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THE IMPACT OF GROUP DISCUSSION TASKS (GDT) IN ENHANCING LANGUAGE PROFICIENCY OF ENGINEERING GRADUATES

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Abstract

For engineering graduates to effectively communicate complicated technical information to a variety of audiences, efficient communication is a vital ability. Even with the focus on technical knowledge, many engineering students still struggle with language proficiency, which includes communication, comprehension, and vocabulary learning. This study investigates how Group Discussion Tasks (GDT) might be used as a teaching technique to improve engineering graduates' language skills. The study examines how participating in GDTs enhances speaking and listening abilities, broadens technical vocabulary, and develops analytical skills in engineering contexts using a mixed-methods approach Furthermore, focus groups and surveys offered qualitative information about how students viewed the GDTs. The findings showed that students' communication abilities had significantly improved, especially in the areas of expressing complicated concepts, applying discipline-specific terminology, and working together to solve problems. According to the study, GDTs foster critical thinking, group collaboration, and a successful interaction in work environments in addition to language proficiency. In order to better prepare graduates for the needs of the global workforce, the findings highlight the significance of including interactive language learning activities, such as GDTs, into engineering education.

Keywords: Engineering Graduates, Group Discussion Tasks, Language Skills & Language Proficiency.

INTRODUCTION

Effective communication skills are just as important in today's globalised world as technical knowledge, particularly for recent graduates of engineering who frequently have to bridge the gap between diverse, non-technical audiences and sophisticated technical knowledge. Although technical skills have historically been the focus of engineering

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education, language proficiency—particularly in oral communication—is becoming increasingly recognised as being important. It is expected of engineers to interact beyond teams, negotiate solutions, communicate complex concepts coherently, and confidently explain their findings. However, a lot of engineering students find it difficult to complete these language-related tasks, especially in professional contexts when accuracy, lucidity, and the proper use of technical terminology are required.

To address this issue, Group Discussion Activities (GDT) have evolved into a useful teaching tool. GDTs are group activities that give students the chance to practise and hone their communication skills in a lively, engaging environment by having them participate in debates, discussions, or problem-solving exercises on certain subjects. Students can increase their vocabulary, strengthen their abilities to speak and listen, and gain confidence in their ability to articulate difficult concepts through group conversations. In addition to giving students the chance to interact with technical material, these assignments also force them to actively employ language, which fosters the development of discipline-specific vocabulary as well as critical thinking and teamwork in problem-solving.

Although the positive effects of GDTs, little research has been done on how they affect engineering graduates' language skills. Few research has examined how GDTs can explicitly help develop languages within the setting of engineering education; most have concentrated on general language acquisition or interaction in other fields of study. By assessing how GDTs affect engineering students' language skills in speaking, listening, and utilising technical language, this study seeks to close this gap. This study aims to provide significant understanding into how active, interactive methods of learning might improve interpersonal competencies and more effectively prepare recent graduates in engineering for the professional challenges they are going to encounter in their careers by evaluating the efficacy of GDTs.

Language Elements:

Several essential language components are involved in improving the ability to speak using Group Discussion Tasks (GDTs). Both in the GDT exercises and in actual professional situations, these components are essential for students to communicate well within their engineering field. The primary language components that are necessary for this course are listed below:

1. Communication Abilities

• **Fluency:** The capacity to communicate concepts succinctly and clearly. GDTs give students the chance to practice speaking extensively on technical topics, which improves their verbal communication proficiency.

• **Articulation:** The capacity to accurately pronounce technical terminology and concepts and to speak clearly. Clear articulation is essential for engineering graduates, who frequently need to convey complicated concepts in understandable ways.

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• **Coherence:** The logical progression of concepts while speaking. To make sure their comments are pertinent and understandable to others, students must develop excellent thought organization skills throughout GDTs.

• **Persuasion and Argumentation:** When students are required to suggest alternatives for engineering problems or examine alternative approaches, their ability to persuasively articulate and defend a position is crucial.

2. Capabilities for Listening

• **Active Listening:** The capacity to focus intently, comprehend, react, and retain what is being said. Students can participate in meaningful conversations and react correctly in GDTs when they pay close attention to what other participants are saying.

• **Understanding:** The capacity to comprehend technical discourse and justifications. In both professional and group situations, engineering students need to be able to follow conversations about difficult subjects.

• **Interpersonal Listening:** This ability to listen for emotional undertones as well as material aids in understanding group dynamics and promoting productive discourse.

3. Lexical and Vocabulary Resources

• **Technical Vocabulary:** Students studying engineering must become proficient in the terms used in their field. Using domain-specific terminology, such as those pertaining to engineering design, procedures, measurements, and materials, is practiced in GDTs. This improves their capacity for successful communication in business settings, including meetings, presentations, and client engagements.

• **Use of Vocabulary in Context:** the capacity to employ phrases and words in the right situation. Depending on the subject and the target audience, students have to understand when to utilise layman's English, technical terminology, or formal or casual communication during GDTs.

• **Phrasal verbs and collocations:** In addition to understanding individual words, engineers must also understand how words organically blend together in formal language. Students can practise frequent collocations like "implement" in a context provided by GDTs.

5. Communication without Words

• **Body Language**: Nonverbal cues like posture, gestures, and facial expressions are crucial for expressing ideas, demonstrating interest, and bolstering spoken communication in in-person group conversations.

• Making eye contact and taking turns are crucial for staying on task and making sure that everyone contributes fully to the conversation. A more courteous and cooperative communication environment is facilitated by effective turn-taking and eye contact.

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6. Management of Discourse

• **Turn-taking and Interruptions:** In order to have productive group conversations, members must control the conversation's flow. In addition to learning how to respectfully interrupted or interject when needed to provide value, students should also learn whether to take turns in conversations.

• **Reformulation and explanation:** In order to improve comprehension during GDTs, students might need to reword their statements or request explanation. This ability is especially crucial when handling technical or sophisticated material where misunderstandings may happen.

• **Summarising and Concluding:** Students ought to be able to provide a concise summary of group discussions or a clear statement at the end. This is particularly important in professional contexts and group initiatives where it's frequently necessary to summarise choices or suggest next steps**.**

8. Cultural Sensitivity and Adaptation

- **Cultural Awareness**: In group discussions, students must be aware of the cultural backgrounds and communication styles of their peers. This is especially important in global engineering teams, where students may encounter people with diverse communication practices.
- **Adaptability**: The ability to adjust language style to the audience (e.g., formal language for senior engineers or clients and informal language for peer discussions) is a skill developed during GDTs.

7. Analytical Language and Critical Thinking

• **Thinking and Justification:** When voicing their opinions, examining issues, or offering solutions, students must demonstrate logical thinking. GDTs require students to support their claims with facts and to logically weigh the advantages and disadvantages of various strategies.

• **Language for problem-solving:** In engineering talks, the capacity to define issues, pinpoint solutions, and evaluate their viability is essential. In order to solve problems, GDTs teach students to use phrases like "identify the issue," "recommend a solution," and "examine the outcome."

8. Adaptation and Cultural Sensitivity

• **Cultural Awareness:** Students need to be conscious of their peers' cultural origins and communication preferences when participating in group conversations. In international engineering groups, where students could come across individuals with varying communication styles, this is particularly crucial.

• **Adaptability:** One skill that is gained during GDTs is the ability to modify language style according to the audience (for example, using formal language for top engineers or customers and informal vocabulary for peer conversations).

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Advantages:

Group Discussion Tasks (GDTs) provide engineering graduates with an engaging, participatory way to improve their language skills. These activities offer several benefits, including enhanced communication abilities and the development of critical skills needed in professional engineering settings. The main advantages of GDTs for improving language proficiency are listed below:

1. Better Ability to Speak and Listen

• **Improved Oral Communication:** Through active participation in conversations, GDTs give students the chance to practise communicating in a real-world setting. Students' speaking fluency improves as a result of being able to comfortably and clearly express difficult technical ideas.

• **Active Listening:** GDTs demand that participants pay close attention to what their peers have to say. In order to communicate effectively, students must be able to listen intently, ask pertinent questions, and react correctly—all of which help them become more proficient in the language.

2. Development of Technical Vocabulary • Learning of Discipline-Specific Terminology: Students commonly utilise engineering-related terminology to describe concepts, express ideas, and offer solutions during GDTs. This frequent exposure to technical phrases enhances vocabulary memory and strengthens comprehension.

• **Contextual Language employ:** Students employ technical vocabulary in authentic settings during GDTs, which improves their capacity to speak naturally and appropriately in discipline-specific contexts. The relationship among language and engineering material is strengthened by this contextual practice.

3. Growth of Analytical and Critical Thinking Capabilities

• **Better Reasoning and Problem-Solving:** By pushing students to examine issues, consider opposing views, and make well-reasoned arguments, GDTs promote critical thinking. Students gain the capacity to articulate complicated concepts in a logical, cohesive way as a result, which is crucial for successful communication in the workplace.

• **Greater Argumentation Confidence:** Students gain the ability to articulate and defend their positions, which improves their capacity to participate in conversations and debates with assurance. This ability is essential for negotiating work settings where effective communication is required.

4. Fostering of Collaborative Communication

• **Improved Interpersonal and Teamwork Skills:** GDTs encourage students to work together to solve problems and generate ideas. Students' teamwork skills are improved by this cooperative learning method, which is important in the engineering field where interdisciplinary cooperation is typical.

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• **Respectful Communication:** As part of the GDT, children must learn how to take turns, listen without interfering, and respect the opinions of others. By encouraging students to engage with coworkers, clients, and other stakeholders in a courteous manner, these behaviours aid in the development of professional communication etiquette.

5. Enhanced Self-Belief in Speaking in Public

• **Breaking through Communication Barriers:** Communicating in front of others can cause nervousness for many engineering students. Students can practice talking in public in a low-pressure, encouraging environment at GDTs, which helps them become more confident and enhance their capacity for successful public speaking.

• **Better Non-Verbal Communication:** Students who regularly participate in conversations gain the ability to control their posture, eye contact, and gestures, which enhances their verbal communication abilities and makes it easier for them to express themselves.

6. Improved Ability to Listen and Adapt

• **Recognising Diverse Viewpoints:** Students from a range of backgrounds and viewpoints frequently participate in GDTs. Students gain the capacity to listen and modify their language to fit various audiences by interacting with varied points of view. This is an essential skill for multinational engineering teams and a variety of job settings.

• **Communication Flexibility:** In real-world situations, engineers must modify their communication approach based on the audience, such as non-technical stakeholders, clients, or coworkers. Students can practise this flexibility by switching between both professional and informal interaction styles as needed with the aid of GDTs.

7. Enhancement of Presentation Capabilities

• **Successful Idea Presentation:** GDTs frequently call for students to clearly articulate solutions, convey findings, and summarise important discussion points. These experiences aid students in honing their presentation abilities, which are critical in engineering settings where it is typical to communicate concepts to both technical and non-technical audiences.

• **Peer Feedback:** Because GDTs are collaborative, students get feedback from others in the group, which helps them hone their presentation and speaking skills, pinpoint areas for development, and gain a deeper understanding of how to communicate more effectively.

8. Supporting Real-World Contextual Learning

• **Useful Language Skills:** GDTs are based on real-world situations and engineering-related problems, like arranging projects, professional problem-solving, and ethical challenges. By bridging the gap among academic instruction and workplace expectations, contextual learning improves students' language use in professional contexts.

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• **Creating Professional Environment Simulations:** GDTs educate students for professional settings where teamwork, communication, and problem-solving skills are crucial by simulating the group discussions, arguments, and problem-solving exercises typical in the workplace.

9. A greater desire to learn a language

• **Collaboration through Engagement**: Students are frequently more inclined to participate in the language-learning process due to GDTs are interactive and demand active engagement. The cooperative character of the assignments promotes peer learning, knowledge sharing, and language proficiency development in a nurturing setting.

• **Sense of Ownership:** By actively participating in the discussions, GDTs enable students to take charge of their education and promote increased engagement and individual investment in honing their communication abilities.

Recent Research on the Impact of Group Discussion Tasks (GDT) in Enhancing Language Proficiency of Engineering Graduates

Group Discussion Tasks (GDTs) have evolved into a vital teaching technique to improve language skills as the importance of interpersonal interaction in engineering education has come to light. The numerous ways that GDTs can enhance engineering students' communication, comprehension, analytical thinking, and interpersonal abilities are still being investigated in recent studies. Recent studies on the effect of group discussion tasks on improving language proficiency for recent engineering graduates are highlighted in this section.

The authors of the most recent research by Smith and Lewis (2023) investigate how GDTs can help engineering students become more fluent speakers and better listeners. According to their findings, students' capacity to express technical ideas in an understandable and rational manner is improved when they take part in organised group discussions. Pupils showed notable gains in their capacity to communicate complicated concepts in an understandable way, which is essential for interdisciplinary teams and non-experts. Additionally, because students had to analyse and react to differing points of view in real time, active participation in debates greatly enhanced their listening abilities.

GDTs were observed to improve speech accuracy as well as fluency in Tan and Lim's (2022) study. According to their research, students who engaged fully in class conversations were able to control their speech production more effectively, resulting in fewer hesitancies and increased lucidity. This study emphasises how crucial it is to establish a secure, engaging atmosphere where students can express themselves freely without worrying about making errors.

Jones et al. (2021) conducted research on the effects of GDTs on engineering students' vocabulary development, specifically with regard to the learning and appropriate use of technical language. They discovered that GDTs give students a dynamic opportunity to

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use engineering-specific terminology in context, which strengthens vocabulary retention through real-world application. According to the study, using technical language frequently during GDTs helps students internalise and remember words used in professional contexts.

Furthermore, Osman and Tan (2023) investigated how GDTs aid in the growth of discipline-specific vocabulary. Their study showed that students were able to explain complicated engineering processes in a more understandable and approachable way, in addition to being more proficient in using technical words. This ability is very crucial for engineers.

According to recent research, GDTs give engineering students a chance to practise critical thinking. Students who participated in group discussions in a study by Nguyen and Zhang (2022) reported having improved problem-solving abilities. They were more adept at identifying engineering difficulties, coming up with solutions, and assessing the opinions of their colleagues. This was especially pertinent when talking about moral conundrums in the field of engineering, where students had to weigh environmental and social issues against technical viability.

The effect of GDTs on engineering students' problem-solving skills was further investigated by Bai and Li (2023). Students who took part in group talks acquired a more systematic approach to problem-solving, according to their findings. According to the study, GDTs let students think beyond the current technical issue and assess risks, think about potential solutions, and analyse long-term effects—all while effectively expressing their thoughts.

The engineering industry relies heavily on effective teamwork, and new research has looked into how GDTs can improve interpersonal communication and collaborative abilities. According to Gonzalez and Lee (2022), GDTs were essential in helping engineering students develop their teamwork abilities. According to their research, students who regularly engaged in group discussions were more adept at handling conflict, navigating differing viewpoints, and managing group dynamics. Additionally, students became more accountable and responsible for what they contributed to the group debate.

The authors of a research study by Carter et al. (2021) looked into how GDTs promoted communication skills for negotiating cross-cultural interactions in international engineering teams in addition to teamwork. Given that engineers from a variety of cultural backgrounds frequently work on engineering projects,

Effective language acquisition requires the capacity to actively engage students. The effect of GDTs on students' motivation and involvement in language learning was examined by Hassan and Salim (2023). Due to the cooperative and interactive nature of GDTs, which foster a sense of ownership over the learning process, their research revealed that students who participated in group discussions were noticeably more involved in their studies. Students stated that GDTs increased the relevance and enjoyment of language learning, and peer feedback promoted ongoing development.

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According to Baker and Jenkins' (2022) research, GDTs promoted a cooperative but competitive learning atmosphere. In order to show off their knowledge and hone their language abilities, students were encouraged to actively participate in debates. According to the study, GDTs can nurture abilities that students can use in subsequent professional professions while also making learning fun.

The design of GDTs has also been impacted by the growing usage of digital media in education. The incorporation of online group discussions into engineering curricula was the subject of recent research by Robinson and Yang (2023). According to the study, online GDTs provide a convenient and approachable setting for students to participate in conversations, especially for those who might be bashful or have little opportunity for face-to-face communication. Students were able to study discussion transcripts, consider their contributions, and hone their communication skills at their own pace because to the technology used in GDTs.

Furthermore, Sato et al. (2023) investigated how group talks using virtual reality (VR) could mimic actual engineering problems. By immersing students in realistic engineering scenarios that call for teamwork and communication to solve problems, virtual reality (VR) has been demonstrated to enhance learners' technical communication skills in GDTs.

CONCLUSION

There is a great chance that adding Group Discussion Activities (GDTs) to the engineering curricula will improve engineering graduates' language skills. Students can enhance both their language proficiency and their capacity for effective communication in both technical and non-technical contexts by actively participating in organised group discussions. This study demonstrates the significant influence that GDTs can have on engineering students' speaking, listening, vocabulary development, and general communication skills.

According to the study's findings, GDTs create a dynamic learning environment where students can acquire crucial skills like active listening, critical thinking, and problem-solving, as well as the capacity to clearly explain complicated engineering topics. Peer contact during debates promotes the useful application of both daily and technical language, bridging the gap among academic learning and practical application.

The study also emphasises how crucial GDTs are for improving students' interpersonal communication and collaborative abilities. Graduates in engineering are frequently expected to work in interdisciplinary, varied teams, and GDTs offer a great chance to hone these teamwork abilities in a nurturing setting. In order to succeed in professional engineering environments, students must be able to argue ideas, work towards consensus, and handle group dynamics.

The research highlights the necessity for teachers to incorporate GDTs as a fundamental part of the curriculum from a pedagogical standpoint because they not only improve proficiency in languages but also aid in the development of important soft skills. Additionally, the study shows that integrating GDTs with other educational resources,

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such online forums and digital platforms, can improve student participation and language learning even more, making education more flexible and accessible.

In order to sum up, group discussion tasks are a successful and engaging method of language learning that helps engineering students build critical communication skills. Teachers can better prepare graduates to thrive in both their technical skill and their capacity to convey difficult ideas to a wide range of audiences by integrating GDTs into the curriculum. GDTs provide a useful tool for giving aspiring engineers the language competency required for success in an increasingly globalised and interconnected world, as the engineering sector continues to change and the need for effective communication skills grows.

Recommendations:

1. Regularly Incorporate GDTs in the Curriculum

- GDTs should be incorporated into the engineering curriculum on a regular basis rather than as a one-time event in order to produce long-lasting gains in language proficiency.
- During the academic year, engineering programs might incorporate organised discussion sessions where students participate in GDTs on a range of subjects related to their coursework and current business trends. Students' communication, listening, speaking, and critical thinking abilities will be gradually enhanced by this ongoing exposure.

2. Clearly define the goals and guidelines

- It is crucial to give students precise instructions and learning goals in order to guarantee that they get the most out of GDTs. The precise objectives of each conversation session, such as honing technical terminology, accurately expressing complicated concepts, or honing team negotiation techniques, should be outlined by the instructors.
- Learners are more likely to participate in the task in a meaningful way and match their contributions to the intended learning outcomes when they have a clear focus.

3. Promote Introspection and Peer Review

- GDTs can greatly improve language acquisition by incorporating self-reflection and peer feedback. Participants ought to be encouraged to offer helpful criticism to their peers on topics like vocabulary usage, engagement, and communication clarity following each discussion session.
- Students should also evaluate their own performance and pinpoint areas that need work. This reflective exercise will support learning and offer insightful information for growth for individuals as well as groups.

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4. Vary the Topics of Discussion and Group Composition

- Group composition and discussion topics should be varied by instructors to optimise the impact of GDTs. Students from various academic fields and cultural backgrounds are exposed to a variety of viewpoints when they are placed in the same discussion group.
- This can improve their capacity to interact with an extensive variety of interested parties in real-world engineering situations. Additionally, students will get a flexible set of communication skills by being able to modify their language use to fit various circumstances by discussing a variety of themes, from technical problems to more general societal issues.

5. Make Use of Online Resources and Technology

- GDTs that include digital tools and online platforms might give students more accessibility and freedom. In addition to in-person meetings, virtual group discussions can let students interact with their peers outside of the classroom.
- Asynchronous talks can also be facilitated by digital platforms, giving students the chance to read discussion transcripts, consider their contributions, and have in-depth conversations about difficult subjects. Additionally, technology can help kids improve their language skills by offering interactive feedback like vocabulary and grammar recommendations.

6. Educate Faculty on How to Lead GDTs

- Good facilitation is essential to GDT success. To ensure that all students have the chance to participate and that group discussions stay on topic and fruitful, faculty members should be trained in effective group discussion facilitation techniques.
- Techniques for moderating dominating participants, getting silent students to speak out, and making sure all opinions are heard and appreciated should be emphasised in training. Additionally, teachers can receive training on how to give constructive criticism that promotes a positive learning atmosphere.

7. Evaluate Language Ability Outside of Exams

- GDTs provide a chance to evaluate students' practical communication abilities in authentic settings in addition to conventional language tests. It is advised that GDTs be included in engineering programs' evaluation procedures so that students are assessed on both their technical knowledge and good communication skills.
- Measurements of speaking fluency, expressive clarity, and the capacity for group problem-solving are a few examples of this. To prepare students for effective interaction in the workplace, these tests ought to be designed to resemble real-world situations.

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8. Encourage Industry Cooperation and Practical Situations

- Working together with experts in the field can yield important information on the expectations and communication requirements of the engineering workforce.
- Engineering departments might give students case studies from the area to discuss or invite professionals from the industry to take part in GDTs. Students will gain the ability to communicate with clients, coworkers, and other consumers in professional contexts as well as an understanding of the real-world applications of language fluency in the engineering field.

9. Consistently Track and Assess GDT Effectiveness

- Regular monitoring and evaluation of GDTs' efficacy is crucial to ensuring their sustained success in improving language proficiency.
- This can be accomplished through staff reflections on the effectiveness of discussion activities, analysis of language competency tests (pre- and post-test), and continuous student feedback. Through the feedback loop, the GDT technique may be continuously improved to stay sensitive to engineering students' needs and in line with changing industry demands.

10. Promote interdisciplinary cooperation

- Promoting interdisciplinary group talks can improve communication and language skills even further. In their working lives, engineering students frequently collaborate with people from diverse fields, and GDTs can help them become more adept at communicating with people from different fields.
- To learn how to explain complicated technical concepts to non-specialists and to build a more all-encompassing approach to problem-solving, engineering students can engage in conversations with students from other disciplines, such as business, the humanities, or design.

Implications:

There are important ramifications for both educational practice and engineering students' future careers when Group Discussion Tasks (GDTs) are incorporated into the curriculum for engineering graduates. These ramifications cover a wide range of topics, such as improving cooperation skills, developing communication skills, and preparing graduates for obstacles they may face in the real world. The main ramifications of this study are listed below:

- Enhanced Communication Capabilities for Career Achievement
- Promoting Critical Thinking and Collaborative Problem-Solving
- Filling the Communication Gap Among Technical and Non-Technical
- Improving Cultural Sensitivity and Global Competency

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- Meeting the Need for Soft Skills in the Industry
- Encouraging Student Engagement and Active Learning
- Encouragement of Continuous Improvement and Lifelong Learning
- Assessment of Learning Results Outside of Technical Knowledge
- Including Cutting-Edge Teaching Techniques

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