

From Classroom to Boardroom: Enhancing Engineering Students' Communication Skills through Mock Business Meetings

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Abstract

Effective communication is a critical skill for engineering professionals, yet it often remains under-assessed in conventional classroom settings. This study investigates the impact of collaborative mock business meetings as a method to enhance and evaluate communication skills among undergraduate engineering students. The research compares collaborative assessment formats with traditional individual evaluations commonly used in technical education.

Using a thematic analysis approach, qualitative data was gathered through recorded meeting sessions, peer evaluation forms, and student reflections. The results highlight that collaborative mock meetings create a realistic and engaging environment for students to develop verbal articulation, teamwork, active listening, and professional etiquette. Participants reported increased confidence in expressing technical ideas and greater awareness of group dynamics, leadership, and problem-solving in communication.

The study concludes that mock meeting assessments offer a practical, discipline-aligned tool for improving communication competencies in engineering education. It recommends integrating

such simulations into engineering curricula to bridge the gap between academic learning and workplace readiness, thereby supporting the development of well-rounded, industry-ready graduates.

Key Words: Communication Skills, Engineering Education, Collaborative Learning, Mock Business Meetings

Introduction

In the current era of rapid technological advancement and interdisciplinary collaboration, the role of engineers is no longer confined to solving technical problems in isolation. The modern workplace demands engineering graduates who are not only proficient in technical knowledge but also effective in communication, capable of working collaboratively, and adept at navigating complex team dynamics. As industries evolve, the expectations from engineering professionals extend beyond individual expertise to include the ability to present ideas clearly, negotiate solutions, lead discussions, and contribute meaningfully to group-based decision-making processes.

Despite the growing recognition of these needs, many engineering programs continue to focus predominantly on technical subjects, often offering limited exposure to soft skills or communication training. Where communication components exist, they are frequently theoretical, with minimal opportunities for real-time application or performance-based assessment. This disconnect between classroom instruction and workplace reality poses a significant challenge in producing industry-ready graduates.

One promising pedagogical intervention to bridge this gap is the use of mock business meeting assessments—structured, collaborative simulations where students engage in professionally modeled discussions, decision-making scenarios, and communication exercises. These sessions are designed to replicate the formal and informal communication practices of corporate and technical environments, allowing learners to perform as they would in real-world settings. By participating in these simulations, students are encouraged to articulate their thoughts, respond

spontaneously, manage conflicts, and demonstrate leadership and interpersonal sensitivity within a supportive learning environment.

Mock meetings offer more than just an opportunity for practice; they also serve as authentic assessment tools that evaluate students' communication competencies in context. Compared to conventional assessment formats—such as written exams or individual presentations—collaborative assessments provide a more holistic view of a student's readiness for professional roles. They capture essential soft skills such as clarity of expression, listening ability, non-verbal cues, negotiation, and teamwork, all of which are difficult to assess through traditional written tests.

In addition, collaborative assessments align closely with the principles of Outcome-Based Education (OBE) and frameworks like Washington Accord, which emphasize the development of graduate attributes including effective communication, teamwork, and life-long learning. National agencies such as the National Board of Accreditation (NBA) in India also mandate communication skills as a core learning outcome for engineering graduates.

However, despite the pedagogical promise of mock business meetings, their use in engineering education remains relatively underexplored, particularly in terms of their impact on assessment quality and student learning outcomes. While studies in business and management domains have shown positive results from such simulations, there is limited empirical evidence on their effectiveness within technical institutions or engineering communication courses.

This study seeks to fill this gap by examining the use of mock business meeting assessments among undergraduate engineering students, comparing their effectiveness with conventional individual assessment formats. Through thematic analysis of student performances, peer feedback, and reflective journals, the research aims to understand how collaborative simulations influence students' communication skills, participation, and overall engagement.

Ultimately, this paper argues for the inclusion of structured, collaborative communication activities as a core component of engineering education. By doing so, institutions can better equip

future engineers with the interpersonal and collaborative competencies essential for success in multidisciplinary, real-world work environments.

Literature Review

Communication has long been recognized as a core competency for engineering graduates by professional bodies such as the National Board of Accreditation (NBA, India) and international frameworks like ABET. According to Passow (2012), employers consistently rank communication and teamwork among the most essential skills required of entry-level engineers. Despite this, engineering curricula often offer limited practical avenues to develop these competencies in authentic contexts (Male et al., 2011).

Effective assessment plays a crucial role in reinforcing learning outcomes and skill development. As Gikandi et al. (2011) argue, assessment is a central component of the learning process, measuring students' understanding and progress. Swan, Shen, and Hiltz (2019) further assert that assessments shape what counts in education, offering critical data for guiding student development. However, oral and speaking-based assessments remain complex and underutilized, particularly in engineering education where emphasis on technical knowledge often overshadows the development of soft skills.

Scholars such as Luoma (2004) and Ahmed & Alamin (2012) have highlighted that oral communication assessments are inherently subjective, requiring teachers to make instantaneous judgments on diverse aspects of language use. This complexity is compounded by logistical challenges such as large class sizes, lack of recording tools, low language proficiency, and time constraints (Sook, 2003; Mekonnen, 2014). These factors often affect the fairness and efficiency of oral evaluations. In many Asian contexts, exam-oriented systems tend to emphasize summative testing focused on reading and writing skills, often neglecting speaking and listening skills, which are critical for real-world communication (Vongpumivitch, 2012; Aziz et al., 2018).

Speaking is regarded as the most direct and observable form of communication, essential for conveying meaning and facilitating interaction (Zaremba, 2006; Ur, 2000). According to Le (2019), speaking serves as the foundation of communicative competence and plays a pivotal role

in fostering group discussions and collaborative exchanges. However, traditional summative assessments often fail to capture the interactive and dynamic nature of spoken communication (Gan, 2010).

To address these shortcomings, educators have begun to adopt authentic assessment methods such as forums, debates, interviews, and mock business meetings. These approaches simulate real-world tasks and help assess students' ability to apply their knowledge in practical contexts (Mueller, 2014). Mock business meetings, in particular, have been widely adopted in business and management education for their ability to replicate workplace scenarios and assess communication effectiveness, team dynamics, and leadership skills (Yoke et al., 2024).

Studies have shown the effectiveness of such simulations. For example, Gok and Akbulut (2019) found that mock business meetings significantly enhanced university students' communication and teamwork skills. Arbaugh and Benbunan-Fich (2006) reported similar findings in online learning environments, highlighting improved virtual collaboration and interpersonal communication. Cempaka (2024) concluded that regular practice of group discussions significantly improved speaking proficiency, while Sandlund and Sundqvist (2019) showed that collaborative assessment in group oral tasks benefited students across ability levels, especially in foreign language learning contexts.

Despite growing evidence of the benefits of mock business meetings, their application in engineering education remains limited, especially in the Indian and broader Asian context. Simulation-based education—such as mock meetings, interviews, and role-plays—has proven effective in promoting critical thinking, engagement, and soft skill development (Prince, 2004; Felder & Brent, 2009; Cant & Cooper, 2010; Stokoe, 2014). Yet, there remains a significant gap in literature assessing their utility as formal tools for evaluating communication competencies in technical fields.

This study seeks to bridge this gap by analyzing the use of collaborative mock business meeting assessments among undergraduate engineering students. Through a thematic analysis of student performance, peer evaluation, and reflective feedback, the research aims to understand the impact

of collaborative simulations on learners' communication skills, critical thinking, and professional preparedness. It contributes to the broader discourse on integrating authentic, collaborative, and performance-based assessments within engineering curricula to meet the evolving demands of the profession.

Research Objectives

1. Examine the effectiveness of mock business meeting simulations in enhancing communication skills among engineering undergraduates.
2. Compare collaborative and individual assessments in terms of engagement, performance, and skill development.
3. Identify key communication competencies demonstrated during mock meetings.
4. Analyze student perceptions of the authenticity and usefulness of mock meetings for real-world preparation.
5. Explore pedagogical value of simulation-based assessments in developing oral communication and critical thinking.
6. Recommend strategies for designing and evaluating collaborative oral assessments in engineering education.

Research Design

This study follows a qualitative research design using thematic analysis to explore the effectiveness of mock business meetings as collaborative assessment tools in enhancing communication skills among undergraduate engineering students. The research is exploratory and interpretive in nature, aiming to understand students' experiences, competencies developed, and perceptions related to simulation-based assessments.

Participants

The study was conducted among first-year undergraduate engineering students enrolled in a professional communication course at a renowned engineering institute in India. A total of 80 to 90 students, grouped into teams of 5–6, participated in structured mock business meeting sessions.

Participants were selected using **purposive sampling**, focusing on students who have participated in group tasks.

Instruments

A structured observation checklist was developed to assess students' communication performance during the mock business meetings. The checklist was used by both facilitators and peers and included the following criteria:

Table 1 Rubrics for evaluating mock business meetings

Criteria	Indicators
Clarity of Speech	Fluency, pronunciation, articulation, and coherence of ideas
Active Listening	Responding appropriately, non-verbal cues, asking relevant follow-up questions
Turn-taking and Team Participation	Balanced participation, respecting speaking turns, encouraging others
Use of Formal/Professional Language	Use of appropriate vocabulary, tone, and register
Confidence and Body Language	Eye contact, posture, gestures, voice modulation
Problem-Solving & Decision-Making	Contributing meaningful solutions, constructive disagreement, logical reasoning
Time Management	Staying within allotted time, managing discussion flow

This rubric helped provide objective, multi-angle feedback on the communication skills demonstrated by participants.

Reflective Journal Prompts

As part of the post-session assessment, students were required to write short reflective journals following each mock business meeting. These reflections served as a critical tool to promote self-

evaluation, introspection, and metacognitive awareness. The journal prompts were designed to guide students in analyzing their own communication behaviors and team dynamics during the session. Students reflected on the challenges they faced in communication, such as organizing their thoughts, managing interruptions, or expressing opinions under time pressure. They also documented how they contributed to the team's discussion and decision-making process, highlighting moments where they led, supported, or mediated dialogue. Another key prompt encouraged students to identify specific communication skills they believed had improved, such as fluency, confidence, listening, or use of formal vocabulary. To enhance their understanding of interpersonal dynamics, students were asked to evaluate how peer interaction influenced their communication style, shedding light on collaborative learning and mutual feedback. Finally, students were prompted to consider what they would do differently in future sessions, encouraging goal-setting and personal development. These journals provided rich, qualitative insights into the participants' evolving communication competencies and offered valuable data for thematic analysis on the impact of collaborative assessment practices.

Video and Audio Recordings of Mock Meetings

All sessions were video recorded with student consent to allow post-session review and detailed communication analysis. These recordings were useful for:

- Observing spontaneous verbal and non-verbal behaviors
- Capturing peer dynamics
- Identifying recurring interactional patterns
- Supporting thematic coding in analysis

Procedure

The research was conducted in the context of a professional communication course offered to first-year undergraduate engineering students. The procedure involved multiple phases, integrating both teaching and assessment activities within a structured classroom framework.

Phase 1: Orientation and Preparation

At the outset, students were given an orientation session on the purpose and format of mock business meetings. They were introduced to professional meeting protocols, including roles such

as chairperson, secretary, team members, and timekeeper. Guidelines on effective communication, group etiquette, and the assessment rubric were shared. Sample meeting scripts and video demonstrations were used to help students understand the expected structure and tone.

Students were then divided into collaborative teams of 5–6 members, ensuring diversity in communication skills and academic performance. Each group was assigned a real-world engineering or managerial problem, such as project planning, resolving team conflicts, or decision-making under deadlines, to simulate a formal business context.

Phase 2: Execution of Mock Business Meetings

Each team conducted a mock business meeting in front of the class, with all discussions video recorded for later analysis. Meetings lasted between 15–20 minutes, and students were expected to:

- Greet and introduce participants
- Present the agenda and manage discussion flow
- Express opinions, respond to others, and negotiate solutions
- Reach a consensus or final decision
- Summarize the meeting outcome formally

During the meetings, the instructor and selected peers used a structured rubric to evaluate each student's communication performance, focusing on clarity, confidence, collaboration, listening skills, and professional conduct.

Phase 3: Reflection and Peer Feedback

Immediately after the meeting, students were required to write a reflective journal, responding to guided prompts related to their individual performance, team contribution, challenges faced, and areas for improvement. Peers also submitted evaluation forms with constructive feedback for each team member.

This phase emphasized self-awareness and peer-supported learning, encouraging students to internalize feedback and reflect on their progress.

Phase 4: Data Collection and Analysis

All video recordings, reflective journals, peer and teacher evaluation forms, and optional focus group discussions were collected as data sources. These materials were subjected to qualitative thematic analysis to identify patterns related to communication development, student engagement, and the effectiveness of the collaborative assessment approach.

Phase 5: Reporting and Debriefing

In the final phase, a classroom debrief was conducted to allow students to share their learning experiences and suggestions. The instructor discussed recurring themes from the reflections and offered individual feedback to support continuous improvement.

The entire procedure spanned three to four weeks, allowing sufficient time for preparation, performance, reflection, and analysis. This integrated approach ensured that communication skills were not only taught and practiced but also assessed in an authentic, learner-centered manner.

Data Analysis

The data collected for this study were analyzed using a qualitative thematic analysis approach to explore how mock business meeting assessments influenced the communication skills of undergraduate engineering students. The primary data sources included video recordings of mock meetings, peer and teacher evaluation forms, students' reflective journal entries, and transcripts of optional focus group discussions. The analysis began with a careful transcription of video and audio recordings, followed by repeated readings of all textual data to gain familiarity with the content. An initial coding process was then carried out, wherein key phrases and behaviors were tagged with relevant labels such as "clarity of expression," "team coordination," "nervousness," "active listening," and "confidence gain."

These initial codes were later organized into broader thematic categories. Prominent themes that emerged included: development of communication competence, which encompassed fluency, vocabulary use, and body language; team collaboration and peer dynamics, highlighting

participation equity and leadership emergence; self-awareness and reflection, as evident in students' journal entries; and perceived authenticity of the mock meeting as an assessment format. Additional themes addressed the challenges students faced in oral communication, such as managing anxiety or dominance by more vocal team members, and the role of peer feedback, which many students reported as encouraging and constructive.

Cross-validation across data sources strengthened the findings. For example, a student who reflected on improved listening skills was also observed using verbal acknowledgments and maintaining eye contact in the video recordings and received positive comments from peers for attentive behavior. This triangulation ensured consistency and credibility in theme development. Overall, the analysis revealed that collaborative mock meetings not only enhanced students' communication skills but also promoted critical reflection, peer-supported learning, and a greater sense of professional readiness. The richness of the qualitative data provided deep insight into how authentic, simulation-based assessments can effectively foster both competence and confidence in student communication.

Results

The findings of the study indicate that mock business meeting assessments significantly contributed to the development of key communication competencies among undergraduate engineering students. One of the most prominent outcomes observed was the improvement in verbal articulation and fluency. Many students demonstrated enhanced clarity of speech, better organization of ideas, and increased use of professional vocabulary. Over successive sessions, video recordings captured progressive refinement in pronunciation, coherence, voice modulation, and non-verbal cues such as posture, gestures, and eye contact, suggesting increased confidence and communication competence.

Active listening and equitable team participation were also consistently evident across the data. Students were observed acknowledging peers' points, maintaining eye contact, nodding in agreement, and asking relevant follow-up questions. Peer evaluations frequently highlighted balanced participation and respectful turn-taking, with team members often encouraging quieter students to contribute. Reflective journals reinforced these observations, with students expressing

heightened awareness of how listening actively and respecting team dynamics led to more meaningful interactions and smoother decision-making.

Another key outcome was the development of leadership and problem-solving skills within the collaborative context. Some students naturally assumed the role of discussion leaders, managing the flow of conversation, clarifying differing viewpoints, and guiding the team toward consensus. These leadership moments were recognized by peers and reflected upon by the students themselves, who reported feeling empowered by the responsibility and more prepared for future professional tasks. The simulated format, by replicating real-world decision-making scenarios, also encouraged students to engage in logical reasoning and conflict resolution, fostering critical thinking under time constraints.

Students' reflective journal entries revealed a deepening sense of self-awareness and metacognitive engagement. Many participants admitted to initial nervousness or hesitation but gradually gained confidence in expressing their opinions, organizing their thoughts under pressure, and responding spontaneously. Students frequently identified specific areas for improvement—such as reducing filler words, improving time management, or contributing more assertively—and outlined strategies for growth in future sessions. This level of introspection indicates that the simulation-based assessment not only supported communication skill acquisition but also nurtured self-directed learning.

The mock meetings were widely perceived as authentic and professionally relevant. Both reflective journals and focus group discussions indicated that students found the experience realistic and more engaging than traditional communication exercises or theoretical instruction. The opportunity to enact formal roles and interact in a simulated business context was regarded as highly beneficial for preparing them for workplace communication. Students appreciated the structured nature of the activity, noting that the clear agendas and assigned roles helped them stay focused and practice meaningful communication.

Peer feedback played a significant role in reinforcing learning. Students valued the constructive nature of evaluations from their teammates, often citing peer comments as motivating and eye-

opening. Many reported that feedback from peers helped them notice behaviors or habits they had previously overlooked, contributing to a collaborative and supportive classroom environment. This reciprocal evaluation process not only encouraged accountability but also cultivated empathy and critical observation skills among students.

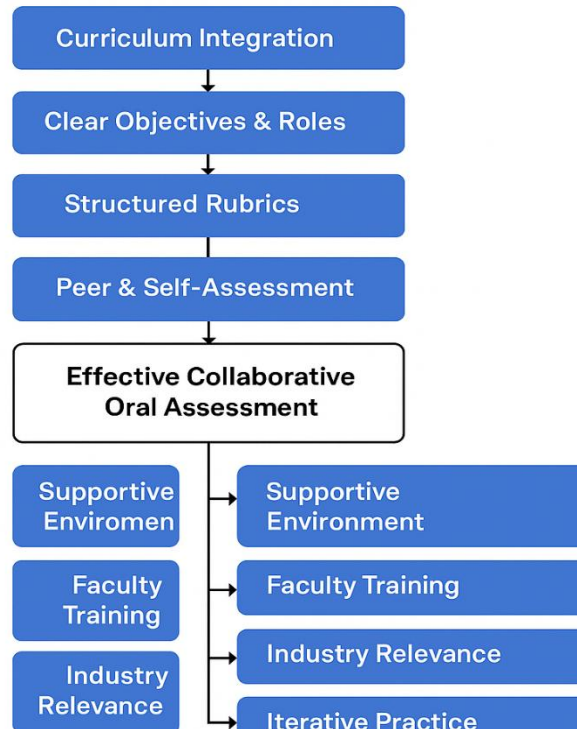
Despite these positive developments, some challenges were noted. A few students expressed difficulty in managing dominant voices within the team or felt overwhelmed during fast-paced discussions. Time management also emerged as a concern in several groups, where meetings occasionally ran over time or lacked proper closure. Nonetheless, students viewed these challenges as part of the learning curve and reported a sense of accomplishment in overcoming them. Instructors observed that teams varied in their cohesiveness and communication dynamics, with some requiring more guidance than others.

Overall, the results suggest that collaborative mock business meetings served as an effective pedagogical and assessment tool for enhancing students' communication skills, encouraging teamwork, and preparing them for real-world professional interactions. The integration of reflective practice and peer feedback added depth to the learning experience, supporting both skill development and personal growth.

Recommendations for Designing and Evaluating Collaborative Oral Assessments in Engineering Education

Based on the findings of this study and a review of best practices in communication pedagogy, several strategies are recommended to effectively design and evaluate collaborative oral assessments, such as mock business meetings, in engineering education:

Figure 1 Designing and Evaluating Collaborative Oral Assessments in Engineering Education



1. Integrate Assessments within Course Structure

Collaborative oral assessments should be embedded within the curriculum of professional communication or soft skills courses, not treated as add-ons. When simulations like mock business meetings are linked to course learning outcomes—especially those aligned with program objectives and accreditation criteria—they become more meaningful and sustainable.

2. Define Clear Objectives and Roles

Before the activity, students must be oriented on the purpose of the task, expected outcomes, and their roles (e.g., chairperson, secretary, timekeeper, team member). Clear guidelines help students take ownership and contribute constructively. Incorporating real-world engineering or managerial scenarios enhances authenticity and relevance.

3. Use Structured Rubrics for Consistent Evaluation

Develop detailed rubrics that assess key competencies such as clarity of speech, active listening, turn-taking, teamwork, use of professional language, body language, problem-solving, and time management. Sharing the rubric in advance helps students understand expectations and self-regulate their learning.

4. Encourage Peer and Self-Assessment

Alongside instructor evaluation, include structured peer feedback and self-reflection components. These promote metacognitive awareness and provide multiple perspectives on performance. Peer assessments should be guided by the same rubric to maintain objectivity and fairness.

5. Incorporate Reflective Practice

Reflection journals or guided prompts after each assessment help students process their experiences, identify strengths and weaknesses, and set goals for improvement. This step is crucial for long-term skill development and encourages students to view communication as an evolving competence.

6. Leverage Technology for Feedback and Review

Video recording the sessions allows students to revisit their performance and receive targeted feedback. It also provides a rich source of data for instructors to assess behaviors, track progress, and offer specific recommendations.

7. Promote a Safe and Supportive Environment

Foster a classroom culture that values experimentation, respectful dialogue, and constructive criticism. Students are more likely to participate confidently when they feel psychologically safe and supported by their peers and instructors.

8. Train Faculty for Effective Facilitation and Assessment

Engineering educators should be trained in communication assessment techniques and facilitation of simulations. Cross-department collaboration with language or soft skills experts can strengthen assessment quality and instructional design.

9. Align Assessments with Industry Expectations

Design scenarios and assessment criteria based on input from industry stakeholders or alumni to ensure that the competencies being assessed reflect real-world communication demands in technical professions.

10. Ensure Iterative Practice

Single-session assessments are insufficient for skill mastery. Organize multiple mock sessions over time, allowing students to receive feedback, reflect, and improve. This iterative model supports continuous development of communication skills.

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