

AI-Supported Video Projects in ESP Classrooms: A Pedagogical Innovation for Business Communication

Andi Asrifan

Universitas Negeri Makassar, Makassar, Indonesia
andi.asrifan@unm.ac.id

Vivit Rosmayanti

Universitas Negeri Makassar, Makassar, Indonesia
Vivit.rosmayanti@unm.ac.id

K. J. Vargheese

Christ College (Autonomous) Irinjalakuda, Kerala, India
vargheesekj@yahoo.com

Raveenthiran Vivekanantharasa

The Open University of Sri Lanka, Srilanka, Colombo
rvive@ou.ac.lk

Abstract

AI-Supported Video Project in ESP Classrooms: A Pedagogical Innovation for Business Communication. The integration of Artificial Intelligence (AI) into English language instruction has created new opportunities for enhancing learner engagement and communication skills, particularly in English for Specific Purposes (ESP) contexts. In Business English courses, students must master professional speaking tasks that require fluency, accuracy, and confidence. However, few studies have explored how AI tools can be combined with project-based learning (PBL) to support these outcomes. This study examines the use of AI-supported video projects to enhance speaking performance and improve learner perceptions in a Business English classroom. Using a mixed-methods design, quantitative data from pre- and post-tests and qualitative reflections were analyzed. Results showed significant gains in speaking performance and increased learner autonomy, confidence, and engagement. Students also encountered several challenges, including technical difficulties in using AI applications and initial anxiety about video recording, which required patience and self-regulation to overcome. Despite these challenges, students viewed the AI tools as beneficial. These findings suggest that integrating AI into PBL tasks can serve as a transformative approach for ESP instruction in higher education.

Keywords: Artificial Intelligence in Education; Business English Speaking Skills; English for Specific Purposes (ESP); Project-Based Learning; Technology-Enhanced Language Learning

Introduction

The incorporation of digital tools into language learning has become essential in the modern educational landscape, promoting new modes of instruction and learner engagement, particularly in English language teaching (ELT) (Javed, 2024; Jawaid et al., 2024; Nuryanti, 2025). Among these innovations, video-based assignments have gained attention for enhancing speaking fluency, multimodal communication, and critical thinking (Cattaneo et al., 2024; Navarrete et al., 2025; Sablić et al., 2021). In English for Specific Purposes (ESP), such as Business English, learners are expected to communicate confidently and professionally in workplace contexts.

Project-Based Learning (PBL) provides a learner-centered framework that encourages collaboration, independence, and authentic communication. When integrated with video creation, PBL helps students develop linguistic accuracy, digital literacy, and reflective speaking skills (Al-Thani & Ahmad, 2025; Eswaran, 2024; Nayak et al., 2024). By engaging in scripting, rehearsing, and recording, learners actively demonstrate competence while increasing motivation and self-efficacy (Alobaid, 2021; Bailey et al., 2021; Ho, 2022; Selfa-Sastre et al., 2022).

The rise of Artificial Intelligence (AI) in education further transforms this process by enabling personalized, real-time feedback that supports learner autonomy and pronunciation improvement (Jia et al., 2022; Kamalov et al., 2023; Slade et al., 2025; Yu & Guo, 2023). Applications such as ELSA Speak, Orai, and YouGlish analyze pronunciation, pacing, and intonation, helping students refine performance before presenting (Asrifan et al., 2024; Hadi & AlShaikh-Hasan, 2025; Yadav, 2024). These AI tools complement formal instruction by offering scalable, data-driven feedback cycles that traditional classrooms often lack due to time constraints (Abdelhalim & Alsehibany, 2025; Cui & Zhang, 2025). Instead than replacing teachers, these systems function as instructional collaborators, enabling educators to concentrate on advanced communicative competencies such as coherence, persuasion, and discourse organization. The incorporation of automated feedback signifies both a technology progression and a fundamental change in feedback delivery, prioritizing ongoing, learner-focused enhancement.

Through AI-assisted video projects, students experience iterative learning—recording, receiving feedback, and improving over time. This synergy between PBL and AI not only strengthens oral fluency and confidence but also encourages self-regulated learning within authentic business communication tasks. Despite these advantages, few studies have examined this dual approach, especially in developing countries, where technological infrastructure and teacher readiness remain critical challenges.

In ESP classrooms, especially those centered on corporate communication, students are required to attain linguistic competency as well as exhibit pragmatic competence, discourse appropriateness, and intercultural sensitivity (Budeng & Merza, 2023). Business English learners are frequently required to grasp genre-specific formats, like business pitches, formal presentations, negotiations, and interviews. These genres necessitate a combination of grammatical precision, deliberate body language, and contextual fluency. Traditional training emphasizes grammar and vocabulary, whereas modern ESP instruction increasingly incorporates performance-based challenges that reflect genuine professional environments.

Video-based projects facilitate the achievement of these objectives by enabling students to replicate professional communication circumstances. Students gain advantages from the iterative process of video production, allowing them to practice, contemplate, and refine their speaking abilities (Akdere et al., 2023; Galatsopoulou et al., 2022; Landsiedel et al., 2024; Schick et al., 2024). Furthermore, when these video projects are augmented by AI technologies, learners obtain instantaneous feedback on pronunciation, pacing, intonation, and vocabulary usage—feedback that is frequently challenging to deliver comprehensively in large classroom environments (Liu et al., 2025; Nguyen et al., 2025).

Numerous research have demonstrated that learners participating in video-based assignments typically exhibit enhancements in self-confidence, speaking fluency, and engagement. (Fathi & Rahimi, 2022; KEMALOĞLU ER, 2022) discovered that EFL learners engaged in video projects demonstrated enhanced fluency and self-expression. (Abdelhamed et al., 2025; Dubovyk, 2024) also reported enhanced student autonomy and speaking proficiency when AI-driven speaking applications were integrated into ESP training. Notwithstanding these encouraging results, investigations into the amalgamation of AI-assisted tools with video-based project-based learning in English for Specific Purposes classrooms are limited, especially in non-Western or developing nations.

Although many studies have investigated AI applications or video-based learning separately, a substantial vacuum exists in empirical research that analyzes their combined integration within an ESP framework (Navarrete et al., 2025; Pellas, 2025). Few studies have systematically examined how AI-assisted video projects might be utilized to improve speaking skills in business communication courses. Moreover, the existing research predominantly emphasizes general English learners, overlooking the specific requirements, genres, and communicative objectives pertinent to Business English as a subfield of English for Specific Purposes (ESP).

Furthermore, the majority of current research emphasizes either learner views or learning outcomes, but rarely both simultaneously. There is a limited comprehension of how students assess the educational value, usefulness, and emotional effects (e.g., anxiety or confidence) of AI-supported video activities. Similarly, there is a dearth of study in higher education settings within the Global South, where access to AI tools, digital infrastructure, and digital pedagogical training may present further problems or engender new learning dynamics.

Contextual Relevance: The Global South Perspective

Conducting this study in Indonesia, emblematic of the Global South environment, is particularly essential due to the unique infrastructural, cultural, and pedagogical aspects that influence the integration of Artificial Intelligence (AI) in education. In contrast to technologically affluent countries, Indonesian higher education institutions frequently encounter inconsistent digital infrastructure, characterized by unreliable internet connectivity, restricted access to premium AI platforms, and disparate degrees of device availability among students. These situations establish distinct restrictions that affect both the execution and perceived efficacy of AI-assisted learning (Haetami, 2025; Nurhayati et al., 2025).

In Indonesia, many students originate from educational traditions that prioritize teacher-centered instruction, wherein the educator is regarded as the primary authority and source of information (Ghafar, 2023; Ghaleb, 2024; Murphy et al., 2021). Thus, the transition to AI-facilitated, self-directed learning—characterized by feedback from a non-human entity signifies a pedagogical and cultural transformation. Students must navigate new modalities of autonomy, digital self-efficacy, and reliance on computerized assessment systems. Investigating how learners in these situations adjust to AI-assisted tasks offers essential insights into the contextualization and localization of educational innovation in poor countries.

This viewpoint enhances the overarching dialogue on AI fairness and inclusion, emphasizing that the efficacy of technology-enhanced learning relies not solely on software sophistication but also on social, infrastructural, and cultural preparedness. Therefore, analyzing AI-assisted video projects in an Indonesian ESP classroom presents both empirical and contextual innovation, enhancing global comprehension of the manifestation of digital revolution in varied educational environments.

A further area of concern is the lack of studies employing a mixed-methods approach to correlate quantitative advancements in speaking proficiency with qualitative insights into learner experiences. Many studies depend exclusively on test scores or anecdotal evidence, so constraining the thoroughness of the results

reached. This gap necessitates rigorous empirical research that connects technology-enhanced learning with contextualized ESP education.

This study examines the integration of AI-assisted video projects within a university-level ESP Business English course to solve existing gaps. This research utilizes a mixed-methods design to examine the intervention's efficacy in enhancing speaking abilities and the students' opinions of its educational value. This study aims to investigate the educational potential of merging video-based project-based learning with AI-driven tools, including pronunciation analyzers, automated feedback systems, and speech recording applications, in English for Specific Purposes situations.

To guide the investigation, this study addresses the following research questions:

1. To what extent does the integration of AI-supported video projects improve students' speaking performance in a Business English ESP course?
2. How do students perceive the use of AI tools (e.g., ELSA Speak, Orai, YouGlish) in supporting their preparation, rehearsal, and delivery of video-based speaking tasks?
3. What pedagogical affordances and challenges emerge from implementing AI-assisted video projects in an Indonesian higher education context?

This study adds to the expanding literature on technology-enhanced English for Specific Purposes instruction by offering empirical information regarding a comparatively underexplored pedagogical innovation. It provides practical insights for ESP instructors, curriculum developers, and language policymakers seeking to utilize AI and multimedia to enhance language learning experiences. The study ultimately seeks to illustrate that, when meticulously constructed, AI-supported video projects can function as both a technology advancement and a transformational pedagogical innovation in ESP classrooms.

Methodology

Research Design

This study utilized a mixed-methods research methodology, combining quantitative and qualitative approaches to thoroughly examine the pedagogical effects of AI-enhanced video projects in an ESP Business English classroom. The quantitative aspect assessed students' speaking proficiency with pre- and post-tests, facilitating statistical evaluation of educational results. Simultaneously, the qualitative component examined students' perspectives, experiences, and thoughts regarding the utilization of AI technologies and video-based activities via interviews and written reflections.

The justification for implementing this approach is to investigate both quantifiable language enhancement and the subjective, contextual aspects of learning, including confidence, engagement, and the usability of AI technologies. This corresponds with Creswell's (2014) claim that mixed approaches are especially appropriate when researchers aim to triangulate data and get a more profound, nuanced understanding of educational processes. Collectively, these data sets enhance the validity and profundity of the study's conclusions.

To guarantee scoring objectivity, interrater reliability was assessed using Cohen's kappa, which is suitable for measuring agreement between two raters on category or rubric-based evaluations. The analysis produced a kappa value of $\kappa = 0.81$, signifying substantial agreement based on Landis and Koch's (1977) criteria. The percent agreement was calculated, revealing an 87% consistency between the two evaluators across all speaking rubric elements. These dependability indicators validate that the scoring method was steady, consistent, and impartial among raters.

Context and Participants

The research was carried out in a private university in South Sulawesi, Indonesia, under the Faculty of Teacher Training and Education, specifically in the Department of English Education. The study was conducted in an ESP (English for Specific Purposes) course named Speaking for Business, aimed at improving students' oral communication abilities in professional and working environments.

Thirty undergraduate students ($N = 30$) participated in the study. The subjects were third-year students aged 20 to 23 years, possessing intermediate to upper-intermediate English proficiency as determined by institutional placement assessments. The participants were chosen by purposive sampling, as they were enrolled in the course and satisfied the criteria for involvement in the AI-supported video project intervention. Ethical permission was secured from the university's research committee before data collection. All participants provided informed consent, and their anonymity and confidentiality were rigorously upheld throughout the research procedure and data reporting.

A sample size of thirty participants ($N = 30$) was deemed sufficient for the study's scope and statistical rigor. In small-scale educational research, especially in classroom-based experimental or quasi-experimental designs, this number is commonly considered adequate to identify significant variations in pretest–posttest performance. Prior research utilizing mixed-methods approaches in analogous ESP or CALL settings has similarly employed comparable sample sizes. Furthermore, the uniformity of participants regarding course enrollment, instructional experience, and proficiency level enhances the internal validity of the quantitative study. Although

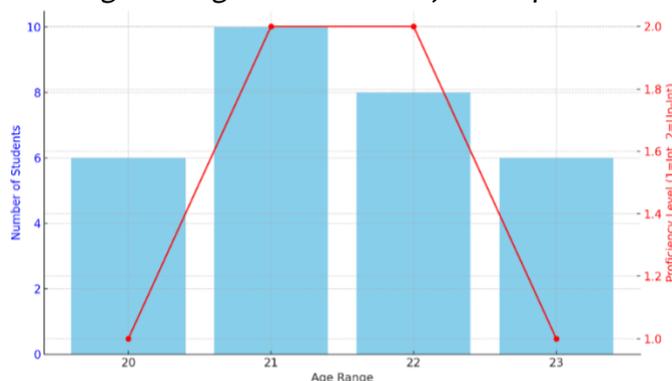
the sample may not encompass all Business English learners in Indonesia, it offers a dependable foundation for discerning patterns, assessing intervention efficacy, and formulating hypotheses for further studies.

The limited sample size (N = 30) constrains the generalizability of the findings outside the specific study environment. The results should be regarded as suggestive rather than definitive. This research serves as a comprehensive case study or pilot inquiry aimed at examining the preliminary effectiveness and student impressions of AI-enhanced video projects in ESP classrooms. Subsequent research using bigger and more diverse participant cohorts across several universities would enhance statistical power and facilitate greater applicability of results.

Table 1. Participant Demographics Table

Age Range	Number of Students	English Proficiency Level
20	6	Intermediate
21	10	Upper-Intermediate
22	8	Upper-Intermediate
23	6	Intermediate

Figure 1. Age Distribution of Participants



The study comprised 30 undergraduate students aged 20 to 23, predominantly 21 years old (10) and 22 years old (8), with English proficiency levels spanning from intermediate to upper-intermediate. The demographic and competency distribution reveals a balanced, academically equivalent cohort, appropriate for ESP instruction and substantive analysis of AI-assisted learning results.

Intervention: AI-Supported Video Project

The intervention consisted of a project-based video assignment wherein students produced a 3–5 minute business presentation or pitch pertinent to workplace communication contexts. The activity, conducted over six weeks, was performed separately to enable each student to showcase their speaking proficiency. The project utilized many AI tools, such as ELSA Speak and Orai for pronunciation assessment and fluency feedback, Google Speech-to-Text for transcription and script creation, and YouGlish for contextual vocabulary usage.

The instructional procedure adhered to a systematic sequence: generating topic ideas, drafting the speech, practicing with AI tools for feedback, filming the final video, obtaining comments from the teacher and peers, and submitting the final version. AI feedback was employed iteratively throughout the rehearsal period, enabling students to refine pronunciation, intonation, and lexical selections. This integration allowed learners to independently manage their speaking growth while participating in authentic communication tasks within a commercial context.

Data Collection Instruments

This study included both quantitative and qualitative methods to collect extensive data. Students undertook a rubric-based speaking assessment as both a pretest and posttest for the quantitative component. The rubric evaluated essential factors including as fluency, pronunciation, vocabulary breadth, grammatical precision, and coherence. Two trained evaluators assessed the recordings utilizing an analytical scoring rubric, and interrater reliability was maintained through calibration sessions and consistency verifications.

For the qualitative component, a subset of 10 students (out of 30) was selected using purposeful sampling to ensure variation in proficiency level, gender, and engagement during the AI-assisted project. Semi-structured interviews were conducted to gain deeper insights into students' experiences, challenges, and perceptions of AI-supported video tasks. Each interview lasted approximately 20–30 minutes and followed a standardized interview protocol consisting of guiding questions on (1) use of AI tools, (2) perceived learning benefits, (3) emotional responses, and (4) technical or pedagogical challenges. All interviews were audio-recorded and transcribed verbatim to maintain accuracy.

Thematic analysis followed Braun and Clarke's (2006) six-step approach. To enhance analytic rigor, two independent coders reviewed all transcripts. An inter-coder reliability check using Cohen's kappa produced a value of $\kappa = 0.79$, indicating substantial agreement. Discrepancies in coding were resolved through discussion

until consensus was reached. This procedure ensured that theme generation was systematic, transparent, and methodologically reliable.

The speaking assessment was evaluated utilizing an analytic rubric comprising five subscales: (1) Fluency, (2) Pronunciation, (3) Vocabulary Usage, (4) Grammatical Precision, and (5) Coherence and Organization. Each subscale was evaluated on a 5-point performance scale, with 1 denoting very limited, 2 indicating limited, 3 representing adequate, 4 signifying good, and 5 reflecting excellent. The total speaking score was calculated by aggregating the five subscales, resulting in a maximum score of 25 points. In accordance with the communication requirements of Business English, fluency and coherence were allocated a greater emphasis of 25% each, whilst pronunciation, vocabulary, and grammar each accounted for 16.7% of the overall composite score.

Criteria for Fluency Assessed smoothness, speech rate, and minimal hesitation; evaluated pronunciation for segmental accuracy and intelligibility; measured vocabulary for appropriateness and lexical range; analyzed grammar for structural accuracy; and investigated coherence for logical flow and clarity of ideas. This rubric conforms to recognized ESP speaking assessment standards and offers a systematic, clear foundation for assessing progress.

Data Analysis

The gathered data were examined employing both quantitative and qualitative methods. In the quantitative study, a paired sample t-test was employed to compare students' pretest and posttest speaking scores, assessing if the AI-supported video project significantly enhanced speaking performance. Data were analyzed utilizing SPSS software, with descriptive statistics and p-values presented. An effect size (Cohen's d) was determined to evaluate the extent of the intervention's influence on speaking abilities.

A thematic analysis of the qualitative data was performed in accordance with the six-phase framework established by (Braun & Clarke, 2006). The analysis commenced with open coding of interview transcripts and reflection journals, subsequently categorizing the codes and formulating overarching themes pertinent to learner experiences, obstacles, and views of AI integration. The data were evaluated manually, with a second coder conducting cross-validation to guarantee consistency. This dual analysis approach enhanced the study's findings with both statistical and narrative profundity.

To ensure internal validity, several procedures were implemented during the administration of the pretest and posttest. The same speaking prompt and task conditions were used for both tests to maintain consistency across measurement

points. A two-week interval was set between the pretest and posttest to minimize memory effects while still capturing improvement attributable to the intervention. The two trained evaluators were also kept blind to whether each recording belonged to the pretest or posttest phase, and all samples were coded anonymously prior to scoring. This blinding procedure ensured that rater judgments remained objective and not influenced by expectations of learner progress. These measures collectively strengthen the reliability and internal validity of the assessment process.

Trustworthiness and Validity

This study utilized many ways to assure the integrity and validity of both the quantitative and qualitative components. During the quantitative phase, reliability and consistency of the tests were ensured by employing a standardized analytic speaking rubric and conducting interrater reliability assessments between two trained evaluators. Consistent calibration guaranteed uniformity in scoring between pretest and posttest data.

Four criteria from Lincoln and Guba (1985) were utilized for the qualitative phase. Credibility was established using data triangulation, integrating student interviews and reflection notebooks to corroborate reoccurring themes. The transferability was facilitated by a detailed account of the research context, participants, and instructional setting, allowing for generalization to analogous ESP situations. Dependability was improved via peer debriefing and continuous dialogue with a colleague experienced in qualitative research. Ultimately, confirmability was established via an audit trail of coding decisions and reflective notes, guaranteeing that findings were based on participant data rather than researcher bias.

Limitations

This study recognizes various constraints that may have affected the results. The utilization of AI tools was significantly contingent upon reliable internet access, presenting difficulties for many pupils, especially those in isolated regions. Moreover, specific AI applications exhibited restricted language support or variable accuracy in feedback, impacting learners' experiences. Secondly, the qualitative data depended on self-reported thoughts and interviews, which may be prone to bias or selective memory. Ultimately, the six-week intervention duration may have been inadequate to observe long-term enhancements in speaking performance or enduring engagement with AI-assisted learning tools.

Findings

Quantitative Results: Speaking Performance Improvement

The quantitative analysis indicated a significant enhancement in students' speaking performance subsequent to the AI-assisted video project. The average pretest score was 74.70 (SD = 5.13), whereas the average posttest score rose to 77.93 (SD = 5.30), signifying an improvement in performance. A paired-sample t-test was performed to ascertain the statistical significance of this difference. The findings indicated a t-value of 6.98 with 29 degrees of freedom (df = 29) and a p-value < 0.001 ($p = 1.12 \times 10^{-7}$), affirming that the enhancement was statistically significant at the 0.05 level.

Alongside significance tests, the effect size was computed using Cohen's d, resulting in a value of 0.63, indicative of a medium to high effect size. This signifies that the intervention significantly influenced pupils' speaking growth. The results substantiate the efficacy of incorporating AI tools in project-based video assignments, especially in improving speaking fluency and confidence within business communication settings. The table presents individual pretest and posttest scores, while the bar chart visually illustrates the general enhancement in speaking performance across the group, offering definitive evidence of the intervention's beneficial results.

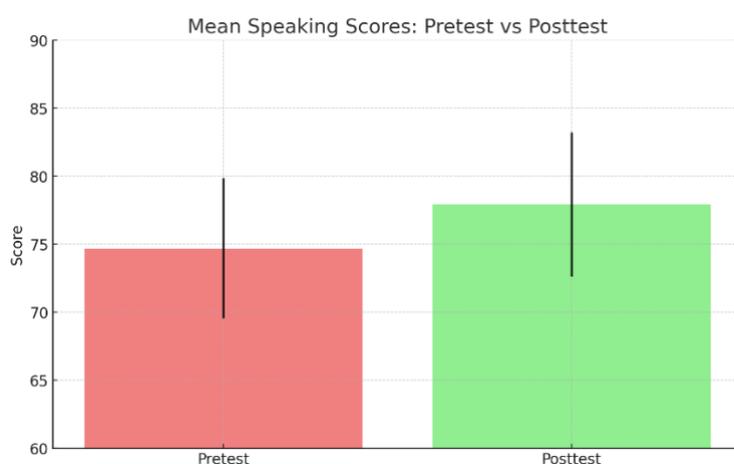
Table 2. Pretest vs Posttest Scores

Participant	Pretest Score	Posttest Score
P1	83.12	84.05
P2	71.94	73.75
P3	72.36	73.30
P4	69.64	70.10
P5	79.33	80.31
P6	63.49	66.45
P7	83.72	83.37
P8	71.19	74.90
P9	76.60	84.57
P10	73.75	78.98
P11	82.31	84.74
P12	64.70	65.04
P13	73.39	74.15
P14	73.08	81.16
P15	80.67	83.82
P16	69.50	70.59
P17	74.14	77.71

P18	70.61	79.91
P19	75.21	78.57
P20	77.91	82.77
P21	69.50	73.40
P22	80.72	82.67
P23	79.51	79.08
P24	77.51	79.46
P25	79.50	81.88
P26	71.58	76.34
P27	74.39	79.90
P28	70.32	76.11
P29	73.66	77.52
P30	77.65	83.31

The table displays the pretest and posttest results of all 30 participants, offering a comprehensive overview of student performance prior to and following the AI-assisted video project intervention. The majority of students exhibited score enhancements, with several attaining increases of 3 to 5 points. This pattern demonstrates persistent individual advancement and reinforces the efficacy of the intervention. The table facilitates comparison across participants, emphasizing the overall upward trajectory in speaking proficiency. This detailed data fosters a clear comprehension of learner outcomes and verifies that the enhancements were widespread rather than confined to a select group of high-achieving students.

Figure 2. Mean Speaking Scores: Pretest vs Posttest



The bar chart effectively contrasts the average pretest and posttest speaking scores of the participants, distinctly demonstrating the educational advancements attained through the AI-assisted video project. The posttest bar is significantly

elevated, reflecting an increase from a mean of 74.7 to 77.9, with error bars denoting the standard deviations. This enhancement illustrates both the efficacy of the project-based learning paradigm and the significant contribution of AI tools in augmenting speaking skills. The chart offers a clear presentation of the quantitative data, corroborating the statistically significant findings from the t-test and endorsing wider educational implications.

Qualitative Results: Learner Perceptions and Experiences

Thematic analysis of student interviews and reflection journals identified four predominant themes that encapsulate learners' perceptions and experiences throughout the AI-supported video production.

Theme 1: Improved Confidence and Fluency

Most participants reported increased confidence during speaking tasks.

"Practicing with the AI apps made me feel more prepared. I wasn't as nervous when recording the final video." (P7)

"After several trials, I noticed my speech became smoother." (P11)

Theme 2: Perceived Usefulness of AI Tools

Students valued AI feedback for its specificity and immediacy.

"ELSA told me exactly which sounds were wrong, so I could fix them right away." (P3)

"Orai helped me reduce filler words and manage my pace." (P14)

Theme 3: Technical and Emotional Challenges

Learners encountered app limitations and anxiety about self-recording.

"Sometimes the app froze, and I had to redo the recording several times." (P18)

"I didn't like seeing myself on camera, but it got easier with practice." (P9)

Theme 4: Increased Autonomy and Motivation

AI-supported tasks encouraged self-directed learning.

"I felt responsible for improving my own speech because the app showed my weaknesses clearly." (P1)

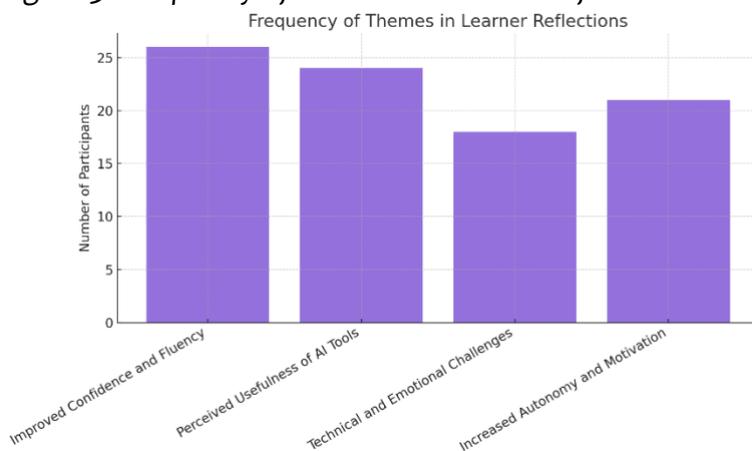
"It motivated me because I could see my score improve each time." (P16)

Table 3. Learner Perceptions and Experiences Table

Theme	Number of Participants
Improved Confidence and Fluency	26
Perceived Usefulness of AI Tools	24
Technical and Emotional Challenges	18
Increased Autonomy and Motivation	21

The table summarizes the four principal themes derived from the qualitative data, together with the count of participants who concurred with each theme. The predominant theme identified was "Enhanced Confidence and Fluency" (26 participants), signifying a substantial positive emotional impact from the AI-assisted video initiative. This was closely succeeded by "Perceived Usefulness of AI Tools" (24 participants), indicating learners' valuation of immediate, tailored feedback. The themes "Increased Autonomy and Motivation" and "Technical and Emotional Challenges" were identified by 21 and 18 students, respectively. The table underscores the varied yet uniform responses throughout the sample.

Figure 3. Frequency of Themes in Learner Reflections



The bar chart depicts the prevalence of significant themes discovered in student interviews and reflection journals. The largest bar signifies "Improved Confidence and Fluency," reported by 26 of 30 participants, illustrating the intervention's effect on speaking self-efficacy. The second highest, "Perceived Usefulness of AI Tools," was acknowledged by 24 students, affirming the educational significance of incorporating AI in speaking practice. "Enhanced Autonomy and Motivation" and "Technical and Emotional Challenges" were significant, indicating that although learners achieved freedom, some encountered usability or emotional obstacles. The

graphic accurately conveys the diverse experiences of learners with the AI-assisted project.

Discussion

Interpretation of Speaking Performance Results

This study's findings demonstrated a statistically significant enhancement in students' speaking performance, as evidenced by the elevated posttest scores subsequent to the AI-supported video project. This enhancement is due to the systematic incorporation of Project-Based Learning (PBL) alongside AI-assisted rehearsal tools, which offered students an engaging and iterative educational setting. The structured process encompassing ideation, scripting, rehearsing, and final production enabled learners to immerse themselves in the speaking challenge, while AI tools provided personalized feedback, improving the precision and fluency of their oral communication.

These results align with prior research (Zayraey & Katawazai, 2025) underscored the significance of video-based projects in enhancing speaking fluency and learner confidence, whereas (Alshehri, 2025; Cui & Zhang, 2025) illustrated that AI-driven feedback tools can result in quantifiable advancements in pronunciation and coherence. The present study enhances these findings by integrating both strategies PBL and AI within the particular framework of Business English as an ESP course, a domain that is still inadequately examined in the current literature.

The feedback loop established by AI tools significantly contributed to the enhancement of trainees' speaking skills. In contrast to conventional classroom environments, where prompt, personalized feedback may be constrained, AI applications offer instantaneous evaluations on aspects such as pronunciation, stress, tempo, and grammar (Abdelhalim & Alsehibany, 2025; Hong & Guo, 2025; Shrivastava & Malviya, 2023; Wang & Zou, 2025). This allowed students to practice repeatedly and enhance their presentation autonomously before submitting their final film. These formative, self-directed feedback cycles not only improved linguistic correctness but also fostered increased student autonomy. The enhanced performance demonstrates that the integration of PBL with AI fosters a dynamic and responsive environment that promotes the development of good oral communication skills in a professional setting.

Reflection on Learner Perceptions

Learner comments indicated that the incorporation of AI-assisted video projects markedly improved their confidence and involvement in speaking activities, especially in the realm of Business English (Cui, 2024; Cui & Zhang, 2025; Wang & Zou, 2025). A multitude of students indicated that utilizing AI technologies for rehearsal before to filming their final video enabled them to prepare at their own pace, exert control over their speaking process, and alleviate nervousness linked to real-time performance. This corresponds with the fundamental tenets of English for Specific Purposes (ESP), wherein learners are anticipated to cultivate both linguistic and pragmatic proficiency pertinent to real-world situations.

AI solutions like ELSA Speak and Orai provide instantaneous feedback on pronunciation, intonation, and fluency components frequently neglected in conventional training owing to time limitations or substantial class numbers (Kadhim Muhsen & Khmas, 2025; Murtaza et al., 2022; Mwogosi et al., 2025). This self-directed, independent learning environment enabled students to independently assess and rectify their performance, a vital component of learner-centered pedagogy. As learners noted quantifiable enhancements through successive trials, their motivation and ownership of the learning process intensified.

However, students also indicated several problems that mitigated these advantages. Several individuals had technological difficulties, such as unreliable internet connections and a lack of familiarity with application interfaces. Others identified emotional obstacles, including unease with viewing or listening to themselves on camera (Carter et al., 2025; Grassini, 2023; Saddhono et al., 2024). Notwithstanding these challenges, the majority of students recognized that the advantages particularly enhanced confidence, more precise articulation, and superior information organization surpassed the problems. Their capacity to analyze and evaluate the advantages and drawbacks of AI-assisted learning illustrates an emerging sense of digital resilience and learner autonomy. In the realm of ESP, where adaptation and autonomous learning are crucial, these insights highlight the educational potential of incorporating AI into video-based speaking assignments.

Pedagogical Implications

The incorporation of AI-assisted video projects presents significant promise for Business English education, especially in ESP environments that emphasize practical communication abilities. By integrating AI technologies with project-oriented assignments, educators may transcend conventional speaking exercises and offer students genuine, performance-driven learning experiences. Students emulate

professional communication such as presentations, proposals, or negotiations while get immediate, personalized feedback via AI tools. This improves their speaking fluency and accuracy, as well as their readiness for professional situations where clarity, confidence, and audience involvement are essential.

Effective implementation necessitates a foundation of digital literacy and teacher preparedness. Educators must be prepared to instruct students in the responsible and pedagogical use of AI technologies, including technology into lesson design instead of regarding it as a mere novelty. Teacher training must prioritize both the technical capabilities of technologies such as ELSA Speak and Google Speech-to-Text, as well as their pedagogical benefits, including scaffolding pronunciation, regulating rehearsal cycles, and promoting learner autonomy. In the absence of sufficient support, instructors may inadequately leverage AI's capabilities or fail to integrate it with significant learning objectives.

Furthermore, AI systems offer a scalable option for administering speaking practice in extensive classes, where individualized feedback is frequently limited by time constraints and teacher-student ratios. AI apps can serve as auxiliary feedback agents, allowing learners to practice autonomously, monitor their advancement, and rectify particular linguistic deficiencies. This enables educators to concentrate on advanced instructional activities, such as discourse analysis or task-based evaluation. This study underscores the necessity of using AI-video integration not as a substitute for educators, but as a supplementary tool that improves engagement, autonomy, and instructional efficacy in Business English education.

Relevance to ESP and Technology-Enhanced Language Learning

The results of this study strongly correspond with modern educational frameworks in English for Specific Purposes (ESP), which prioritize authenticity, learner requirements, and communicative ability adapted to certain professional fields (Al-khresheh, 2024; Mohebbi, 2025). Business English, a subset of English for Specific Purposes (ESP), necessitates that learners engage in genre-specific contexts such as pitching, presenting, or negotiating where fluency, accuracy, and confidence are vital. The incorporation of AI-assisted video projects directly facilitates these objectives by providing students with opportunities to participate in contextual, significant communication tasks while cultivating the metacognitive abilities essential for self-evaluation and enhancement.

This research substantially advances the nascent convergence of Artificial Intelligence (AI), Project-Based Learning (PBL), and English for Specific Purposes (ESP), a domain that is inadequately addressed in current literature (Kassenkhan et

al., 2025; Liu et al., 2025). Although AI has garnered interest in general language education and PBL has been extensively utilized in content-based instruction, limited empirical research has investigated how the integration of AI tools with PBL frameworks can improve learning outcomes in Business English settings. The findings indicate that this integration enhances speaking performance while promoting student autonomy, motivation, and critical reflection essential skills in professional communication.

This study further corroborates the expanding corpus of research in technology-enhanced language learning (TELL) by demonstrating how AI tools may deliver scalable, adaptable, and individualized feedback inside project-based frameworks. These affordances establish AI as not only a technology enhancement, but as an integral pedagogical element of ESP training (Vadivel et al., 2025). As English for Specific Purposes (ESP) progresses to address the communicative requirements of globalized workplaces, the strategic implementation of AI and video projects may transform the methods by which we assist learners in acquiring language and professional communication skills. This study thus establishes new avenues for research and practice in the digital transformation of English for Specific Purposes (ESP) education.

Limitations and Suggestions for Future Research

While the outcomes of this study are intriguing, numerous limitations must be addressed. The brief length (six weeks) of the intervention may not adequately reflect the long-term impacts of AI-assisted video projects on learners' speaking proficiency. The limited sample size ($N = 30$) constrains the generalizability of the findings to wider ESP situations. Future research should incorporate longitudinal studies to investigate enduring enhancements in speaking proficiency, confidence, and learner autonomy over prolonged durations.

This study exclusively examined student perspectives. An in-depth examination of educators' perspectives, readiness, and teaching methodologies in the application of AI-integrated instruction would yield significant insights into classroom dynamics and instructional obstacles. Ultimately, broadening the research to encompass cross-cultural or multilingual contexts would enhance the comprehension of how varied student demographics interact with AI tools in ESP classes. These guidelines would promote both theoretical and practical understanding in the developing domain of technology-enhanced language learning.

Conclusion

This study examined the incorporation of AI-assisted video projects in an English for Specific Purposes (ESP) classroom, particularly in a Business English course, to improve students' speaking abilities and assess their impressions of technology-enhanced learning. The research sought to integrate Project-Based Learning (PBL) with AI tools to provide a pedagogically unique method for enhancing learners' performance in professional communication tasks.

The results indicated a statistically significant enhancement in students' speaking scores, exhibiting a medium to high effect size, implying that the organized, AI-supported practice and feedback process effectively influenced learners' fluency, pronunciation, and overall oral communication skills. The qualitative data indicated that learners exhibited enhanced confidence, autonomy, and motivation, while also acknowledging the advantages and challenges of utilizing AI tools, including technical difficulties and performance anxiety. Notwithstanding these limitations, students regarded the intervention as significantly advantageous for cultivating workplace-relevant speaking skills.

This work advances the field of technology-enhanced English for Specific Purposes (ESP) training by demonstrating that artificial intelligence and video-based tasks can synergistically increase learner-centered, reflective, and performance-oriented language acquisition. It underscores the necessity of enhancing teacher digital literacy, optimizing instructional design, and providing scalable feedback mechanisms, particularly in extensive classroom environments.

Future research should do longitudinal studies to evaluate long-term learning outcomes, examine teacher experiences and classroom methodologies, and broaden the investigation to encompass other cultural and institutional settings. These measures would enhance our comprehension of the pedagogical capabilities of AI in English for Specific Purposes (ESP) and reinforce its influence in the evolution of language education.

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