

Interactional Synchrony in Collaborative Presentations for Students' Fluency Development

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Abstract

This study explores how Collaborative Presentation Tasks facilitate the development of speaking fluency among 54 Electrical Engineering students in an English as a Foreign Language (EFL) context. Adopting a qualitative descriptive design, the study investigated students' lived experiences of collaborative presentations, with particular attention to the emergence of interactional synchrony during preparation and delivery stages. Data were collected through classroom observations, audio-video recordings of group presentations, semi-structured interviews, and students' reflective journals. The analysis focused on how coordinated rehearsal, shared cognitive planning, peer scaffolding, and orderly turn-taking evolved within collaborative groups and shaped students' fluency development. The findings reveal that collaborative presentation environments fostered psychological safety, significantly reducing speaking anxiety and encouraging students' willingness to communicate and take linguistic risks. Joint rehearsal practices enabled students to align pacing, rhythm, and transitions, resulting in smoother speech flow, fewer hesitation markers, and greater speech automaticity. In addition, collective content construction reduced cognitive load when presenting technical material, allowing students to focus more on meaning delivery and interaction rather than linguistic accuracy. Peer support further promoted more authentic and spontaneous oral expression, although challenges such as unequal participation and reliance on more proficient peers were also observed. Overall, the study demonstrates that collaborative presentations function not only as assessment tasks but as fluency-enhancing learning environments that integrate cognitive, emotional, and interactional support. These findings highlight the pedagogical potential of synchrony-based collaborative speaking activities in engineering education and offer practical implications for designing communication tasks that promote confident, fluent, and meaningful oral communication.

Keywords: Collaborative presentations, Speaking fluency, Interactional synchrony, Engineering students

Abstrak

Penelitian ini mengeksplorasi bagaimana tugas presentasi kolaboratif memfasilitasi pengembangan kelancaran berbicara (speaking fluency) pada 54 mahasiswa Teknik Elektro. Dengan menggunakan desain kualitatif deskriptif, penelitian ini mengkaji pengalaman belajar mahasiswa dalam presentasi kolaboratif, dengan fokus khusus pada munculnya sinkronisasi interaksional selama tahap persiapan dan penyampaian presentasi. Data dikumpulkan melalui observasi kelas, rekaman audio-video presentasi kelompok, wawancara semi-terstruktur, serta jurnal refleksi mahasiswa. Analisis difokuskan pada bagaimana latihan terkoordinasi, perencanaan kognitif bersama, scaffolding antarteman sebaya, serta pengambilan giliran berbicara yang teratur berkembang dalam kelompok kolaboratif dan membentuk peningkatan kelancaran berbicara mahasiswa. Hasil penelitian menunjukkan bahwa lingkungan presentasi kolaboratif menciptakan keamanan psikologis yang mampu menurunkan kecemasan berbicara secara signifikan serta meningkatkan kemauan mahasiswa untuk berkomunikasi dan mengambil risiko linguistik. Praktik latihan bersama memungkinkan mahasiswa menyelaraskan tempo, ritme, dan transisi presentasi, sehingga menghasilkan alur ujaran yang lebih lancar, berkurangnya penanda keraguan (hesitation)

markers), serta meningkatnya otomatisasi berbicara. Selain itu, konstruksi materi secara kolektif mengurangi beban kognitif dalam penyampaian konten teknis, sehingga mahasiswa dapat lebih fokus pada penyampaian makna dan interaksi dibandingkan ketepatan linguistik semata. Dukungan teman sebaya juga mendorong ekspresi lisan yang lebih autentik dan spontan, meskipun masih ditemukan tantangan berupa partisipasi yang tidak merata dan ketergantungan pada mahasiswa yang lebih mahir. Secara keseluruhan, penelitian ini menunjukkan bahwa presentasi kolaboratif tidak hanya berfungsi sebagai tugas penilaian, tetapi juga sebagai lingkungan pembelajaran yang meningkatkan kelancaran berbicara melalui integrasi dukungan kognitif, emosional, dan interaksional. Temuan ini menegaskan potensi pedagogis aktivitas berbicara kolaboratif berbasis sinkronisasi dalam pendidikan teknik serta memberikan implikasi praktis bagi perancangan tugas komunikasi yang mendorong kepercayaan diri, kelancaran, dan komunikasi lisan yang bermakna.

Kata Kunci: presentasi kolaboratif, kelancaran berbicara, sinkronisasi interaksional, mahasiswa teknik

INTRODUCTION

In the landscape of modern engineering education, oral communication has become an essential professional competency. Engineers are expected to articulate design concepts, explain their ideas, back up their choices, justify decision-making processes, and present complex technical systems to diverse audiences including supervisors, clients, teams from other fields, and international collaborators. Since engineering projects are more often done with people from different cultures and English is the main language used for technical work, speaking English fluently is no longer just an extra benefit yet it's now a basic need. For undergraduate engineering students particularly those in non-English speaking countries, being able to speak English well is very important for doing well in school and getting a good job later.

However, in second language research, fluency is not seen only as a sign of overall language level. It is linked to the smooth flow of oral production and is commonly operationalized through speed, breakdown (pausing), and repair phenomena such as repetitions, self-corrections, and false starts (Koizumi & In'nami, 2024). From this point of view, speaking English fluently is still a major challenge for many engineering students in EFL contexts. Speaking fluency is widely recognized as challenging in EFL contexts and is influenced by learners' practice opportunities, exposure to input, and motivational factors (Kholmurodovna, 2025). Given this understanding of fluency as smooth, rapid, and continuous speech, the way speaking activities are designed and implemented in the classroom becomes a central pedagogical concern. From a pedagogical perspective, the development of fluency depends strongly on how classroom activities are planned and used. While this focus may be useful at lower levels, higher-level students need a better balance between accuracy-based and fluency-oriented activities. This imbalance is clearly seen in EFL contexts at the university level. Many students have good grammatical knowledge, but they do not have enough opportunities to practice speaking in a fluent and meaning-focused way. These teaching limits are made worse by psychological, cognitive, and environmental factors that directly affect how students speak. Difficulties in achieving fluent and natural oral communication frequently operate as affective barriers that reduce students' engagement in classroom interaction (Alrayah, 2018).

Despite the rising importance of oral fluency in engineering fields, many students in English as a Foreign Language (EFL) environments continue to struggle with smooth and spontaneous oral production. Their difficulty in speaking English clearly often comes from several factors such as limited exposure to English-speaking environments, high cognitive load when explaining technical content, not getting enough practice, and feeling very nervous when they have to speak. As what Hung Duong Minh et al., (2025) say that difficulties in acquiring English-speaking skills often arise from psychological factors, as many learners feel anxious, pressured, and afraid of making mistakes, which makes them hesitant to speak and practice the language. Hence, the less environment students have to practice speaking skill, the less significantly affective communication the student proficient in their own speaking skill (Thu, 2021).

Traditional pedagogical approaches in engineering communication courses tend to rely heavily on individual presentations as the central method for assessing students' oral performance. Although individual presentations can be beneficial for evaluating independent

mastery, they often limit opportunities for interaction, negotiation of meaning, and supportive rehearsal environments. During solo presentation, students commonly express feelings of isolation and fear or anxiety of being judged, which intensify affective barriers and inhibit fluency development. As what Irulappan (2025) state that this anxiety manifests as nervousness, self-doubt, and physiological symptoms such as a racing heartbeat or dry mouth, which can severely hinder the ability to communicate effectively. Due to the high stakes associated with individual presenting assignments, students may prioritize memorization of scripts above the development of spontaneous, coherent, and natural speech. As a result, students' oral performance may not accurately represent their comprehension of technical material, and fluency continues to be underdeveloped. However, because speaking outcomes in presentation tasks are closely tied to learners' confidence and anxiety regulation, presentation formats that provide greater support and shared responsibility such as collaborative presentations may offer additional advantages for fluency development (Al-khresheh, 2024).

In contrast to these traditional approaches, a growing body of research in language education highlights the benefits of collaborative learning in fostering oral communication skills. Drawing from sociocultural and interactionist perspectives, collaborative learning emphasizes that language development occurs through socially situated interactions where learners co-construct knowledge and support one another through dialogue, shared responsibilities, and communication. Collaborative learning provides a natural and supportive environment in which students gain deeper understanding, enhance critical thinking and creativity, develop interactive skills, and benefit from one another (Gilbert, 2021; Ho, 2021; Mende et al., 2021). Fluency development is shaped not only by cognitive processing efficiency but also by the social context of communication, as pragmatic and sociolinguistic demands influence how fluency emerges in real interaction (Segalowitz, 2016).

Within this framework, Collaborative Presentation Tasks have emerged as a pedagogical innovation that integrates co-planning, shared script development, joint rehearsal cycles, and multi-speaker delivery. Unlike traditional individual presentations, CPT situates oral production within a collective workflow, allowing learners to rehearse together, coordinate intonation and pacing, exchange corrective feedback, and align their communicative strategies. Applying a collaborative approach means inviting students to develop effective communication skills (Suyato et al., 2024). Students often describe this phenomenon as “speaking in sync” a sense of shared rhythm and cohesion that emerges when learners present collaboratively. This synchrony can lower cognitive load, reduce performance anxiety, and promote smoother oral delivery as students draw confidence from their peers. The plans, comments, and suggestions from each member of the collaboration process were considered to arrive at a well-planned task (Mutong & Marzan, 2024). Recent evidence from a systematic review indicates that peer feedback particularly when designed to be interactive and timely can support EFL learners' speaking development and engagement, although challenges related to feedback quality and uneven participation remain (Weng et al., 2025).

Moreover, although collaborative approaches have been implemented in general EFL classrooms, their application within engineering communication where the content is highly technical and cognitively demanding remains underexplored. Few studies have examined how engineering students experience collaborative presentations and how these experiences translate into perceived fluency gains. Furthermore, existing research tends to focus on quantitative fluency metrics rather than the social, emotional, and cognitive processes that shape fluency development. A qualitative perspective is therefore necessary to uncover the mechanisms through which collaborative presentation tasks influence learners' speaking trajectories.

While previous studies have explored collaborative learning and speaking fluency, limited attention has been given to how interactional synchrony develops within collaborative presentation tasks, particularly in engineering ESP contexts. Most existing research emphasizes quantitative fluency outcomes rather than the social, cognitive, and emotional processes that shape fluent oral production. This study addresses this gap by qualitatively examining how engineering students co-construct fluency through joint rehearsal, peer support, and coordinated presentation practices.

Despite the growing body of research on collaborative learning and speaking development in EFL contexts, limited attention has been given to how collaborative presentation tasks

specifically influence the development of speaking fluency among engineering students. Most existing studies tend to examine collaborative learning in general language classrooms or focus primarily on measurable fluency outcomes such as speech rate, pauses, and repair phenomena. Consequently, less is known about how collaborative presentation processes such as joint rehearsal, shared cognitive planning, and peer support shape the development of fluency when students must simultaneously communicate complex technical content. This gap is particularly relevant in engineering education, where students are required not only to speak English but also to explain technical concepts clearly and confidently. Furthermore, previous research has rarely explored how the social, emotional, and cognitive dynamics within collaborative presentation tasks contribute to the emergence of fluent oral production in technical communication contexts. Addressing this gap is important for understanding how pedagogical practices in engineering communication courses can better support students' speaking fluency development.

Therefore, this study addresses these gaps by exploring the lived experiences of engineering students as they engage in collaborative presentations. By examining student reflections, interaction patterns, and affective responses, the study aims to deepen our understanding of how fluency develops within collaborative settings and how students make sense of the collaborative presentation process.

This study focuses on exploring how engineering students develop their speaking fluency through Collaborative Presentation Tasks. The first focuses on how students experience changes in their fluency as they engage in collaborative presentations, examining the cognitive, emotional, and interactional factors that shape their performance. This research contributes to the growing discourse on engineering communication pedagogy and offers insights into how collaborative learning frameworks can be effectively integrated into technical education. The findings aim to support the development of pedagogical models that foster confident, fluent, and competent communicators.

METHODS

Research Design

This study employed a qualitative descriptive design to explore how collaborative presentation tasks support the development of speaking fluency among engineering students. A qualitative approach was chosen because the study aims to understand students' subjective experiences, perceptions, and interaction patterns, rather than to measure fluency gains numerically. The design focuses on providing a rich, contextualized description of how students co-construct presentations, negotiate meaning, and manage turn-taking while preparing and delivering group presentations in English.

Context and Participants

The participants in this study consisted of 54 seventh-semester students from the Electrical Engineering Department including 39 male and 15 female students. As English serves as a foreign language in this context, students have limited opportunities to practice the language outside the classroom. Their English proficiency levels ranged from low-intermediate to intermediate, based on prior English placement tests and evaluations. Participants were selected through purposive sampling, with inclusion criteria requiring that students were officially registered in the English class, had previously delivered presentations in groups, and had experience presenting in English at least once during the course. All participants voluntarily agreed to be audio or video-recorded and interviewed, and pseudonyms were assigned to ensure confidentiality throughout the transcription and reporting processes.

Collaborative Presentation Tasks

The core pedagogical intervention in this study involved a structured series of collaborative presentation tasks centred on engineering-related themes relevant to the students' disciplinary background. These tasks were systematically embedded into the regular course syllabus and implemented over a period of approximately 6-7 weeks. Each cycle of the intervention required students to work in small groups to research a technical topic, negotiate and organize content collaboratively, rehearse their parts together, and deliver a group presentation in English. The process emphasized joint planning, shared responsibility, and

interactive decision-making, enabling students to support one another throughout the stages of topic exploration, slide preparation, and oral delivery. In addition to the presentations themselves, the intervention included peer-feedback sessions, instructor guidance, and opportunities for repeated practice, allowing students to progressively refine their fluency, coherence, and confidence in speaking. Therefore, the collaborative presentation tasks served not only as assessment activities but also as learning tools that encouraged engagement, mutual support, and communicative development.

Task Design

Each collaborative presentation task required students to work in groups of five to six members, engaging in a structured process that mirrored authentic communication and teamwork practices in engineering settings. The groups began by selecting or receiving an engineering-related topic such as renewable energy systems, basic electronic components, IoT applications, and so on which provided a meaningful disciplinary context for their English use. They then collaboratively planned and structured the presentation by organizing the introduction, main content, and conclusion; dividing subtopics among members according to interest or expertise; designing smooth transitions between speakers; and selecting appropriate visual materials, including slides, diagrams, or photographs.

Once the content was agreed upon, students moved into a rehearsal phase, during which they practiced their individual sections, adjusted timing, coordinated turn-taking and speaker transitions, and offered peer feedback aim to improve clarity, confidence, and fluency. The final stage involved delivering the presentation in front of the class, with each member presenting their assigned segment, utilizing the prepared visual aids, and participating in a brief Q&A session in which they responded to questions from peers or the instructor. This multi-step process not only supported the development of speaking fluency but also fostered collaboration, strategic planning, as well as communicative competence within an engineering ESP context.

Focus on Fluency

During the preparation and rehearsal stages, the researcher provided explicit guidance to help students enhance their speaking fluency by drawing attention to several key performance features. Students then were encouraged to practice pausing and chunking ideas appropriately, minimize long hesitations such as “eee...” or “mmm...,” and use fillers and discourse markers in a more natural and purposeful manner. The lecturer also emphasized the importance of maintaining a steady and manageable speaking pace, as well as coordinating turn-taking smoothly to avoid awkward silences or overlapping speech during the group presentation. After each presentation, the feedback prioritized fluency-related aspects such as flow, rhythm, pacing, and interactional coordination rather than focusing solely on linguistic accuracy, thereby reinforcing the communicative goals of the task and supporting students’ gradual development of confident, fluid oral delivery.

Data Collection

In this study, multiple data sources were employed. One of the most substantial was the systematic classroom observation conducted throughout all stages of the collaborative presentation cycles. Because the lecturer also served as the researcher, the observations were carried out in a non-participant manner during moments when students were actively engaged in group work, rehearsals, presentation delivery, and the subsequent Q&A sessions. Although present in the classroom as the course instructor, the researcher refrained from influencing students’ natural behavior, allowing the interactions and collaborative processes to unfold authentically.

A structured observation sheet and detailed field notes were used to document a wide range of classroom dynamics, including patterns of participation who spoke, when they contributed, and for how long as well as visible indicators of hesitation, confidence, anxiety, or engagement evident during preparation and performance. The researcher also carefully recorded how effectively each group coordinated its presentation, noting the smoothness of transitions between speakers, the organization of turn-taking, and the forms of peer support demonstrated, such as prompting, encouraging, or assisting one another when difficulties arose.

In addition, all forms of instructor feedback relevant to fluency such as advice on pacing, pausing, managing delivery flow, and maintaining interactional rhythm were documented as part of the observational data. Together, these observations provided rich and contextualized insights that complemented other data sources, contributing to a comprehensive understanding of how collaborative presentation tasks influenced students' fluency development and group interaction patterns in the classroom setting.

Audio/Video Recordings

All group presentations were audio as well as video-recorded to enable detailed examination of students' oral performance. These recordings provided rich data for analysing various aspects of speaking fluency, including speech rate and pausing patterns, the use of fillers, repetition, and reformulation, as well as the collaborative strategies students employed during presentations, such as prompting, offering verbal support, and completing each other's sentences. Following the recording process, all data were transcribed verbatim to facilitate in-depth qualitative analysis of the linguistic and interactional features displayed throughout the collaborative presentation tasks.

Semi-Structured Interviews

Following the completion of the presentation cycles, semi-structured interviews were also conducted with a selected sample of students representing different presentation groups, involving 10 participants. These interviews were designed to explore students' perceptions of how the collaborative presentation tasks influenced their speaking fluency, the specific aspects they found supportive or challenging during the preparation and delivery stages, and the extent to which working in a group affected their confidence and willingness to speak in English. Students were also asked to describe the strategies they used to enhance fluency and achieve a sense of synchrony delivery with their peers. Interviews were conducted either in English or in the students' first language, depending on their comfort level, and all recordings were subsequently translated when necessary and transcribed verbatim to allow for rigorous qualitative analysis of emerging themes and patterns.

Reflective Journals

In this study, the students were also asked to write short reflective journals after each presentation cycle, in which they commented on their developing speaking fluency. In these reflections, students described what they noticed about their own fluency during the task, moments when they felt their group was working in a synchrony and the specific strategies they attempted such as repeated rehearsal, reducing script dependency, or relying on key phrases to maintain flow. They also identified aspects they hoped to improve in subsequent presentations. These written reflections served as an additional qualitative data source, offering deeper insight into learners' self-awareness, strategy use, and ongoing progress in fluency development throughout the collaborative presentation activities.

Data Analysis

Data analysis followed a thematic analysis approach informed by Braun and Clarke's six-phase framework. This approach was selected because it provides a systematic yet flexible procedure for identifying patterns of meaning across qualitative datasets. Multiple sources of data including classroom observations, interview transcripts, presentation recordings, and student reflective journals were analyzed to capture how collaborative presentation tasks contributed to the development of speaking fluency among engineering students.

The analysis began with a rigorous transcription process. All audio and video recordings from interviews and presentations were transcribed verbatim to preserve the authenticity and richness of participants' responses. Interviews conducted in the local language were subsequently translated into English while carefully maintaining the original meanings and contextual nuances. To ensure confidentiality, participants' identities were anonymized using coded identifiers such as G1-S1 (Group 1, Student 1). These transcripts were then organized into a structured dataset to facilitate systematic analysis.

Following Braun and Clarke's first phase of data familiarization, the researcher repeatedly read the transcripts, reviewed observation notes, and revisited selected video recordings to gain an in-depth understanding of the data. During this stage, preliminary notes were recorded to capture initial impressions related to students' speaking behaviors, collaborative interactions, and emotional responses during presentations.

The second phase involved generating initial codes. Segments of data that reflected experiences related to speaking fluency and collaborative interaction were systematically coded. These codes represented meaningful units of information within the dataset. Examples of early codes included "rehearsal improves speech smoothness," "peer prompts when forgetting words," "coordinated transitions between speakers," and "increased confidence after repeated presentations."

In the third phase, the researcher searched for potential themes by grouping related codes into broader conceptual categories. These categories reflected recurring aspects of students' experiences, including collaborative planning processes, rehearsal practices, peer scaffolding mechanisms, affective changes such as reduced anxiety or increased confidence, and observable improvements in speaking fluency during presentations.

The fourth phase involved reviewing and refining the themes. At this stage, the researcher examined whether the emerging themes accurately represented the coded data and the dataset as a whole. Codes that overlapped conceptually were merged, while others were refined to ensure that each theme captured a coherent and distinct pattern within the data.

In the fifth phase, the themes were defined and named, resulting in four interconnected themes that explain how collaborative presentation tasks support speaking fluency development. These themes were carefully interpreted in relation to students' experiences, observed classroom interactions, and presentation performance patterns.

Finally, the sixth phase involved producing the analytical narrative, where the themes were interpreted in connection with existing literature on speaking fluency, collaborative learning, and engineering communication. This interpretive stage allowed the findings to be situated within broader theoretical discussions regarding task-based learning, sociocultural interaction, and fluency development in English for Specific Purposes contexts.

Because the researcher also served as the course instructor during the study, the possibility of researcher bias was carefully considered. To minimize the influence of this dual role, several strategies were implemented. First, data triangulation was employed by integrating multiple data sources, including interviews, classroom observations, presentation recordings, and reflective journals. Second, systematic coding procedures were used to ensure that themes emerged from the data rather than from prior assumptions. Third, reflective memos were maintained throughout the analysis process to document analytical decisions and enhance transparency in interpretation. These strategies helped strengthen the credibility and trustworthiness of the findings while reducing the potential influence of the researcher's positionality within the classroom context.

Trustworthiness

To ensure the trustworthiness of the study, several methodological strategies were applied. Credibility was strengthened by using multiple data sources, such as classroom observations, recorded presentations, interviews, and student reflections, as well as through member checking, where selected students reviewed and confirmed the researcher's interpretations. Peer debriefing with a colleague also helped improve the analysis by providing an external perspective on the emerging themes.

Dependability was maintained by keeping an audit trail that recorded key research decisions, coding procedures, and analytical notes. In addition, detailed descriptions of the research context, participants, and procedures were provided to allow the study to be repeated in similar contexts. Confirmability was addressed through reflexive journaling, in which the researcher reflected on their dual role as both lecturer and researcher, and by ensuring that all interpretations were supported by direct evidence from the data. Transferability was supported by providing clear and detailed descriptions of the learning setting, institutional context, and task design, allowing readers to judge whether the findings could be applied to other educational contexts.

Ethical Considerations

The study followed fundamental ethical research principles to safeguard the rights and well-being of all participants. Students were fully informed about the objectives of the research, the types of data that would be collected, and the ways in which the data would be used. Informed consent was obtained from every participant, and additional permission from the institution and from parents when necessary for students under the age of 18 was also secured. Participation in the study was entirely voluntary, and students were assured that they could withdraw at any stage without any academic consequences. To protect privacy, anonymity and confidentiality were maintained through the use of pseudonyms, and all recordings and transcripts were securely stored. Furthermore, the study underwent review and approval by the appropriate institutional ethics committee, ensuring compliance with established research standards.

RESULT AND DISCUSSION

This study explored how collaborative presentation tasks contributed to the development of speaking fluency among engineering students. Through thematic analysis of interview data, classroom observations, presentation recordings, and reflective journals, four interconnected themes emerged. These themes illuminate the cognitive, emotional, and social processes through which collaborative learning environments support the development of oral fluency.

While previous research has widely acknowledged the benefits of collaborative learning for communication skills, the present findings extend this body of work by illustrating how specific collaborative mechanisms namely psychological safety, joint rehearsal, shared cognitive planning, and peer support-interact to shape fluency development in English presentation contexts within engineering education. Rather than functioning as isolated pedagogical strategies, these mechanisms appear to operate simultaneously, creating a supportive communicative ecology that promotes both linguistic performance and learner confidence.

Importantly, the findings suggest that collaborative presentation tasks do not merely increase speaking opportunities but reconfigure the speaking process itself, transforming individual performance pressure into shared communicative responsibility. This shift has important implications for understanding fluency development in English for Specific Purposes (ESP) contexts, particularly among engineering students who often experience high anxiety in formal presentation settings.

Collaborative Spaces Foster Psychological Safety and Reduce Speaking Anxiety

One of the most salient findings was that collaborative presentation environments created a psychologically safe space that significantly reduced students' anxiety when speaking English. Participants consistently reported feeling more relaxed and confident when presenting in groups compared to individual presentations. The shared responsibility and emotional support from peers alleviated the fear of making mistakes and being judged.

As one participant explained:

"When I present alone in front of the class, I freeze easily. But when I'm with my group, I feel like someone is backing me up, so I become more relaxed." (S5)

Similarly, another student stated:

"I usually get very nervous when presenting alone and sometimes forget what to say. But in a group, I feel supported, so I can speak more calmly." (S8)

Classroom observations reinforced these perceptions. Students demonstrated fewer hesitation markers such as fillers ("uhh," "umm," "hmm") and exhibited more relaxed body language during group presentations. They also appeared more willing to take linguistic risks, attempting longer utterances and spontaneous explanations. These findings align with Krashen's Affective Filter Hypothesis, which suggests that lower anxiety facilitates language acquisition and performance. When emotional barriers are reduced, learners can process language more effectively and express themselves more fluently. Recent studies have similarly indicated that negative emotions such as anxiety and boredom hinder engagement and oral performance (Xu et al., 2026)

Furthermore, the results support prior research highlighting the benefits of collaborative presentations in enhancing confidence, communication skills, and teamwork (Ayu et al., 2024). Conversely, high speaking anxiety has been shown to negatively impact fluency, pronunciation, and coherence (Bozkurt & Aydin, 2023; Hatiza & Sujatmoko, 2025). Therefore, the collaborative context functioned as an emotionally supportive environment that directly contributed to smoother and more confident speaking. This suggests that collaborative presentation tasks may serve as an effective pedagogical mechanism for managing affective barriers in ESP classrooms.

Joint Rehearsal and Peer Scaffolding Enhance Rhythm, Flow, and Fluency

The second major theme revealed that joint rehearsal played a crucial role in shaping students' fluency development. Through repeated group practice, learners synchronized their pacing, intonation, and speech transitions, which students described as "speaking in synchrony." This synchronization reflects broader processes of linguistic alignment, whereby interlocutors gradually adapt their lexical choices, syntactic structures, and speech rhythm during interaction, facilitating more fluent and coordinated oral production (Kim & Michel, 2023). This finding is consistent with recent conceptualizations of oral task repetition as practice for speaking development rather than merely a pre-task planning aid, emphasizing sustained fluency growth and possible transfer beyond the repeated task itself (Hanzawa et al., 2026). This process enabled them to internalize smoother speech patterns and reduce hesitation. Similarly, collaborative tasks in three-dimensional virtual worlds have been shown to promote smoother speech flow, reduced hesitation, and increased oral automaticity through sustained peer interaction and rehearsal cycles (Wiboolyasarin et al., 2023).

One participant noted:

"As we practiced together, our speaking rhythm slowly matched. So when we presented, everything felt smoother." (S10)

Peer scaffolding emerged as a complementary mechanism during rehearsals. Students supported one another by offering reminders, correcting pronunciation, providing feedback, and encouraging peers when difficulties arose. This immediate and contextual assistance prevented breakdowns in communication and maintained speech continuity.

Additionally, the observed scaffolding aligns with sociocultural learning perspectives, where knowledge and skills are co-constructed through social interaction. Sarmiento-Campos et al., (2022) describe scaffolding as just-in-time pedagogical support that enhances learner engagement, while (Yawiloeng, 2021) emphasizes its role in enabling learners to develop through shared expertise. Together, rehearsal and scaffolding created a cooperative environment that facilitated fluent oral production, smoother transitions between speakers, and increased confidence.

From a sociocultural perspective, these interactions reflect the co-construction of linguistic competence through collaborative engagement. While previous studies emphasize teacher-led scaffolding, the present findings indicate that peer scaffolding can function as an equally powerful mechanism in sustaining fluent communication during task performance.

Shared Cognitive Planning Improves Coherence, Organization, and Content Mastery

Another significant finding was the impact of collaborative planning on the coherence and clarity of students' presentations. Engineering students often struggle to organize and articulate complex technical concepts in English. However, through joint planning sessions, students collectively outlined key ideas, negotiated meaning, and structured the logical flow of information.

One student reflected:

"Group work helped me understand the ideas more easily, and I felt more relaxed because I already knew the flow of our presentation." (S7)

Rather than memorizing isolated sections, students developed a shared mental representation of the entire presentation. This holistic understanding reduced hesitation during delivery and improved transitions between speakers. This collaborative planning process reflects key self-regulated learning mechanisms, including goal setting, performance monitoring, and strategic revision, which have been shown to significantly enhance speaking development in foreign language contexts (De Vrind et al., 2024). From a cognitive perspective, this finding aligns with Cognitive Load Theory (Ou et al., 2022), which posits that learners perform better when

unnecessary mental effort is minimized. Collaborative planning distributed the cognitive burden among group members, allowing students to focus on meaning construction and fluent delivery rather than recall of fragmented information. Furthermore, from a multidimensional perspective on oral fluency, collaborative planning may be understood as supporting cognitive fluency by easing online processing demands, which can subsequently manifest as improved utterance fluency, such as fewer breakdowns and more continuous speech (Suzuki, 2022).

Classroom observations further showed that presentations were more logically sequenced and that students responded more accurately during question-and-answer sessions. These results corroborate (Fathi & Sidgi, 2022) assertion that collaborative learning enhances task performance through shared problem-solving and goal alignment. Overall, shared cognitive planning strengthened both fluency and technical communication competence.

These results contribute empirically to the literature by demonstrating how collaborative planning mechanisms operate specifically within English for engineering contexts, where learners must simultaneously manage linguistic accuracy and technical content delivery.

Peer Support Encourages Authentic and Confident Oral Expression

The final theme highlights the role of peer support in fostering more natural and spontaneous speaking. Students reported feeling less dependent on written scripts and more comfortable expressing ideas in their own words when working collaboratively.

As one participant explained:

"I used to be afraid to speak without notes, but group work helped me become more confident to speak naturally and authentically." (S9)

The emotional reassurance provided by peers reduced students' fear of grammatical errors and pronunciation mistakes. This created an environment conducive to experimentation and genuine communication rather than rigid memorization. Moreover, the tendency of students to adopt fluency-oriented coping strategies under high anxiety conditions (Annur & Yunita, 2025) helps explain why collaborative presentations encouraged more natural and spontaneous oral expression in this study. This finding is consistent with research demonstrating that peer support enhances learners' emotional well-being and confidence (Richard et al., 2022). In the context of language learning, such emotional security allows students to focus on meaning and interaction, key components of fluency development.

Moreover, observations revealed smoother speaker transitions, clearer explanations, and stronger engagement during group presentations. Students demonstrated greater content mastery and responded more confidently to audience questions, indicating that emotional support and cognitive collaboration worked synergistically to enhance speaking performance. Taken together, these findings suggest that collaborative presentations can serve as an integrative pedagogical approach that simultaneously addresses affective, cognitive, and interactional dimensions of speaking fluency in ESP classrooms.

CONCLUSION

This qualitative study provides rich insights into how collaborative presentation tasks in English support speaking fluency among engineering students by reducing anxiety, fostering shared rehearsal patterns, easing cognitive load through collective content construction, and encouraging spontaneous language use through supportive peer presence. Emotional safety and reduced anxiety have helped the students speak more smoothly, while joint rehearsal and peer scaffolding create shared rhythms that promote synchronized fluency. Besides, constructing content collaboratively lessens cognitive load and improves coherence, and the presence of peers further encourages risk-taking, resulting in more natural and spontaneous speech. These findings indicate that collaborative presentations can transform speaking tasks in English presentation which often feared by engineering students into shared, rhythmic, and confidence-building communication experiences. However, several limitations should be acknowledged. The participants in this study were drawn from a single engineering program, which may limit the broader applicability of the findings to other academic contexts. In addition, the qualitative approach focused on exploring experiences within a specific learning environment, which means the results should be interpreted within that contextual setting. Another limitation relates to the dual role of the researcher as both investigator and instructor, which may introduce potential bias

in data interpretation. Future studies may involve participants from multiple programs or institutions and combine qualitative and quantitative approaches to provide a more comprehensive understanding of collaborative speaking practices in English learning.

SUGGESTION

Collaborative presentations should be used as continuous fluency-building activities rather than one-time assessments by integrating jointplanning, rehearsal, and supportive peer interaction. Teachers are encouraged to promote interactional synchrony through coordinated pacing and smooth transitions while maintaining a low-anxiety learning environment that prioritizes meaning over minor errors. Shared content construction can reduce cognitive pressure in technical presentations, enabling students to speak more smoothly and confidently. To ensure balanced participation, clear group roles and accountability strategies should be applied. Moreover, future research is encouraged to examine how collaborative presentation tasks influence other dimensions of speaking proficiency such as accuracy, complexity, and pronunciation and to conduct longitudinal investigations to determine whether fluency gains are sustained beyond the collaborative setting. Furthermore, exploring learners' affective variables, including motivation, self-efficacy, and willingness to communicate, would deepen understanding of the psychological processes that mediate fluency development within collaborative learning environments.

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