explore the long-term impact of TBLT on students' oral communication skills and to investigate the scalability of TBLT interventions in larger classroom settings. Additionally, future studies could examine the effectiveness of TBLT in enhancing interdisciplinary communication skills, as many engineering students will need to collaborate with professionals from other fields in their careers. Finally, research on the integration of technology into TBLT tasks, such as the use of online peer review platforms or virtual collaboration tools, could provide valuable insights into how TBLT can be adapted for the digital age.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

- Baldaniya, M., & Patel, S. (2018). "Challenges in English Language Acquisition among Vernacular Medium Students in Gujarat." *Journal of Language Learning*, 22(1), 45-67.
- Ellis, R. (2003). *Task-Based Language Learning and Teaching*. Oxford University Press.
- Graddol, D. (2006). *English Next: Why Global English May Mean the End of 'English as a Foreign Language'*. British Council.
- Hyland, K. (2017). *Second Language Writing*. Cambridge University Press.
- Kumar, S., & Ahmed, M. (2017). The effectiveness of task-based language teaching in Indian ESL classrooms. *Journal of Applied Linguistics*, 12(2), 56-78.
- Long, M. H. (2015). *Second Language Acquisition and Task-Based Language Teaching*. Wiley-Blackwell.
- Nair, P., & Joshi, R. (2017). "Teaching English in Engineering Institutes of Gujarat: A Regional Perspective." *Gujarat Journal of Educational Research*, 15(3), 112-130.
- Nunan, D. (2004). *Task-Based Language Teaching*. Cambridge University Press.
- Paltridge, B. (2014). *Genre and Second Language Writing*. University of Michigan Press.
- Patel, K., & Joshi, M. (2020). "Barriers to English Proficiency for Gujarati-Medium Students in Technical Education." *Indian Journal of Educational Studies*, 38(2), 80-95.
- Robinson, P. (2011). *Task-Based Language Learning: A Cognitive Perspective*. Routledge.
- Skehan, P. (1998). *A Cognitive Approach to Language Learning*. Oxford University Press.
- Willis, J., & Willis, D. (2007). *Doing Task-Based Teaching*. Oxford University Press.
- Zhang, X., & Wang, L. (2019). Integrating TBLT in technical education: A case study on Chinese engineering students. *Asian EFL Journal*, 21(3), 30-47.
- Zhao, Y. (2011). Task-based learning in China: Addressing linguistic and cultural barriers. *Language Learning Journal*, 39(1), 95-111.