

Enhancing Aviation English for LTELs: Integrated ELD challenges and scenario-based innovations

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This qualitative case study investigates how Aviation English instructors at Politeknik Penerbangan Surabaya, Indonesia, integrate English Language Development (ELD) strategies into content teaching to support Aviation English Learners (AELs) with prolonged English instruction challenges in developing language, literacy, and intercultural competence. Grounded in Vygotsky's Zone of Proximal Development, the study employs semi-structured interviews with four instructors and two administrators, supplemented by document analysis of curricula, lesson plans, and institutional policies, to examine instructional practices and systemic barriers. Findings reveal persistent challenges in distinguishing AELs with extended learning needs from other learners and implementing mandated integrated ELD strategies, underscoring tensions between integrated and designated ELD models. Instructors highlight fostering academic optimism, high expectations, and advanced literacy tasks, such as scenario-based simulations and role-plays, to promote productive struggle, significantly enhancing student engagement and learning outcomes. Robust institutional support—through clear policies, targeted professional development, and aviation-specific curricula—is critical for effective ELD implementation. The study advocates for authentic aviation communication tasks and intercultural training to elevate AELs' English proficiency and intercultural skills, aligning with International Civil Aviation Organization (ICAO) standards for safety-critical communication. These findings offer actionable pedagogical and administrative strategies to enhance AEL outcomes in vocational education, addressing gaps in Indonesia's aviation training and contributing to safer, more effective global aviation communication.



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INTRODUCTION

English proficiency and intercultural communication skills are pivotal in the global aviation industry, where English serves as the lingua franca for pilots and air traffic controllers, as mandated by the International Civil Aviation Organization (ICAO) standards. These standards prioritize not only phraseology accuracy but also fluency, intelligibility, interaction, and comprehension to prevent communication breakdowns that could jeopardize operational safety (ICAO, 2010). In Indonesia, the aviation sector is undergoing rapid expansion, fueled by growing air travel and international connectivity, which amplifies the demand for professionals adept in multilingual and multicultural settings. However, at vocational institutions like the Politeknik Penerbangan Surabaya, many first-year students in Aviation English courses are classified as English Learners (ELs), with a notable proportion identified as long-term English learners (LTELs). LTELs, characterized as students who have undergone multiple years of English instruction without attaining academic fluency, often demonstrate conversational proficiency but struggle with the academic and technical registers required in aviation, resulting in low academic achievement due to prolonged exposure to ineffective teaching methods and insufficient targeted support (Rhinehart et al., 2024). Addressing these instructional needs demands pedagogical innovation and institutional commitment, particularly under the Indonesian Ministry of Transportation's policy framework, such as SE-BPSDM 9/2024, which mandates integrating English Language Development (ELD) strategies across all subject-matter instruction to align with global aviation communication standards.

The background of this study is rooted in the unique challenges of vocational education in Indonesia, where aviation programs must meet rigorous ICAO requirements while addressing local linguistic constraints, including students' diverse proficiency levels and limited exposure to authentic English in operational contexts. Indonesian aviation cadets often fall short of ICAO's Level 4 speaking requirements, which necessitate operational proficiency in high-stakes scenarios, due to inadequate scenario-based learning, limited simulation practice, and a lack of context-specific materials (Rochmawati, Sylvia, & Diriyanti Novalina, 2024). A recent needs analysis at an Indonesian aviation polytechnic highlighted that student pilots urgently need improved listening and speaking skills for air traffic control interactions, yet current curricula overemphasize grammar and vocabulary memorization, neglecting practical,

aviation-specific materials (Maulana, 2021). Additionally, affective barriers such as high anxiety from intensive training, physical exhaustion, and low self-efficacy significantly impede cadets' engagement with Aviation English, which covers critical topics like aircraft types, airport management, and air communication protocols (Rochmawati et al., 2024). These challenges are particularly pronounced for LTELs, who may be misclassified as having learning disabilities or struggle with speaking insecurities, necessitating differentiated instruction that embeds language support within content areas to foster both linguistic and professional competence (Rhinehart et al., 2024). Traditional teaching methods, such as teacher-centered translation and rote learning, further exacerbate these issues by limiting opportunities for interactive and communicative practice essential for aviation contexts (Asrifan et al., 2025).

A review of the literature underscores the importance of English for Specific Purposes (ESP) and ELD in vocational education, highlighting both advancements and persistent gaps. Theoretical frameworks, such as Vygotsky's Zone of Proximal Development (ZPD), emphasize scaffolding through social interaction and contextualized content to bridge competence gaps (Sarmiento-Campos et al., 2022). Integrated ELD, as opposed to designated models, is increasingly recognized for aligning with real-time disciplinary language use, with studies showing enhanced oral proficiency and engagement compared to isolated language instruction (Lee, 2021). In aviation, ESP instruction must transcend basic linguistic skills to develop operational communication and critical incident handling, such as managing non-routine or emergencies (Hamzah et al., 2023). In Indonesia, efforts to integrate ESP within communicative and intercultural frameworks are progressing, with research advocating for curriculum adaptations that address stakeholder perceptions and promote collaborative teaching practices, such as lesson study (Triastuti et al., 2023; Suharni et al., 2024). Recent Scopus-indexed studies by non-Indonesian authors with over 30 citations further illuminate these dynamics. Performance-based tasks like simulations are critical for aviation English learners to achieve operational competence, yet such practices are underutilized in many vocational settings (Ziakkas et al., 2022). The efficacy of needs analysis in designing ESP curricula, noting that tailored materials enhance learner engagement but require institutional support to implement effectively (Astika, 2015). Task-based approaches increase learner persistence but require instructor expertise (Ha et al., 2021). The need for culturally responsive ESP materials in Indonesian polytechnics, noting that current resources often fail to address local linguistic diversity and aviation-specific needs (Runggo & Hendriyani, 2025). These studies collectively underscore the necessity of aligning instructional content with aviation-specific discourse practices to enhance motivation and task persistence, while cultivating intercultural communicative competence (ICC) remains critical to address pragmatic and cultural nuances in multicultural aviation settings (Zhou et al., 2024).

Despite these insights, significant research gaps persist. International studies on aviation English primarily focus on East Asian or general ESP contexts, with limited attention to Indonesian polytechnics, particularly regarding ELD integration for LTELs (Ho, 2022; Luana Sasabone et al., 2021). Existing literature often overlooks the interplay of affective factors, such as anxiety and low confidence, with ICC development, which is vital for LTELs in high-stakes vocational programs. Moreover, few studies address institutional barriers, such as inadequate professional development or resource constraints, in implementing national policies like SE-BPSDM 9/2024. While needs analyses highlight the demand for practical, aviation-specific materials, they rarely examine longitudinal impacts on ICAO compliance or the efficacy of grassroots innovations like scenario-based simulations for LTELs (Treadaway & Read, 2025; Demirdöken, 2021).

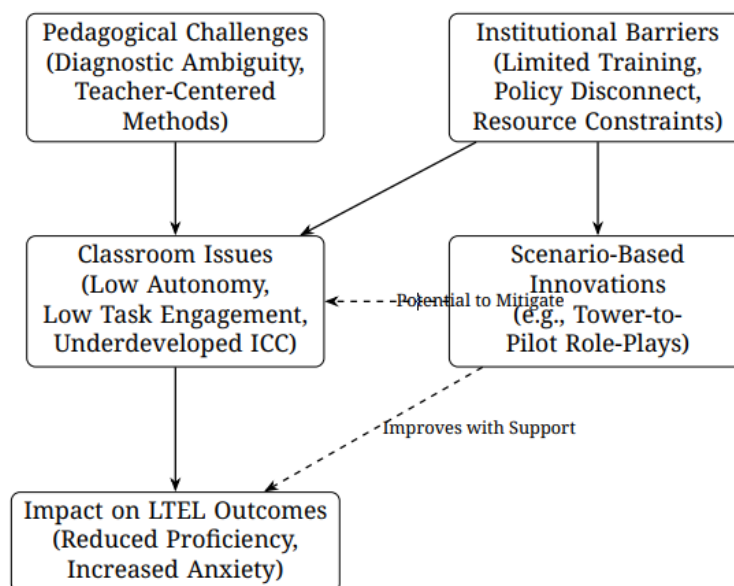


Figure 1: Interrelationship of themes impacting ELD implementation for LTELs

This diagram illustrates the interplay between pedagogical and institutional themes, culminating in classroom issues that impact LTEL outcomes. Diagnostic ambiguity and teacher-centered methods contribute to low autonomy, while resource constraints and policy gaps limit authentic task engagement and ICC development. Scenario-based tasks offer potential but require institutional support to scale (Demirdöken, 2021; Mohamed et al., 2024). The diagram emphasizes the systemic nature of ELD challenges, with institutional barriers amplifying pedagogical issues, ultimately affecting LTELs' proficiency. This aligns with Krashen's Affective Filter Hypothesis as low autonomy and engagement exacerbate anxiety (Kiruthiga & Christopher, 2022; Liu, 2023), and Vygotsky's ZPD, highlighting the need for structured scaffolding (Lasmawan & Budiarta, 2020; Rigopouli et al., 2025).

This study introduces a novel contribution by employing a qualitative case study design to holistically investigate the implementation of integrated ELD strategies for

LTELs within Aviation English instruction at Politeknik Penerbangan Surabaya, a context underexplored in existing literature. By synthesizing Vygotsky's ZPD with affective, task-based, and intercultural frameworks, this research offers a multidimensional lens to examine how instructors address LTELs' unique linguistic and professional needs. Unlike prior studies that focus predominantly on linguistic outcomes or general ESP contexts, this study bridges the literature gap by exploring the intersection of diagnostic ambiguities in identifying LTELs, the role of productive struggle in fostering advanced literacy, and the influence of institutional policies and resources on ELD delivery. The specific aims of this study are twofold: (1) To examine the pedagogical practices and challenges faced by instructors in implementing integrated ELD strategies within Aviation English content instruction for LTELs, and (2) To identify the institutional supports and barriers, including policy alignment and resource availability, that facilitate or hinder effective ELD implementation. These aims directly address the identified research gaps by providing empirical insights into the understudied context of Indonesian aviation polytechnics, the interplay of affective and intercultural factors, and the practical implications of national policy mandates like SE-BPSDM 9/2024. The significance of this study lies in its potential to contribute to the theoretical understanding of ELD integration in high-stakes vocational settings and to offer actionable recommendations for curriculum design, instructor training, and policy reform. By improving LTEL outcomes, this research seeks to enhance the quality of Aviation English instruction, ensuring safer and more effective communication in global aviation contexts and promoting equitable access to vocational English education in Indonesia.

RESEARCH METHODOLOGY

This section provides a comprehensive description of the methodological framework employed to investigate the integration of English Language Development (ELD) strategies for long-term English learners (LTELs) in Aviation English instruction at Politeknik Penerbangan Surabaya (PPS).

Research Design

The study adopted a qualitative case study design to explore the implementation of ELD strategies for LTELs within the context of an Indonesian aviation polytechnic. This design was chosen for its ability to provide an in-depth, contextualized understanding of complex educational phenomena within a bounded system, as supported by recent methodological literature (Alhazmi & Kaufmann, 2022; Donaldson & Allen-Handy, 2023). Grounded in Vygotsky's Zone of Proximal Development (ZPD), the study examines instructor beliefs, institutional policies, pedagogical practices, and sociocultural dynamics influencing LTELs' language learning. Politeknik Penerbangan Surabaya was purposefully selected due to its significant LTEL population and its mandate to prepare cadets for English-mediated aviation communication aligned with

International Civil Aviation Organization (ICAO) standards. The qualitative case study approach facilitates rich, descriptive data collection and analysis, enabling the identification of patterns and themes to inform pedagogical and institutional recommendations. Triangulation across multiple data sources enhances the study's credibility and mitigates potential biases, as emphasized in qualitative research methodology (Ahmed, 2024; Riazi et al., 2023).

Participants

Participants were selected through purposive sampling to ensure representation of stakeholders directly involved in ELD implementation and decision-making. The sample consisted of six individuals: four Aviation English instructors, each with over five years of teaching experience in phraseology, ICAO-based communication, and general English, and two academic administrators responsible for language policy, curriculum design, and staff development. All participants were affiliated with Politeknik Penerbangan Surabaya, ensuring contextual relevance to the study's focus. This sampling strategy prioritized expertise and role diversity to capture multifaceted perspectives on LTEL challenges and ELD strategies, consistent with purposive sampling principles (Palinkas et al., 2015). Ethical considerations included obtaining informed consent, using pseudonyms to maintain confidentiality, and securing institutional ethical approval in accordance with research ethics guidelines (S. Wang et al., 2024).

Instruments and Data Collection

Data was collected from three primary sources to ensure triangulation and robust insights: semi-structured interviews, document analysis, and classroom observations with field notes. Semi-structured Interviews: These served as the primary instrument, conducted individually with all six participants. Interviews lasted 45 to 60 minutes and were held in a mix of English and Bahasa Indonesia based on participant preference to ensure comfort and authenticity in responses. The interview protocol, informed by the theoretical framework and literature, focused on ELD strategies, perceptions of student engagement and language needs, institutional support, and challenges in teaching Aviation English to LTELs. Interviews were audio-recorded with consent and transcribed verbatim for analysis, aligning with best practices for qualitative interviewing (Rowlands, 2021; McMullin, 2023). Document Analysis: Institutional artifacts were reviewed to corroborate interview data and provide contextual evidence. Documents included curriculum blueprints, syllabi, weekly lesson plans, instructional materials, and policy documents such as SE-BPSDM 9/2024 and the Directorate General Aviation Policy Memo 2023. These were analyzed for alignment with ELD expectations, ICAO standards, and language learning outcomes, following document analysis methodologies (Yin et al., 2023; Masiulionienė & Tupčiauskaitė, 2023).

Classroom Observations and Field Notes: Non-participant observations were conducted in two Aviation English classroom sessions to capture real-time instructional practices. Field notes documented instructional methods, student participation patterns, code-switching practices, and task formats, providing insights into ELD implementation. Observations were not formally recorded to minimize disruption but were systematically documented, as recommended for qualitative observational research (Lim, 2025; Uttley et al., 2025). Data collection occurred over a defined period to ensure feasibility, with members checking employed to validate interpretations, enhancing the study's trustworthiness (Lindheim, 2022; Lloyd et al., 2024).

Data Analysis Procedures

Data analysis followed an iterative thematic coding approach, integrating a priori and emergent codes to derive meaningful patterns, as outlined in contemporary qualitative research literature (Bouncken et al., 2021; Christou, 2022). A priori codes were derived from the theoretical framework and literature, including terms such as "intercultural competence," "affective barriers," and "task-based instruction." Emergent codes captured context-specific themes, such as "curricular rigidity," "teacher improvisation," and "differentiation," reflecting the unique dynamics of the aviation polytechnic setting.

The analysis proceeded in three cycles (Allsop et al., 2022). Initial Coding: Using NVivo software, raw data from interviews, documents, and field notes were organized into broad thematic categories, allowing for systematic data management (Bingham, 2023). Focused Coding: Overlapping codes were refined and collapsed to identify core patterns, such as the tension between integrated and designated ELD models and the role of institutional support in pedagogical innovation. Axial Coding: Relationships between themes were explored, particularly how instructional practices interacted with institutional policies and impacted LTEL outcomes, ensuring a comprehensive analysis of the data's interconnections.

Trustworthiness was ensured through: (1) member checking, where key findings were shared with participants for feedback; (2) triangulation, cross-verifying data from interviews, documents, and observations; and (3) an audit trail, archiving all instruments, transcripts, and analytic memos. These procedures align with qualitative research standards for rigor and validity (Kocaman, 2024), providing a robust foundation for the study's findings.

RESULTS

This section presents a detailed account of the findings from a qualitative case study at Politeknik Penerbangan Surabaya.

Research Question #1: Pedagogical Practices and Challenges in Implementing Integrated ELD Strategies.

Thematic analysis identified three primary themes related to instructors' pedagogical practices and challenges in integrating ELD strategies for LTELs within Aviation English instruction: diagnostic ambiguity in identifying LTELs, reliance on teacher-centered methods, and emergent use of scenario-based tasks. These themes directly address the first research question by elucidating how instructors operationalize ELD and the obstacles they encounter.

Diagnostic Ambiguity in Identifying LTELs. Instructors faced significant challenges in distinguishing LTELs from other English learners, which impeded the design and delivery of targeted ELD strategies. LTELs, characterized by prolonged English instruction without achieving academic fluency, demonstrated conversational proficiency but struggled with technical aviation registers, such as ICAO phraseology. Instructor A articulated this difficulty: "Sometimes, I cannot separate between students who are truly struggling with English and those who just feel insecure about speaking. It's hard to know who needs what kind of help." Observations corroborated this, noting that during a phraseology drill, an LTEL student mispronounced "altimeter setting" as "altimeter sitting" and hesitated to self-correct, despite conversing fluently in informal discussions. A gap in technical vocabulary and confidence, diagnostic ambiguities in LTEL identification due to overlapping conversational and academic proficiency deficits (King & Powell, 2023).

Document analysis revealed that syllabi and assessment rubrics lacked specific LTEL criteria, grouping all English learners under broad proficiency levels (e.g., "beginner" or "intermediate"). For instance, a syllabus outlined "English proficiency development" without distinguishing LTELs' needs for advanced literacy support, leading to generic vocabulary lists that failed to address technical gaps. This resulted in inconsistent scaffolding, with some LTELs receiving inadequate support, perpetuating cycles of low achievement. The diagnostic ambiguity hindered instructors' ability to integrate ELD strategies tailored to LTELs' unique needs, aligning with Vygotsky's ZPD framework, which emphasizes precise scaffolding to bridge competence gaps.

Reliance on Teacher-Centered Methods

The predominant use of teacher-centered methods, such as direct translation and grammar-focused instruction, limited LTELs' opportunities for communicative practice, a critical component of integrated ELD. Instructor B explained, "We don't

have specific aviation English teaching materials. We adapt from general English books and try to include aviation examples, like translating 'cleared for takeoff' into Bahasa Indonesia." Observations confirmed this, with one session showing Instructor B spending 20 minutes explaining verb tenses for phrases like "request clearance," followed by students copying definitions without speaking. A student noted, "The teacher only translates vocabulary and asks us to memorize it. We rarely speak or simulate real flights." This approach restricted LTELs' development of productive skills (speaking and writing), essential for ICAO Level 4 proficiency.

Document analysis of weekly lesson plans revealed a focus on textbook-driven exercises, with objectives like "master verb forms" or "memorize 20 aviation terms" dominating over communicative tasks. Teacher-centered methods in Indonesian ESP contexts hinder communicative competence by prioritizing rote learning (Suharyanto, 2024).

Emergent Use of Scenario-Based Tasks

Despite challenges, some instructors adopted scenario-based tasks to integrate ELD, aligning with Content-Based Instruction (CBI) principles. Instructor C described an innovative approach: "We've tried using tower-to-pilot scenarios and assigning students different roles, like pilot or controller. This helps them learn the language while staying focused on the communicative function." Observations supported this, noting a session where LTELs participated in a simulated air traffic control dialogue, with one student improving fluency in phrases like "maintain runway heading" after receiving peer feedback. The task required students to respond to prompts like "report position" in real-time, fostering both linguistic and operational competence.

However, these tasks were inconsistently applied due to time constraints and lack of institutional guidance. A lesson plan referenced "simulations" but provided only a single example, "practice standard phraseology," without scaffolding details like pre-task vocabulary or post-task feedback protocols. This finding is supported by Dominguez & Svihla (2023), who advocate scenario-based tasks for enhancing ESP engagement in aviation contexts, noting their effectiveness in simulating real-world demands.

Research Question #2: Institutional Supports and Barriers

Analysis of institutional dynamics revealed three themes impacting ELD implementation: limited professional development, policy-implementation disconnect, and resource constraints. These themes address the second research question by identifying the institutional factors that facilitate or hinder effective ELD delivery for LTELs.

Limited Professional Development

Instructors reported a lack of aviation-specific ELD training, which impeded their ability to implement integrated strategies effectively. An academic administrator noted, "There's no specific training for teaching Aviation English. The training offered is more general, focused on ESP methods, not LTELs or ICAO standards." This gap forced instructors to rely on improvisation, as Instructor D stated, "I learn by trying things in class, like breaking down phrases, but I'm not sure if it's the best way for LTELs." Observations showed inconsistent scaffolding, with Instructor D using unstructured code-switching to explain "squawk code" in Bahasa Indonesia, reducing English immersion. For example, in one session, an LTEL student asked for clarification in Bahasa Indonesia, and the instructor responded similarly, limiting target language exposure.

Document analysis of professional development plans revealed a focus on generic ESP workshops, with titles like "Introduction to ESP Teaching" and no mention of aviation-specific or LTEL-focused strategies. This aligns with Suherman (2024), who identifies inadequate teacher training as a barrier to ESP success in Indonesian vocational contexts.

Policy-Implementation Disconnect.

The institutional mandate, SE-BPSDM 9/2024, required integrated ELD across content instruction but lacked actionable guidelines, creating a disconnect between policy intent and classroom practice. An academic officer observed, "There is a mandate to include English components, but no concrete training or tools for how to implement it. It's mostly up to the teachers to figure it out." Curriculum blueprints referenced ICAO standards, such as "achieve Level 4 proficiency," but omitted specific ELD strategies or LTEL-focused outcomes. Observations highlighted this gap, with lessons rarely incorporating mandated elements like intercultural competence or scenario-based learning. For instance, one observed session focused on reading a textbook passage about "airport operations" without interactive components, despite policy calls for communicative practice.

Document analysis of SE-BPSDM 9/2024 revealed broad directives, such as "integrate language development in all subjects," without implementation frameworks or assessment metrics. This finding is supported by Okoye et al., (2025), who note policy-practice gaps in Indonesian ESP programs due to vague mandates.

Resource Constraints

Limited access to aviation-specific materials and underutilized infrastructure constrained ELD integration. Instructor B reported, "We don't have specific aviation English materials. We use general English textbooks and add aviation terms ourselves." Observations confirmed reliance on outdated texts, with one session using

a 2015 general English book for vocabulary drills on terms like “runway incursion.” Despite Politeknik Penerbangan Surabaya’s advanced facilities, such as language labs and flight simulators, these were underutilized for ELD, with observations noting no lab-based activities during the study period. Document analysis showed resource allocation prioritizing technical equipment, like radar simulators, over language-specific tools, such as ICAO-aligned software or digital phraseology modules.

This scarcity forced instructors to prioritize content delivery over language development, particularly for LTELs needing intensive support. Suherman (2024) support this, noting resource scarcity in Indonesian vocational settings as a barrier to ESP instruction.

Table 1: Summary of themes addressing research questions

Research Question	Theme	Key Findings	Supporting Evidence	Supporting Literature	Contrasting Literature
RQ1: Pedagogical Practices and Challenges	Diagnostic Ambiguity	Difficulty distinguishing LTELs; generic strategies fail literacy needs.	Instructor A quote, observation of drill hesitations (e.g., “altimeter setting”), syllabus gaps.	Dinh & Sannino (2024)	Uysal (2025)
	Teacher-Centered Methods	Translation and grammar drills limit communicative practice.	Instructor B quote, observation of passive classes (20-minute grammar focus), textbook-driven plans.	Suseno et al. (2022)	Kulish et al. (2021)
	Scenario-Based Tasks	Role-plays show promise but lack consistency.	Instructor C quote, observation of fluency gains (e.g., “maintain runway heading”), vague syllabus references.	Wu & Roever (2025)	Nickerson & Davidson (2024)
RQ2: Institutional Supports and Barriers	Limited Professional Development	General ESP training fails aviation-specific needs.	Administrator quote, observation of code-switching, generic training plans.	Treadaway & Read (2025)	Yao et al. (2024)

Research Question	Theme	Key Findings	Supporting Evidence	Supporting Literature	Contrasting Literature
	Policy-Implementation Disconnect	Mandates lack guidelines, leading to uneven application.	Academic officer quote, syllabus misalignment, observation of non-ICAO tasks.	Ma & Liu (2024)	Wilang et al. (2024)
	Resource Constraints	Lack of materials and underused infrastructure.	Instructor B quote, outdated textbooks, minimal lab use in observations.	Irawan et al. (2024)	Qiu et al. (2024)

Table 1 synthesizes the findings, mapping themes to each research question and integrating supporting and contrasting literature. For RQ1, diagnostic ambiguity and teacher-centered methods highlight systemic pedagogical gaps, supported by Dinh & Sannino (2024) and Suseno et al (2022), but challenged by Uysal (2025) and Kulish et al., (2021), who suggest structured tools and scaffolding could mitigate issues. Scenario-based tasks show promise, as per Wu & Roever (2025), but require training to avoid inconsistency Nickerson & Davidson (2024). For RQ2, institutional barriers like limited training and resources align with Treadaway & Read (2025) and Muliyah & Aminatun (2020), but Gumartifa et al. (2025) suggest digital solutions could address resource issues. The table underscores the need for targeted reforms to bridge pedagogical and institutional gaps, aligning with Vygotsky’s ZPD, which emphasizes structured scaffolding.

Additional Classroom Issues Impacting ELD Implementation.

Further analysis identified three emergent classroom issues that complement the primary themes and further elucidate ELD challenges for LTELs: lack of learner autonomy, low engagement with authentic tasks, and underdeveloped intercultural competence.

Lack of Learner Autonomy

LTELs exhibited limited autonomy, heavily relying on instructor-led explanations, which hindered strategic competence development. Field notes from a session showed students repeating phrases like “request clearance” without initiating dialogue, as one student noted, “Most of the time, we just listen and write what the teacher says. There’s little chance to explore or speak our own version.” In one observed class, an instructor provided direct translations for “runway incursion” over 10 minutes, with LTELs copying notes passively. This dynamic, observed consistently, conflicts with learner-centered ELD principles. Rochmawati et al. (2021) support this, linking low autonomy to affective barriers like anxiety among Indonesian aviation

cadets. The minimal scaffolding can foster autonomy, suggesting that Politeknik Penerbangan Surabaya's heavy reliance on teacher guidance is a key barrier.

Low Engagement with Authentic Tasks.

Despite curriculum mandates for ICAO-based scenarios, tasks were predominantly script-based or translation-focused, reducing authenticity and engagement. A respondent stated, "The teacher used real aviation vocabulary, but we never acted out the situations or practiced them with partners." Observations confirmed this, with one session focusing on reading standard phraseology (e.g., "climb and maintain 10,000 feet") without role-play or spontaneous dialogue. Only one observed task, a brief pilot-controller exchange, prompted active LTEL participation, but it lacked follow-up scaffolding. This undermines Task-Based Language Teaching (TBLT) effectiveness, as noted by Oktavia Widiastuti (2025), who highlights limited authentic tasks in Indonesian ESP contexts.

Underdeveloped Intercultural Competence

Lessons neglected intercultural communicative competence (ICC), focusing on literal language over pragmatic nuances critical for global aviation. Instructor D admitted, "We focus on the words and structure. Cultural issues are not included in our syllabus or training." Observations showed no discussions on tone, politeness, or cultural conventions in simulations, such as addressing a non-native English-speaking controller. For example, an LTEL used an abrupt tone ("turn left now") in a role-play, uncorrected by the instructor, risking miscommunication in real-world contexts. Furyanto & Rochmawati (2025) support this, emphasizing ICC's role in aviation English.

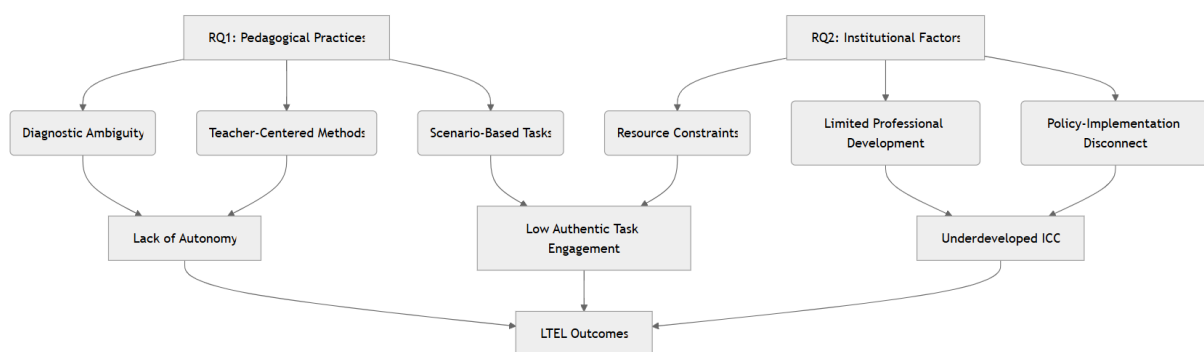


Figure 1: Interrelationship of themes impacting ELD implementation

Figure 1 illustrates the interplay between pedagogical and institutional themes, culminating in classroom issues that impact LTEL outcomes. Diagnostic ambiguity and teacher-centered methods contribute to low autonomy, while resource constraints

and policy gaps limit authentic task engagement and ICC development. Scenario-based tasks offer potential but require institutional support to scale, as supported by Klassen et al. (2021) but challenged by Möller et al. (2025). The diagram emphasizes the systemic nature of ELD challenges, with institutional barriers amplifying pedagogical issues, ultimately affecting LTELs' proficiency. This aligns with Krashen's Affective Filter Hypothesis, as low autonomy and engagement exacerbate anxiety, and Vygotsky's ZPD, highlighting the need for structured scaffolding.

Table 2: Classroom issues and their impact on LTEL outcomes

Classroom Issue	Description	Evidence	Impact on LTELs	Supporting Literature	Contrasting Literature
Lack of Learner Autonomy	Heavy reliance on instructor guidance; minimal student-initiated dialogue.	Student quote, observation of passive note-taking, 10-minute translation focus.	Hinders strategic competence; increases dependency.	Furyanto & Rochmawati (2025)	Çakmak Gürel (2025)
Low Authentic Task Engagement	Script-based tasks over simulations; limited spontaneous practice.	Student feedback, observation of reading-focused session, single role-play task.	Reduces fluency and domain-specific confidence.	Radkowsch et al. (2021)	Zhang & Li (2022)
Underdeveloped ICC	Focus on literal language; no pragmatic or cultural training.	Instructor D quote, observation of abrupt tone in role-play, no syllabus ICC mention.	Risks miscommunication in global contexts.	Ye (2024)	Cong-Lem (2025)

Table 2 complements Table 1 by detailing classroom issues that exacerbate the primary themes' impact on LTELs. Low autonomy, supported by Furyanto & Rochmawati (2025), stems from pedagogical reliance on teacher-centered methods, but Çakmak Gürel (2025) suggest minimal scaffolding could foster independence. Low authentic task engagement, as per Sari (2023), limits fluency, though Radkowsch et al. (2021) indicate structured tasks could mitigate this. Underdeveloped ICC, supported by Ye (2024), risks operational errors, but Cong-Lem (2025) prioritize technical accuracy, highlighting a tension at Politeknik Penerbangan Surabaya. This

table underscores the need for pedagogical shifts to address these issues and improve LTEL outcomes.

These findings comprehensively address the research questions, revealing that instructors' ELD practices are constrained by diagnostic challenges, reliance on outdated methods, and limited institutional support, despite promising scenario-based innovations. Institutional barriers, including inadequate training, vague policies, and resource shortages, hinder effective ELD implementation, necessitating systemic reforms to enhance LTELs' Aviation English proficiency and intercultural competence.

DISCUSSION

This section provides a comprehensive interpretation and analysis of the findings from the qualitative case study at Politeknik Penerbangan Surabaya, weaving them into a cohesive narrative that addresses the research questions, connects to existing literature, and explores broader implications for English Language Development (ELD) strategies for long-term English learners (LTELs) in Aviation English instruction.

The study's key findings highlight significant pedagogical and institutional challenges in implementing ELD for LTELs. For the first research question, instructors struggled with diagnostic ambiguity, unable to consistently distinguish LTELs' needs due to their conversational fluency masking technical proficiency gaps, relied heavily on teacher-centered methods like translation and grammar drills that limited communicative practice, and showed emergent but inconsistent use of scenario-based tasks, such as tower-to-pilot role-plays, which offered promise but lacked structure. For the second research question, institutional barriers included limited professional development, with generic ESP training failing to address aviation-specific or LTEL needs; a policy-implementation disconnect, where mandates like SE-BPSDM 9/2024 lacked actionable guidelines; and resource constraints, with outdated materials and underutilized infrastructure like language labs hindering ELD delivery. Additional classroom issues—lack of learner autonomy, low engagement with authentic tasks, and underdeveloped ICC—further impeded LTELs' progress toward ICAO Level 4 proficiency. These patterns reveal systemic gaps in both pedagogy and institutional support, underscoring the complexity of addressing LTELs' needs in high-stakes aviation contexts.

The diagnostic ambiguity finding suggests that LTELs' conversational fluency creates a false perception of proficiency, leading instructors to apply generic ELD strategies that fail to address technical vocabulary and phraseology deficits, as evidenced by students' struggles with terms like "altimeter setting." This matters because it perpetuates cycles of underachievement, as LTELs cannot meet ICAO's stringent communication requirements without targeted support. Johnson & Mercado-Garcia (2025) confirm this, noting that LTELs' overlapping proficiencies complicate identification, but Zhang & Winke (2025) counter that standardized diagnostics could

resolve this, suggesting Politeknik Penerbangan Surabaya's lack of such tools is a critical oversight. The reliance on teacher-centered methods, observed in translation-heavy sessions, reflects a pedagogical misalignment with aviation's communicative demands, increasing LTELs' anxiety and limiting productive skills, as per Bailey & Kadhum Fahad (2021) Affective Filter Hypothesis. Mohebbi & Coombe (2021) support this, documenting similar issues in Indonesian ESP, while Woods & Copur-Gencturk (2024) argue that teacher-centered approaches can succeed with structured scaffolding, indicating Politeknik Penerbangan Surabaya's challenge lies in implementation. The emergent use of scenario-based tasks, which improved fluency in role-plays, aligns with Vygotsky's ZPD by fostering productive struggle, but their inconsistency, due to time and guidance shortages, echoes Rigopouli et al. (2025) caution that such tasks require robust training to be effective.

Institutionally, the lack of aviation-specific training forced instructors to improvise, reducing English immersion through practices like code-switching, as seen in Instructor D's explanations. This aligns with Ali et al. (2020), who highlight training deficiencies in Indonesian vocational settings, but Munir et al. (2023) suggest that adapted ESP training could suffice, pointing to Politeknik Penerbangan Surabaya's need for customization. The policy-implementation disconnect, with SE-BPSDM 9/2024's vague mandates failing to guide practice, corroborates Hummel & Bauernhofer (2024), while Cui et al. (2024) propose localized guidelines as a solution, underscoring Politeknik Penerbangan Surabaya's policy shortcomings. Resource constraints, such as reliance on outdated textbooks, support Tibane et al. (2024), but Haleem et al. (2022) argue digital tools could mitigate these, highlighting PPS's underutilization of language labs. Classroom issues—low autonomy, limited authentic tasks, and underdeveloped ICC—reflect a passive learning culture (Furyanto & Rochmawati, 2025), reduced TBLT effectiveness (Chunliu & Guangsheng, 2025), and risks to global communication (Khan et al., 2022). However, Hofer & Reinhold (2025), T. Wang et al. (2023), and Gao et al. (2025) suggest minimal scaffolding, structured tasks, or technical accuracy could address these, respectively, indicating potential pathways for Aviation School.

These findings contribute to ESP literature by highlighting LTEL-specific challenges in vocational contexts, extending Vygotsky's ZPD through the need for precise scaffolding, Krashen's Affective Filter by linking anxiety to pedagogical gaps, TBLT by showcasing scenario-based tasks' potential, and ICC by emphasizing its necessity in aviation (Jiang et al., 2025). They challenge existing knowledge by revealing the interplay of pedagogical and institutional barriers, contrasting with studies like Herliana et al. (2024) that assume diagnostic tools are readily implementable. The unexpected inconsistency of scenario-based tasks, despite their promise, may stem from instructors' limited training and time, a factor underexplored in prior ESP research.

Practically, the findings call for LTEL-specific diagnostics, such as proficiency tests targeting technical registers, to enable tailored scaffolding. Professional development in TBLT and CBI, emphasizing scenario-based tasks with structured scaffolds (e.g., pre-task vocabulary, peer feedback), could enhance LTELs' fluency and confidence, aligning with ICAO standards. Institutionally, aviation-specific training programs, detailed ELD guidelines within policies, and investment in ICAO-aligned materials (e.g., digital phraseology modules) are essential. Leveraging existing infrastructure, like language labs, could support immersive learning. Theoretically, the study refines ZPD application in ESP by highlighting LTELs' need for targeted scaffolding, extends Krashen's framework by linking affective barriers to institutional gaps, and underscores ICC's role in high-stakes contexts. Policy-wise, revising SE-BPSDM 9/2024 to include actionable ELD frameworks and fostering inter-institutional resource sharing could align instruction with global standards, enhancing LTELs' workplace readiness.

Limitations include the single-site focus at PPS, limiting generalizability to other Indonesian polytechnics, and a small sample size (six participants), though purposive sampling ensured relevance. The reliance on instructor perceptions and observations, without direct student performance data (e.g., speaking samples), restricts conclusions about LTEL outcomes. Two observation sessions may miss practice variations, and field notes' subjectivity, without formal recordings, could introduce bias. Limited access to unpublished policies may overlook additional guidelines, affecting the institutional analysis. These limitations suggest cautious interpretation, though triangulation across interviews, documents, and observations enhances trustworthiness.

Future research should conduct multi-site studies across Indonesian aviation institutions to enhance generalizability, incorporate student data (e.g., proficiency tests, interviews) to assess LTEL outcomes, and pilot ELD modules embedding ICC, TBLT, and scenario-based tasks to evaluate efficacy. Longitudinal studies tracking LTELs' ICAO test performance and workplace communication could reveal long-term impacts. Evaluating tailored training models for aviation ELD, focusing on LTELs and ICC, would address training gaps. Methodological improvements, such as extended observations or video recordings, could reduce subjectivity.

It means study illuminates the intricate pedagogical and institutional barriers to ELD implementation for LTELs in Aviation English, emphasizing the need for diagnostic tools, interactive pedagogies, and robust institutional support. By advancing ZPD, Affective Filter, TBLT, and ICC frameworks, it offers nuanced insights into ESP challenges, particularly in vocational contexts. Despite limitations, the findings provide a foundation for reforming pedagogy and policy, ensuring LTELs achieve the proficiency and intercultural competence needed for safe, effective aviation

communication in a globalized industry, paving the way for future research and practical advancements.

CONCLUSION

The study underscores the critical need for targeted ELD strategies tailored to LTELs in Aviation English instruction at Politeknik Penerbangan Surabaya, revealing that systemic pedagogical and institutional challenges significantly impede proficiency gains. It highlights the potential of scenario-based tasks to enhance communicative competence when supported by adequate training and resources. Furthermore, the findings emphasize the importance of aligning policies with practical guidelines to foster intercultural competence and learner autonomy, offering a pathway to improve LTELs' readiness for global aviation communication. However, as a single-site case study with a small sample and only instructor/administrator perspectives, the findings may not fully generalize to other Indonesian aviation institutions. Future multi-site and longitudinal research incorporating direct student proficiency data, video-recorded observations, and piloted ELD modules is therefore recommended to validate and extend these results. Ultimately, this research provides foundational insights and actionable recommendations for safer, more equitable, and effective Aviation English training in high-stakes vocational contexts worldwide.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

AUTHOR (S) CONTRIBUTION

Laila Rochmawati: Conceptualization (lead), methodology (lead), writing – original draft (lead), review (supporting), final approval (lead). Fatmawati : Conceptualization (supporting), methodology (supporting), writing – original draft (supporting), review (lead), editing (lead), final approval (supporting).

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REFERENCES

- Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 2, 100051.
<https://doi.org/10.1016/j.glmedi.2024.100051>
- Alhazmi, A. A., & Kaufmann, A. (2022). Phenomenological qualitative methods applied to the analysis of cross-cultural experience in novel educational social contexts. *Frontiers in Psychology*, 13.
<https://doi.org/10.3389/fpsyg.2022.785134>
- Ali, M., Triyono, B., & Koehler, T. (2020). Evaluation of Indonesian technical and vocational education in addressing the gap in job skills required by industry. *2020 Third International Conference on Vocational Education and Electrical Engineering (ICVEE)*, 1–6. <https://doi.org/10.1109/ICVEE50212.2020.9243222>
- Allsop, D. B., Chelladurai, J. M., Kimball, E. R., Marks, L. D., & Hendricks, J. J. (2022). Qualitative methods with NVivo software: a practical guide for analyzing qualitative data. *Psych*, 4(2), 142–159. <https://doi.org/10.3390/psych4020013>
- Asrifan, A., Tayibu, K. N., Muhayyang, M., Ingilan, S. S., & Mahfud, A. (2025). Traditional learners vs. Non-traditional learners. In *Mitigating Learner Disadvantages in Teaching and Learning* (pp. 59–90). IGI Global.
<https://doi.org/10.4018/979-8-3693-8623-1.ch003>
- Astika, G. (2015). The role of needs analysis in English for specific purposes. *TEFLIN Journal - A Publication on the Teaching and Learning of English*, 10(1), 31.
<https://doi.org/10.15639/teflinjournal.v10i1/31-47>
- Bailey, F., & Kadhum Fahad, A. (2021). Krashen revisited: case study of the role of input, motivation and identity in second language learning. *Arab World English Journal*, 12(2), 540–550. <https://doi.org/10.24093/awej/vol12no2.36>
- Bingham, A. J. (2023). From data management to actionable findings: a five-phase process of qualitative data analysis. *International Journal of Qualitative Methods*, 22. <https://doi.org/10.1177/16094069231183620>
- Bouncken, R. B., Qiu, Y., Sinkovics, N., & Kürsten, W. (2021). Qualitative research: extending the range with flexible pattern matching. *Review of Managerial Science*, 15(2), 251–273. <https://doi.org/10.1007/s11846-021-00451-2>
- Çakmak Gürel, Z. (2025). Indication of scaffolding in mathematical modeling. *International Journal of Science and Mathematics Education*.
<https://doi.org/10.1007/s10763-025-10576-5>
- Christou, P. A. (2022). How to use thematic analysis in qualitative research. *Journal of Qualitative Research in Tourism*, 3(2), 79–95.
<https://doi.org/10.4337/jqrt.2023.0006>
- Chunliu, X., & Guangsheng, L. (2025). The effectiveness of task-based language teaching in improving communicative competence. *International Journal of ADVANCED AND APPLIED SCIENCES*, 12(1), 263–273.
<https://doi.org/10.21833/ijaas.2025.01.025>

- Cong-Lem, N. (2025). Intercultural communication in second/foreign language education over 67 years: a bibliometric review. *Journal of Intercultural Communication Research*, 54(1–2), 1–21.
<https://doi.org/10.1080/17475759.2025.2456265>
- Cui, X., Wang, C., & Gardiner, I. A. (2024). Enhancing EMI learning through L1 use and ESP: A mixed-methods study in a Chinese transnational education context. *System*, 125, 103455. <https://doi.org/10.1016/j.system.2024.103455>
- Demirdöken, G. (2021). The constructivist approach towards identifying the challenges of esp teachers: the case of aviation English. *International Journal of Aviation, Aeronautics, and Aerospace*.
<https://doi.org/10.15394/ijaaa.2021.1571>
- Dinh, H., & Sannino, A. (2024). Toward a diagnostic toolkit for intervention in teachers' agency during curriculum reform: groundwork for a change laboratory in vietnam. *Teaching and Teacher Education*, 140, 104494.
<https://doi.org/10.1016/j.tate.2024.104494>
- Dominguez, S., & Svihla, V. (2023). A review of teacher-implemented scaffolding in K-12. *Social Sciences & Humanities Open*, 8(1), 100613.
<https://doi.org/10.1016/j.ssaho.2023.100613>
- Donaldson, J. P., & Allen-Handy, A. (2023). What is learning? a complex conceptual systems analysis of conceptualizations of learning. *International Journal of Educational Research Open*, 4, 100254.
<https://doi.org/10.1016/j.ijedro.2023.100254>
- Furyanto, F. A., & Rochmawati, L. (2025). Practices of intercultural competence teaching: an autobiographical study at aviation English classroom. *Journal of Education and Learning (EduLearn)*, 19(1), 274–286.
<https://doi.org/10.11591/edulearn.v19i1.21337>
- Gao, X., Yang, Y., Du, Y., & Sun, D. (2025). Effect of mind mapping-based scaffolding on elementary students' computational thinking in block-based programming. *Journal of Educational Computing Research*, 63(1), 236–271.
<https://doi.org/10.1177/07356331241303067>
- Gumartifa, A., Syahri, I., & Alfaresi, B. (2025). Digital tools in esp learning: culturally and linguistically diverse students' practices and challenges. *Voices of English Language Education Society*, 9(1), 206–217.
<https://doi.org/10.29408/veles.v9i1.29348>
- Ha, N. D. N., Loc, N., & Tuyen, T. (2021). Task-based approach: an overview. *European Journal of English Language Teaching*, 7(1).
<https://doi.org/10.46827/ejel.v7i1.4090>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/j.susoc.2022.05.004>
- Hamzah, H., Krish, P., & Hamat, A. (2023). Aviation communication challenges and

- language training development: perspectives from pilots and air traffic controllers. *Training, Language and Culture*, 7(1), 86–100.
<https://doi.org/10.22363/2521-442X-2023-7-1-86-100>
- Herliana, H., Maison, M., & Syaiful, S. (2024). Development and implementation of a five-tier diagnostic test to identify student misconceptions on fractions: a significant step towards improving mathematics education. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 8(2), 563–576.
<https://doi.org/10.22437/jiituj.v8i2.34159>
- Ho, W. Y. J. (2022). The construction of translanguaging space through digital multimodal composing: a case study of students' creation of instructional videos. *Journal of English for Academic Purposes*, 58, 101134.
<https://doi.org/10.1016/j.jeap.2022.101134>
- Hofer, S. I., & Reinhold, F. (2025). Scaffolding of learning activities: aptitude-treatment-interaction effects in math? *Learning and Instruction*, 99, 102177.
<https://doi.org/10.1016/j.learninstruc.2025.102177>
- Hummel, K., & Bauernhofer, K. (2024). Consequences of sustainability reporting mandates: evidence from the EU taxonomy regulation. *Accounting Forum*, 48(3), 374–400. <https://doi.org/10.1080/01559982.2024.2301854>
- ICAO. (2010). Manual on the implementation of ICAO language proficiency requirements. In *Strategies*.
<https://www.skybrary.aero/bookshelf/books/2497.pdf>
- Irawan, D., Sulistiyo, U., & Abrar, M. (2024). Investigation of differentiated instruction model esp based on students' needs at vocational high school in Palembang. *PPSDP International Journal of Education*, 3(2), 453–470.
<https://doi.org/10.59175/pijed.v3i2.323>
- Jiang, J., Balakrishnan, V., & Lim, J. W. (2025). Exploring new phenomena of intercultural communication from Chinese international students' English application in different contexts abroad. *Journal of Intercultural Communication Research*, 54(1–2), 22–45. <https://doi.org/10.1080/17475759.2025.2459656>
- Johnson, A., & Mercado-Garcia, D. (2025). Targeted intervention for long-term English learners' English language development and reading outcomes. *AERA Open*, 11. <https://doi.org/10.1177/23328584251362747>
- Khan, S., Mishra, J., Ahmed, N., Onyige, C. D., Lin, K. E., Siew, R., & Lim, B. H. (2022). Risk communication and community engagement during COVID-19. *International Journal of Disaster Risk Reduction*, 74, 102903.
<https://doi.org/10.1016/j.ijdrr.2022.102903>
- King, S. G., & Powell, S. R. (2023). Language proficiency and the relation to word–problem performance in emergent bilingual students with mathematics difficulties. *Learning Disabilities Research & Practice*, 38(4), 263–273.
<https://doi.org/10.1111/ldrp.12325>
- Kiruthiga, E., & Christopher, G. (2022). The impact of affective factors in English

- speaking skills. *Theory and Practice in Language Studies*, 12(12), 2478–2485. <https://doi.org/10.17507/tpls.1212.02>
- Klassen, R. M., Rushby, J. V., Maxwell, L., Durksen, T. L., Sheridan, L., & Bardach, L. (2021). The development and testing of an online scenario-based learning activity to prepare preservice teachers for teaching placements. *Teaching and Teacher Education*, 104, 103385. <https://doi.org/10.1016/j.tate.2021.103385>
- Kocaman, R. (2024). A practical guideline for addressing data trustworthiness in qualitative research (pp. 317–346). <https://doi.org/10.4018/979-8-3693-3069-2.ch011>
- Kulish, i., Nekoz, i., & Koroliuk, h. (2021). Scaffolding strategies as an effective technology in teaching esp. *Cherkasy University Bulletin: Pedagogical Sciences*, 2, 42–48. <https://doi.org/10.31651/2524-2660-2021-2-42-48>
- Lasmawan, I. W., & Budiarta, I. W. (2020). Vygotsky's zone of proximal development and the students' progress in learning (a heutagogical bibliographical review). *JPI (Jurnal Pendidikan Indonesia)*, 9(4), 545. <https://doi.org/10.23887/jpi-undiksha.v9i4.29915>
- Lee, I. (2021). The development of feedback literacy for writing teachers. *TESOL Quarterly*, 55(3), 1048–1059. <https://doi.org/10.1002/tesq.3012>
- Lim, W. M. (2025). What is qualitative research? an overview and guidelines. *Australasian Marketing Journal*, 33(2), 199–229. <https://doi.org/10.1177/14413582241264619>
- Lindheim, T. (2022). Participant validation: a strategy to strengthen the trustworthiness of your study and address ethical concerns. In *Researching Values* (pp. 225–239). Springer International Publishing. https://doi.org/10.1007/978-3-030-90769-3_13
- Liu, X. (2023). The effect of affective filter hypothesis on college students' English writing teaching and its enlightenment. *OALib*, 10(09), 1–9. <https://doi.org/10.4236/oalib.1110671>
- Lloyd, N., Hyett, N., & Kenny, A. (2024). To member check or not to member check? an evaluation of member checking in an interpretive descriptive study. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069241301383>
- Luana Sasabone, Yuriatson Jubhari, Sukmawati, & Sujarwo. (2021). The Implementation of English for specific purposes (esp) in Improving Students Speaking Skill of UKI Paulus Makassar. *Edulec : Education, Language And Culture Journal*, 1(1), 1–8. <https://doi.org/10.56314/edulec.v1i1.1>
- Ma, L., & Liu, Z. (2024). How do local governments respond to central mandate in affordable housing policy? A qualitative comparative analysis of forty-one Chinese cities. *Journal of Urban Management*, 13(3), 386–397. <https://doi.org/10.1016/j.jum.2024.05.003>
- Masiulionienė, G., & Tupčiauskaitė, G. (2023). Bridging the gap between ica level 4

- and 5 in aviation English: expectations and results. *Aviation*, 27(3), 197–211. <https://doi.org/10.3846/aviation.2023.19763>
- Maulana, M. I. (2021). Task-based language teaching; potential benefits and possible criticisms in Indonesian contexts. *Journal of English Teaching and Learning Issues*, 4(2), 69. <https://doi.org/10.21043/jetli.v4i2.12183>
- McMullin, C. (2023). Transcription and qualitative methods: implications for third sector research. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 34(1), 140–153. <https://doi.org/10.1007/s11266-021-00400-3>
- Mohamed, O. I., Aljadaan, O., & Al-Ani, N. N. (2024). Needs analysis of English for specific purposes for health sciences students: a cross-sectional study at a university in the U.A.E. *Journal of Language Teaching and Research*, 15(5), 1419–1431. <https://doi.org/10.17507/jltr.1505.04>
- Mohebbi, H., & Coombe, C. (Eds.). (2021). *Research questions in language education and applied linguistics*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-79143-8>
- Möller, A., Comer, K., Rawlins, P., & Emerson, L. (2025). Using a scenario-based method to explore university students' views about writing assistance. *New Zealand Journal of Educational Studies*, 60(1), 225–245. <https://doi.org/10.1007/s40841-025-00384-4>
- Muliyah, P., & Aminatun, D. (2020). Teaching English for specific purposes in vocational high school: teachers' beliefs and practices. *JET (Journal of English Teaching)*, 6(2), 122–133. <https://doi.org/10.33541/jet.v6i2.1756>
- Munir, A., Savitri, W. E., Asrori, A., & Chakim, N. (2023). Pre-service English teachers' adaptation skills in two ESP courses. *Script Journal: Journal of Linguistics and English Teaching*, 8(1), 1–15. <https://doi.org/10.24903/sj.v8i01.1290>
- Nickerson, C., & Davidson, P. (2024). Using scenario-based assessment in the development of students' digital communication skills and professional competence. *Business and Professional Communication Quarterly*, 87(2), 324–336. <https://doi.org/10.1177/23294906241240247>
- Okoye, K., Campos, E., Das, A., Chakraborty, V., Ghosh, M., Chakrabarti, A., & Hosseini, S. (2025). Impact of digitalized-education upon sustainable education and practice: A systematic review and meta-analysis of literature based on pre-intra-and-post pandemic and rural education development. *Sustainable Futures*, 10, 100851. <https://doi.org/10.1016/j.sftr.2025.100851>
- Oktavia Widiastuti. (2025). Watch me on YouTube: A concept of call-tblt to promote Indonesian EFL students' communicative performance. *A Journal of Culture, English Language Teaching, Literature and Linguistics*, 12(2), 658–678. <https://doi.org/https://doi.org/10.22219/celtic.v12i2.40777>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in

- mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533–544.
<https://doi.org/10.1007/s10488-013-0528-y>
- Qiu, X., Zhang, T., & Dong, S. (2024). Self-regulated strategy instruction: Insights from esp teachers at a Chinese university and vocational college. *System*, 120, 103188. <https://doi.org/10.1016/j.system.2023.103188>
- Radkowsch, A., Sailer, M., Schmidmaier, R., Fischer, M. R., & Fischer, F. (2021). Learning to diagnose collaboratively – effects of adaptive collaboration scripts in agent-based medical simulations. *Learning and Instruction*, 75, 101487. <https://doi.org/10.1016/j.learninstruc.2021.101487>
- Rhinehart, L. V., Bailey, A. L., & Haager, D. (2024). Long-term English learners: untangling language acquisition and learning disabilities. *Contemporary School Psychology*, 28(2), 173–185. <https://doi.org/10.1007/s40688-022-00420-w>
- Riazi, A. M., Rezvani, R., & Ghanbar, H. (2023). Trustworthiness in l2 writing research: a review and analysis of qualitative articles in the Journal of Second Language Writing. *Research Methods in Applied Linguistics*, 2(3), 100065. <https://doi.org/10.1016/j.rmal.2023.100065>
- Rigopouli, K., Kotsifakos, D., & Psaromiligkos, Y. (2025). Vygotsky’s creativity options and ideas in 21st-century technology-enhanced learning design. *Education Sciences*, 15(2), 257. <https://doi.org/10.3390/educsci15020257>
- Rochmawati, L., Fatmawati, Sukma, M. M., & Sonhaji, I. (2021). Online learning motivation for aviation English: attitude, readiness, and demographic factors. *JEES (Journal of English Educators Society)*, 6(1), 1–8. <https://doi.org/10.21070/jees.v6i1.792>
- Rochmawati, L., Sylvia, T., & Diriyanti Novalina, S. (2024). The impact of team teaching on student achievement and perceptions in aviation vocational schools. *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*, 11(2). <https://doi.org/10.22219/celtic.v11i2.37434>
- Rochmawati, L., Sylvia, T., Kusumayati, L. D., & Silvia, M. A. (2024). Communicative language teaching in aviation vocational college context: the effect of students’ learning perception and attitude on their efl learning performance. *Journal of Foreign Language Teaching and Learning*, 9(1), 19–40. <https://doi.org/10.18196/ftl.v9i1.20789>
- Rowlands, J. (2021). Interviewee transcript review as a tool to improve data quality and participant confidence in sensitive research. *International Journal of Qualitative Methods*, 20. <https://doi.org/10.1177/16094069211066170>
- Runggo, Y., & Hendriyani, H. (2025). Esp-based needs analysis for palu polytechnic students. *Edunesia: Jurnal Ilmiah Pendidikan*, 6(1), 431–447. <https://doi.org/10.51276/edu.v6i1.1047>
- Sarmiento-Campos, N.-V., Lázaro-Guillermo, J. C., Silvera-Alarcón, E.-N., Cuellar-Quispe, S., Huamán-Romani, Y.-L., Apaza, O. A., & Sorkheh, A. (2022). A look at

- vygotsky's sociocultural theory (sct): the effectiveness of scaffolding method on efl learners' speaking achievement. *Education Research International*, 2022, 1–12. <https://doi.org/10.1155/2022/3514892>
- Suharni, S., Saidi, S. B., & Hussein, N. H. (2024). Intercultural competence development of efl teachers in indonesia. *International Journal of Education, Psychology and Counseling*, 9(54), 60–69. <https://doi.org/10.35631/IJEPC.954004>
- Suharyanto, S. (2024). Teachers' strategies in esp learning program in indonesia: a comparative study. *JELITA*, 5(1), 51–64. <https://doi.org/10.56185/jelita.v5i1.639>
- Suherman, A. (2024). Barriers prevent egp teachers from becoming esp practitioners in the context of an indonesian tertiary education. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 9(1), 55. <https://doi.org/10.21093/ijeltal.v9i1.1596>
- Suseno, E., Purnomo, H., & Nuryana, A. (2022). The implementation of grammar translation method to better speaking competence supported by developing reading and listening skills. *IJIET (International Journal of Indonesian Education and Teaching)*, 6(1), 161–179. <https://doi.org/10.24071/ijiet.v6i1.1602>
- Tibane, C. C., Neo, M.-T. O., Phanuel, M. T., & Peter, M. (2024). Examining the effect of resource constraints on teaching and learning of grade 12 mathematics in gauteng community learning centres. *International Journal of Learning, Teaching and Educational Research*, 23(10), 453–474. <https://doi.org/10.26803/ijlter.23.10.22>
- Treadaway, M., & Read, J. (2025). Assessing the language needs of L2 English student pilots preparing for flight training in English-speaking countries. *English for Specific Purposes*, 78, 125–138. <https://doi.org/10.1016/j.esp.2024.12.007>
- Triastuti, A., Nurkamto, J., & Sumardi, S. (2023). Translanguaging pedagogies in an esp course: a case in indonesia. *VELES (Voices of English Language Education Society)*, 7(3), 527–541. <https://doi.org/10.29408/veles.v7i3.23912>
- Uttley, L., Weng, Y., & Falzon, L. (2025). Yet another problem with systematic reviews: a living review update. *Journal of Clinical Epidemiology*, 177, 111608. <https://doi.org/10.1016/j.jclinepi.2024.111608>
- Uysal, H. (2025). Long-term English learners. In *Oxford Research Encyclopedia of Linguistics*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780199384655.013.1060>
- Wang, S., Ramdani, J. M., Sun, S. (Alice), Bose, P., & Gao, X. (Andy). (2024). Naming research participants in qualitative language learning research: numbers, pseudonyms, or real names? *Journal of Language, Identity & Education*, 1–14. <https://doi.org/10.1080/15348458.2023.2298737>
- Wang, T., Zheng, J., Tan, C., & Lajoie, S. P. (2023). Computer-based scaffoldings influence students' metacognitive monitoring and problem-solving efficiency in an intelligent tutoring system. *Journal of Computer Assisted Learning*, 39(5),

- 1652–1665. <https://doi.org/10.1111/jcal.12824>
- Wilang, J. D., Ngamchatturat, T., & Seepho, S. (2024). Bridging content and language in English-medium engineering programs. *International Journal of Learning, Teaching and Educational Research*, 23(4), 99–117. <https://doi.org/10.26803/ijlter.23.4.6>
- Woods, P. J., & Copur-Gencturk, Y. (2024). Examining the role of student-centered versus teacher-centered pedagogical approaches to self-directed learning through teaching. *Teaching and Teacher Education*, 138, 104415. <https://doi.org/10.1016/j.tate.2023.104415>
- Wu, J., & Roever, C. (2025). Data from role plays and elicited conversations: what do they show about L2 interactional competence? *Research Methods in Applied Linguistics*, 4(1), 100165. <https://doi.org/10.1016/j.rmal.2024.100165>
- Yao, L., Abas, N., & Roslim, N. (2024). Esp in vocational institutes: a mixed-method study of students' esp learning style preferences. *World Journal of English Language*, 15(1), 70. <https://doi.org/10.5430/wjel.v15n1p70>
- Ye, Z. (2024). Language barriers in intercultural communication and their translation strategies. *Modern Management Science & Engineering*, 6(1), p178. <https://doi.org/10.22158/mmse.v6n1p178>
- Yin, Y., Yu, G., & Huang, D. (2023). Implementing the icao language proficiency requirements: the localization of aviation English testing. *Applied Linguistics*. <https://doi.org/10.1093/applin/amad057>
- Zhang, X., & Winke, P. (2025). Time to proficiency in young English learners and factors that affect progress. *TESOL Quarterly*, 59(2), 695–729. <https://doi.org/10.1002/tesq.3340>
- Zhou, R., Samad, A., & Perinpasingam, T. (2024). A systematic review of cross-cultural communicative competence in efl teaching: insights from china. *Humanities and Social Sciences Communications*, 11(1), 1750. <https://doi.org/10.1057/s41599-024-04071-5>
- Ziakkas, D., Michael, W. S., & Pechlivanis, K. (2022). The implementation of competency-based training and assessment (CBTA) framework in aviation manpower planning. *Transportation Research Procedia*, 66, 226–239. <https://doi.org/10.1016/j.trpro.2022.12.023>