

ESP FOR GROUND STAFF TRAINING: NEEDS ANALYSIS AND MATERIAL DEVELOPMENT

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Abstract: This study investigates the needs analysis and material development of English for Specific Purposes (ESP) for ground staff in aviation. Ground staff play a vital role as frontline personnel who manage essential passenger services, including check-in procedures, boarding announcements, baggage-related communication, and the handling of passenger complaints. These responsibilities require not only technical competence but also effective communication skills in English, given its status as the global lingua franca of aviation. Using a qualitative research design, data were collected through interviews with aviation English instructors and observations of airport service operations. The needs analysis identified key language demands, particularly vocabulary mastery, pronunciation, and communicative functions related to passenger interaction. Based on these findings, a series of ESP learning materials was developed, guided by the principles of Communicative Language Teaching (CLT). The materials were task-based, authentic, and interactive, incorporating role plays, simulations, announcement practices, and the use of realia such as boarding passes and e-tickets to mirror workplace realities. A preliminary implementation demonstrated positive outcomes, including increased learner engagement, higher motivation, and improved preparedness for professional communication. The results emphasize that equipping ground staff with targeted English communication skills not only enhances service quality and customer satisfaction but also contributes significantly to operational efficiency, safety, and security in aviation.

Keywords: ESP, English for Aviation, Needs Analysis, material Development

1. INTRODUCTION

English has become a global lingua franca that transcends geographical boundaries and professional domains. Nowhere is this more evident than in the aviation industry, where English is not merely an additional skill but a mandatory requirement to ensure safety, efficiency, and effective communication. The International Civil Aviation Organization (ICAO), a specialized agency of the United Nations, designates English as the principal language of communication in international aviation, although five other languages: French, Spanish, Arabic, Russian, and Chinese are also recognized as official languages (ICAO, 2010). The predominance of English in aviation operations underscores its critical role in preventing miscommunication, which can have life-threatening consequences in air transportation.

For ground staff, English plays a crucial role in daily professional activities. Unlike pilots and air traffic controllers, who primarily engage in technical phraseology and standard operational communication, ground staff members interact directly with passengers from diverse cultural and linguistic backgrounds (Masita et al.,

2023). Their responsibilities encompass a wide range of services, including check-in procedures, boarding announcements, baggage handling, assisting passengers with special needs, and resolving complaints. Each of these tasks requires not only technical knowledge of aviation procedures but also communicative competence in English. The ability to communicate politely, clearly, and confidently is essential for ensuring passenger satisfaction, operational smoothness, and the maintenance of international aviation standards (Masita & Widiyanto, 2023).

The teaching of English in aviation falls under the umbrella of ESP. ESP differs from General English in that it is designed to meet the specific linguistic needs of learners within a particular discipline or profession. There are several key areas in ESP: needs analysis to determine learners' target language requirements, developing curricula that align with those needs, and adopting genre-based approaches that reflect authentic language use in specific disciplines (Feak & Chan, 2025). In the aviation sector, this means tailoring English instruction to professional roles such as ground staff, flight attendants, pilots, and aviation security officers.

In the case of ground staff, ESP incorporate tasks such as explaining baggage regulations, making boarding announcements, and handling customer complaints in English. These tasks demand both linguistic proficiency and intercultural competence, as staff must often deal with passengers who speak English as a second or third language.

1.1 The Role of Needs Analysis

One of the foundations of ESP is needs analysis, which involves identifying learners' target communicative tasks and the linguistic competencies required to perform them successfully. Needs analysis is recognized as the foundational and most critical stage of ESP curriculum design, involving systematic data collection about learners' purposes for learning English to inform course objectives and material selection (Balatska & Vyslobodska, 2020). This process requires multiple research instruments including questionnaires, interviews, observations, and task analysis to identify both target and learning needs. In aviation contexts, needs analysis reveals that communicative skills, particularly speaking and listening, are prioritized by both learners and teachers, with conversation skills and practical writing identified as essential competencies (Taghipour et al., 2020). Similarly, railway engineering students demonstrate gaps between current curricula and industry demands, requiring ESP courses focused on technical communication, report writing, and international collaboration (Tulkinovna & Gulomovna, 2025). The task-based approach to needs analysis proves effective in identifying specific linguistic competencies required for professional contexts, enabling the development of targeted ESP programs that bridge academic instruction with workplace communication requirements. In aviation, needs analysis is particularly important because communication tasks are directly tied to safety and customer service outcomes.

Effective communication in English has become a central requirement in Indonesian aviation, particularly for airport ground staff who serve as the frontline of passenger interaction. Needs analysis studies demonstrate that ground handling personnel require proficiency in specific communicative areas including passenger assistance, complaint handling, and operational announcements (Azhar & Masy'ah, 2023). Despite recognizing English as essential for airport operations, staff face significant implementation challenges, particularly in speaking skills where 60%

report anxiety, and listening comprehension difficulties affecting 40% of personnel (Siwa, 2023). Siwa (2023) claims critical gap exists between institutional requirements and support systems, with 100% of staff reporting absence of formal language training, leading to reliance on self-directed learning methods. Communication and speaking skills emerge as primary priorities for airline staff, though comprehensive four-skills development remains necessary (Masita et al., 2023). These findings highlight the urgent need for structured institutional support and contextually relevant ESP materials to enhance professional communication competence in Indonesian aviation settings.

1.2 Task-Based Learning and Authenticity in ESP

In recent years, educators and researchers in ESP have increasingly emphasized not only *what* learners need to know, but *how* they learn best. Approaches that centre on real communication, authentic materials, and active student involvement is shown to produce stronger outcomes in language proficiency, especially in professional and technical fields. For example, in Indonesia, the integration of technology-enhanced task-based language teaching has been investigated for its impact on learner motivation, self-directed learning, and engagement (Mulyadi et al., 2023). Similarly, studies in other contexts show that ESP learners exposed to tasks derived from real world discourse and using materials drawn from authentic settings outperform peers in more traditional, grammar-focused programs (Tevdovska, 2018; Boers & Faez, 2023; and Gunarathne, 2025). These trends set the stage for exploring how task-based instruction and authentic resources can improve ESP instruction in aviation and other workplace environments.

Research demonstrates the effectiveness of integrating task-based learning and authentic materials in ESP instruction. Silva et al. (2024) found that Task-Based Language Teaching (TBLT) in ESP contexts promotes communicative competence by engaging learners in real-world tasks rather than isolated grammar exercises, developing linguistic skills directly applicable to professional environments. Mudinillah et al. (2024) confirmed through a systematic review that TBLT enhances language acquisition, particularly speaking and listening skills, while fostering learner autonomy and motivation, though successful implementation requires adequate teacher training and institutional support. The incorporation of authentic materials further strengthens ESP effectiveness. Курбанбаев & Хабибуллаева (2024) reported that materials designed for native speakers in real-world contexts improve language proficiency while increasing learner motivation and cultural awareness among intermediate ESP students. In addition, recent empirical findings from Indonesia suggest that technology-enhanced task-based instruction contributes significantly to ESP learners' self-directed learning, especially when complemented by authentic materials and consistent opportunities for speaking practice (Mulyadi et al., 2023). In their study, nursing students receiving technology-enhanced TBLT reported higher motivation, better planning skills for learning tasks, and stronger gains in English mastery compared to baseline measures. Such evidence underscores the potential of combining task-based approaches and authentic materials to bridge the gap between formal ESP instruction and real-world communicative demands.

1.3 The Communicative Approach in Aviation English

Recent studies in ESP for aviation and vocational settings show that learners benefit greatly when learning is structured around real communication tasks, rather than just grammar drills. For example, a study at an aviation vocational college in Surabaya found that using Communicative Language Teaching (CLT) significantly improved student performance in speaking and listening when students were involved in meaningful classroom interaction and tasks. In that study, students' attitudes and perceptions toward CLT were also shown to influence how much they improved. (Rochmawati et al., 2024). Additionally, research by Azhar & Masyi'ah (2023) on developing ESP materials for airport ground handling services in Indonesia emphasizes that materials need to be closely aligned with actual workplace demands like announcements, baggage handling, and customer-staff interactions. These findings provide strong support that CLT, with its focus on interaction, relevance, and student engagement, is highly promising for ground staff ESP training.

ESP for ground staff is best delivered within the framework of Communicative Language Teaching (CLT). CLT emphasizes interaction as both the method and the goal of learning a language (Littlewood, 2014). Unlike grammar-translation or purely structural approaches, CLT focuses on learners' ability to communicate effectively and appropriately in real-life situations.

For aviation personnel, this means developing communicative competence across four domains identified by Canale (1983):

1. Grammatical competence: accurate use of vocabulary and structures.
2. Sociolinguistic competence: appropriate use of language in different social contexts, such as addressing passengers politely.
3. Discourse competence: the ability to organize spoken or written language cohesively.
4. Strategic competence: using communication strategies to overcome breakdowns or misunderstandings.

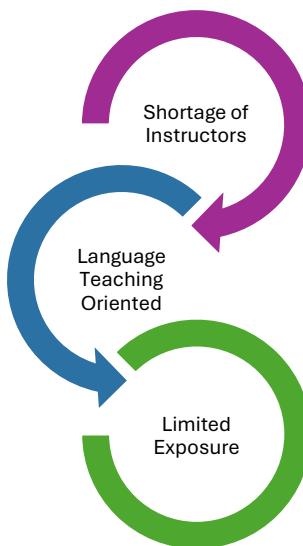
Ground staff, for example, may need to employ strategic competence when explaining a flight delay to frustrated passengers or when handling complaints diplomatically. A communicative approach ensures that learners are equipped not only with the linguistic tools but also with the pragmatic strategies to manage these situations effectively.

1.4 Aviation Safety and Language Proficiency

Language proficiency in aviation is not just about customer service but also critically linked to safety. The International Civil Aviation Organization (ICAO) has established Language Proficiency Requirements (LPRs) that define six core skill areas: pronunciation, structure, vocabulary, fluency, comprehension, and interaction (ICAO, 2010). Although these standards are generally set for pilots and air traffic controllers, they are also applicable to ground staff, since their communication with passengers can directly influence operational flow and safety in airports. For example, unclear boarding announcements may lead passengers to miss flights or go to wrong gates, while miscommunication during baggage handling can result in delays and inefficiencies. Aligning ESP instruction with ICAO's language standards helps ensure that ground staff meet international expectations of communicative competence.

Recent research supports how important proficiency and standards are, even beyond traditional groups like pilots. (Azhar & Masyi'ah, 2023) conducted a needs analysis with Indonesian ground handling students and found that many reports low English proficiency levels in practical tasks, especially when interacting with passengers or dealing with on-site issues. Their study notes also that there are often inadequate institutional support and resources for these ESP programs, causing gaps between required language performance and the training provided. Additionally, a study on aircraft mechanics in Europe points out that, although regulations often do not require formal English competence for maintenance personnel, stakeholders see the need for updated ESP curricula that simulate actual job tasks and include listening, speaking, and comprehension components (Korba et al., 2023).

Figure 1. Barriers in English for Aviation



Despite the clear need for ESP in aviation, many barriers remain. First, there is often a shortage of instructors who have both strong linguistic knowledge and familiarity with aviation operations (Rahmatillah, 2019; and (Azhar & Masyi'ah, 2023). Second, many educational contexts are still stuck in exam-oriented language teaching, which does not align well with communicative or task-based approaches (Dewi et al., 2025). Third, learners may have limited exposure to authentic English environments, reducing opportunities to practice beyond the classroom (Kusumaningputri, 2020).

To address these challenges, ESP programs need to prioritize professional development for instructors, integrate simulation-based activities, and employ technology-enhanced tools such as interactive quizzes, digital announcements, and virtual role plays. These innovations help reduce the gap between classroom learning and workplace realities. This study was motivated by recognizing that ground staff in Indonesian aviation require targeted ESP instruction to improve their communicative competence. While pilots and air traffic controllers have been studied quite extensively for Aviation English, ground staff, who are often the first point of contact with passengers are less studied. Therefore, this research seeks to conduct a needs

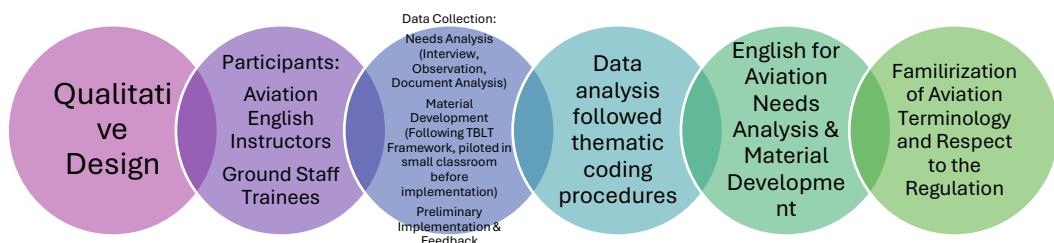
analysis of ground staff English requirements and to design materials based on task-based instruction, authenticity, and interaction.

By anchoring ESP instruction in both Communicative Language Teaching (CLT) and ICAO standards, the study contributes to both theory and practice. Theoretically, it expands ESP application into a less explored domain (ground handling), and practically, it offers a model of material development that aviation training institutions in Indonesia and beyond could adopt. In summary, English proficiency is indispensable for aviation personnel, especially ground staff, whose roles require clarity, politeness, and accuracy. ESP provides the framework for addressing these professional demands, while CLT and task-based instruction offer pedagogical strategies for effective learning. This study positions itself at the intersection of needs analysis, material development, and communicative pedagogy, aiming to bridge the gap between language learning and workplace performance in aviation.

2. METHODOLOGY

This study employed a qualitative research design to explore the needs of ground staff in aviation English communication and to develop ESP materials aligned with those needs. The methodology was structured into three stages: needs analysis, material development, and preliminary implementation with feedback collection. Each stage was informed by established frameworks in ESP (Hutchinson & Waters, 1987; Dudley-Evans et al., 1998; and Richards, 2006).

Figure 2. Research Flow



Qualitative design was chosen because the study sought to capture in-depth insights into the communicative requirements of ground staff rather than to measure predetermined variables. According to Cresswell (2013), qualitative approaches are particularly suitable for exploring contexts, practices, and experiences in educational and vocational settings. In this case, the qualitative design allowed the researchers to observe actual workplace interactions, interview instructors familiar with aviation communication, and analyze the linguistic demands of ground staff duties.

Participants included two main groups: Aviation English instructors from vocational training institutions and aviation academies in Indonesia. Their perspectives were valuable for identifying the gaps between classroom instruction and workplace demands and Ground staff trainees at a vocational aviation program. These participants were involved in the preliminary implementation of the developed ESP materials and provided feedback on their relevance, practicality, and

effectiveness. The selection of participants was purposive, as they represented stakeholders directly involved in the teaching, learning, and practice of aviation English.

In data collection, the needs analysis stage focused on identifying the communicative tasks required of ground staff and the linguistic challenges they faced in performing them. Data collection methods included: Interviews with instructors semi-structured interviews were conducted to gain insights into the linguistic challenges observed among learners, particularly in vocabulary mastery, pronunciation, and fluency. Questions focused on recurrent communication issues during role plays, simulations, and on-the-job practice; Observations of airport operations, observed real ground staff tasks at the airport, such as passenger check-in, baggage claim services, boarding gate management, and complaint resolution. Observations highlighted which communicative events required English and what linguistic difficulties emerged in practice; and Document analysis includes Training manuals, ICAO language guidelines, and English materials were analyzed to identify standards and expectations for aviation English proficiency. The triangulation of these sources increased the validity of the needs analysis (Flick, 2018)

In the material development phase was guided by three key principles: task-based instruction, authenticity, and interaction. Following the Task-Based Language Teaching (TBLT) framework by (Ellis, 2017), materials were designed to simulate authentic communicative tasks of ground staff. These included: Role plays and simulations for check-in dialogues, baggage claim interactions, and complaint handling; Announcement practice where learners practiced boarding and delay announcements with scripts modeled on real-life examples; Use of realia such as boarding passes, e-tickets, flight schedules, and complaint forms to ensure that learning materials mirrored actual workplace documents; and Technology-enhanced tools including videos of authentic interactions and interactive online quizzes to reinforce listening and speaking skills. The design process was iterative, with materials being drafted, reviewed by instructors, and piloted in small classroom sessions before full implementation.

The developed materials were implemented with a group of ground staff trainees. During this stage, classroom activities incorporated pair and group discussions, interactive simulations, and practice with realia. Learner engagement was observed and recorded, while instructors provided feedback on the practicality and effectiveness of the materials. Feedback collection included: observation notes on learner participation and performance; post-lesson reflections where learners shared their perceptions of the usefulness of each activity; and instructors evaluations focusing on whether the materials addressed the communicative gaps identified in the needs analysis.

Data analysis followed thematic coding procedures. Interview transcripts, observation notes, and feedback were coded to identify recurring themes such as vocabulary difficulties, pronunciation challenges, learner engagement, and authenticity of tasks. This inductive approach allowed the researchers to align material development with both learner needs and instructional realities (Miles et al., 2018).

The outcomes of this study highlight two critical aspects of aviation ESP training: the familiarization of aviation terminology and the respect for regulation. Through task-based role plays, simulations, and authentic materials, ground staff trainees became more confident in using aviation-specific vocabulary for both routine and emergency situations, thereby reducing the risk of miscommunication in operational

contexts. At the same time, by aligning instruction with ICAO language proficiency requirements and workplace standards, the program reinforced the idea that English proficiency is not only essential for customer service but also a regulatory necessity tied to safety and compliance. Together, these outcomes strengthen trainees' professional competence while fostering a safety-oriented mindset in aviation communication

3. RESULTS

The results of this qualitative study are presented according to the three research stages: needs analysis, material development (CLT implementation), and preliminary implementation feedback. Data collected from interviews, observations, and document analysis were thematically coded, and recurring patterns were grouped into key themes.

Table 2. Research Findings and Evidence Sources

Research Stage	Key Findings	Evidence Sources
Needs Analysis	<ol style="list-style-type: none"> 1. English required for routine & emergency tasks 2. Key areas: greetings, service explanation, baggage handling, complaint resolution, problem-solving 3. Learners lack fluency, confidence, and authentic interaction exposure 	<ol style="list-style-type: none"> 1. Interviews One instructor noted, <i>“Most trainees can greet passengers, but when a problem occurs like excess baggage, they cannot explain clearly in English.”</i> 2. Observations During check-in observations, staff reverted to Bahasa Indonesia when asked about baggage policies. 3. Documents Manual of the Implementation of ICAO language Proficiency Requirements stresses fluency and interaction, but vocational training manuals lacked modules on complaint handling and problem-solving.
Material Development (CLT)	<ol style="list-style-type: none"> 1. Activities: role plays, simulations, group discussions, announcement practice 2. Use of realia (boarding passes, tickets, schedules) 3. Technology-enhanced tools (videos, quizzes) increased engagement 	<ol style="list-style-type: none"> 1. Interviews A trainer remarked, <i>“When we use real boarding passes and flight schedules, students take the activity more seriously, it feels like the real job.”</i> 2. Observations Learners actively participated in group simulations and showed enthusiasm when practicing announcements. 3. Documents

Preliminary Implementation	1. Students: higher motivation and workplace readiness	Curriculum reviews indicated limited authentic material; CLT-based modules addressed this gap.
	2. Teachers: better participation and improved skills (fluency, vocabulary, pronunciation) 3. Materials seen as relevant and practical	<ol style="list-style-type: none">1. Interviews A student shared, "<i>I feel more confident now. After practicing in class, I believe I can handle passengers in English at the airport.</i>"2. Observations Teachers recorded improved pronunciation during announcement practices and noted higher learner engagement.3. Documents Instructor evaluation forms confirmed that the new ESP materials were relevant, practical, and industry-aligned.

3.1 Needs Analysis Outcomes

The needs analysis revealed that ground staff trainees require English proficiency not only for routine communication but also for emergency or unexpected situations. Communicative tasks such as greetings, explaining services, baggage handling, complaint resolution, and problem-solving emerged as the most essential areas of communication. While learners were generally able to perform basic greetings in English, they struggled with more complex interactions that demanded both linguistic accuracy and pragmatic competence. During interviews, instructors consistently highlighted gaps in trainees' abilities to handle workplace scenarios in English. One instructor noted:

"Most trainees can greet passengers, but when a problem occurs like excess baggage, they cannot explain clearly in English. They often switch back to Bahasa Indonesia, which causes confusion."

Observations reinforced these concerns. For example, at check-in counters, trainees could complete simple exchanges (e.g., asking for tickets or passports) but faced difficulties when passengers raised questions about baggage allowances or asked about gate changes. These difficulties were not limited to vocabulary gaps but also extended to fluency and confidence.

Document analysis further supported these findings. While Manual on the Implementation of ICAO Language proficiency Requirements emphasizes six critical language areas: pronunciation, structure, vocabulary, fluency, comprehension, and interaction. Training manuals for ground staff focused mostly on procedural tasks and did not provide structured communicative language practice. For example, complaint handling and problem-solving scenarios were almost absent from the curriculum, despite their central role in passenger interaction. The needs analysis showed a clear mismatch between the communicative demands of the workplace and the language training currently available to ground staff trainees.

3.2 Material Development (CLT Implementation)

In response to these findings, ESP materials were developed using the principles of CLT and TBLT. The emphasis was on creating learning tasks that

simulated real job situations while providing opportunities for interaction, negotiation of meaning, and practice with authentic language input. The materials included role plays, simulations, pair and group discussions, and announcement practices. These activities allowed learners to experience scenarios such as processing passengers at check-in, announcing delays, assisting with baggage issues, and handling complaints. The authenticity of the materials was enhanced through the use of realia, including actual boarding passes, e-tickets, flight schedules, and complaint forms. Additionally, technology enhanced tools such as videos of real interactions and interactive quizzes were integrated to strengthen listening and speaking skills.

Interviews with instructors revealed strong support for this approach. One trainer explained:

"When we use real boarding passes and flight schedules, students take the activity more seriously, it feels like the real job. They are more motivated because they can imagine themselves at the airport."

Observations confirmed that learners responded positively to CLT-based activities. Compared to grammar-focused lessons, trainees were visibly more engaged during role plays and group discussions. They interacted actively, negotiated meaning, and supported each other in completing communicative tasks.

Document analysis also highlighted the added value of the new materials. Existing curricula provided only limited exposure to authentic materials and communicative tasks, while the CLT-based modules filled this gap by aligning language practice with ICAO communicative competence standards.

3.3 Preliminary Implementation Feedback

The preliminary implementation of the ESP materials generated positive feedback from both students and instructors. Students consistently reported higher motivation and greater readiness for workplace communication. For many trainees, the simulations and role play provided their first opportunity to practice handling difficult situations in English, such as explaining delays or resolving passenger complaints. One trainee reflected:

"I feel more confident now. After practicing in class, I believe I can handle passengers in English at the airport."

Teachers also observed improvements in participation and communicative skills. During announcement drills, learners demonstrated progress in pronunciation and fluency, even though some challenges remained. Vocabulary use also improved as learners became familiar with aviation specific terms such as *excess baggage*, *boarding gate*, and *claim form*. An instructor commented:

"Students are more active and less shy in class. They used to be quiet, but now they volunteer to do role plays and even try announcements without being asked."

Observational data showed that the interactive, task-based approach significantly increased learner participation compared to traditional methods. Students were more willing to take risks in speaking, and classroom discussions reflected greater collaboration and peer support.

Instructor evaluation forms and post-lesson reflections confirmed the practical relevance of the materials. Teachers highlighted that the new modules addressed key communicative gaps identified during the needs analysis. Learners also expressed appreciation for the authentic nature of the tasks, noting that the training prepared them for real-life challenges in the workplace.

4. DISCUSSION

The purpose of this study was to explore the English language needs of aviation ground staff and to design ESP materials that respond directly to those needs. The motivation came from a persistent gap between institutional training programs, which often emphasize general English or exam-oriented skills, and the workplace requirements of ground staff, who must interact with passengers in real time under both routine and emergency conditions. The findings not only highlight the urgent communicative needs in this sector but also demonstrate how a communicative, task-based approach supported by authentic materials can address those needs effectively.

4.1. Needs Analysis and Workplace Alignment

Effective communication in English has become an essential skill for aviation personnel, especially for ground staff who serve as the first point of contact for passengers. Their ability to interact clearly and professionally influences not only customer satisfaction but also the smooth flow of airport operations. Understanding the specific language demands of these roles is therefore a crucial step in designing ESP programs that are relevant and practical for aviation contexts.

The needs analysis showed that English is crucial for routine interactions (such as greetings, service explanation, and baggage handling) as well as emergency or problem-solving situations (such as managing complaints or explaining delays). These findings are consistent with previous research that emphasizes the workplace-specific nature of ESP in aviation. For instance, Azhar and Masyi'ah (2023) found that ground handling students required English skills primarily for passenger assistance, complaint resolution, and service explanation, yet such areas were underrepresented in their existing materials.

The present study extends these findings by identifying not only the communicative tasks required but also the psychological barriers faced by trainees, particularly low confidence, lack of fluency, and minimal exposure to authentic interaction. These insights are supported by Siwa (2023), who reported that ground staff in Ambon struggled with speaking and listening due to the absence of formal English training and overreliance on self-learning. By confirming these issues in a different training context, the study provides further evidence that aviation English programs must move beyond abstract grammar instruction to focus on practical communicative competence.

4.2. Material Development through CLT and Authenticity

After identifying the language gaps faced by ground staff, the next step was to develop instructional materials that could effectively bridge those gaps. The goal was to create resources that not only addressed linguistic competence but also mirrored the realities of airport communication. To achieve this, the material development process was guided by well-established language teaching approaches that emphasize meaningful interaction and practical application in professional contexts.

In response to the identified needs, the materials were designed using CLT principles, supported by TBLT. These pedagogical frameworks emphasize interaction, authenticity, and learner participation, which are essential for preparing trainees for real workplace communication. Activities such as role plays,

simulations, and announcement practices provided opportunities for learners to practice realistic scenarios, while the use of realia (e.g., boarding passes, flight schedules, complaint forms) created a strong sense of authenticity.

This design choice resonates with research by Nugraha et al. (2023), who showed that aviation English lessons informed by authentic corpora significantly improved learners' vocabulary mastery and contextual awareness. Similarly, Octavianie & Oktavia, (2021) found that aircraft maintenance students benefited from CLT-based ESP instruction combined with hybrid learning, which increased their engagement and ability to apply English in technical contexts. These parallels indicate that authenticity and interactivity are not optional features but core requirements for ESP materials in aviation.

4.3. Learner Motivation, Confidence and Readiness

Evaluating how learners responded to the newly developed materials was an important step in understanding their effectiveness. Beyond language accuracy, the study aimed to see whether the activities could influence learners' attitudes, engagement, and overall readiness for workplace communication. The feedback gathered from both students and instructors provides valuable insights into how communicative, task-based approaches shape learning outcomes in aviation training.

One of the most significant outcomes of the study was the noticeable increase in learner motivation and confidence. Students reported feeling more prepared to handle real passenger interactions after engaging in communicative, task-based lessons. For example, one trainee reflected that practicing announcements and complaint handling in class made them "more confident to speak English at the airport." Teachers also noted improvements in fluency, pronunciation, and vocabulary use, as well as higher participation during classroom tasks.

These findings echo the work of Rochmawati et al. (2023), who found that motivation, anxiety, and self-efficacy were key predictors of aviation cadets' performance in English learning. The results of the present study suggest that communicative, authentic, and interactive methods can lower anxiety and raise self-efficacy, thus creating a more positive learning environment for ground staff trainees.

4.4. Practical and Regulatory Implications

While the immediate benefits of the ESP program were observed at the learner level, the broader impact of the study becomes evident when considering its implications for training institutions and the aviation industry as a whole. Effective communication in English is not only about improving classroom outcomes but also about ensuring that training programs meet professional and regulatory expectations. This wider perspective highlights the strategic importance of aligning language instruction with industry standards.

Beyond individual learning gains, the findings have institutional and regulatory implications. By aligning the ESP materials with the ICAO Language Proficiency Requirements, the program emphasized that English proficiency is not only a matter of customer service but also of safety and compliance. Miscommunication in announcements, baggage handling, or complaint resolution can disrupt operations and even compromise passenger safety. Integrating regulatory awareness into

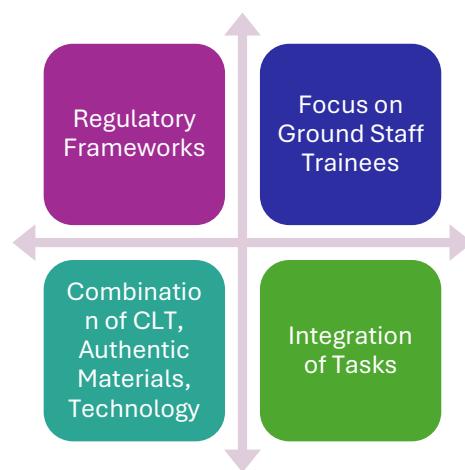
language instruction ensures that trainees see English as part of their professional responsibility, not just as an academic requirement.

The combination of needs analysis, CLT, and regulatory alignment offers a model for other aviation training institutions in Indonesia and beyond. It demonstrates that ESP for ground staff can and should be grounded in both communicative pedagogy and international standards, ensuring relevance to both the workplace and the global aviation industry.

Highlighting the unique contributions of this study is essential for understanding its value within the broader field of ESP and aviation training. Beyond addressing immediate classroom needs, the study offers insights that extend to curriculum design, regulatory compliance, and international best practices. These contributions demonstrate how carefully designed ESP programs can bridge the gap between academic instruction and real-world professional demands.

The contribution of this study lies in several areas:

Figure 3. Research Contribution



a. Focus on ground staff trainees

Whereas much previous research has targeted pilots, air traffic controllers, or maintenance personnel, this study highlights the communicative needs of ground staff, an underexplored but critical group in aviation.

b. Integration of emergency tasks

By including both routine and emergency communication, the materials provide a more comprehensive preparation for real operational contexts.

c. Combination of CLT, authentic materials, and tech-enhanced tools

While each of these has been explored separately, their integration into a cohesive ESP program for ground staff in Indonesia offers practical innovation.

d. Link to regulatory frameworks

Aligning ESP training with ICAO standards strengthens both the academic and practical contributions of the study, ensuring that communicative competence supports safety and compliance.

These contributions show that the study not only addresses a local training gap but also provides a replicable model for vocational ESP in aviation worldwide.

5. Conclusion

This study investigated the English language needs of aviation ground staff and developed ESP materials designed to address those needs. The findings highlight that ground staff require English proficiency not only for routine interactions, such as greetings, service explanations, baggage handling, and complaint resolution but also for emergency and problem-solving contexts. These needs demonstrate that English proficiency is central to both service quality and operational safety, making targeted training essential in aviation.

In practical terms, the study shows that vocational aviation training institutions should integrate communicative, task-based ESP materials that reflect real workplace scenarios. Teacher training must also ensure that instructors possess both strong linguistic skills and a working understanding of aviation operations. Furthermore, curricula should be aligned with ICAO standards to reinforce that English proficiency is not just an academic requirement but a regulatory and safety critical expectation. The use of authentic materials and multimedia tools proved effective in increasing learner motivation and contextual relevance, bridging the gap between classroom practice and workplace performance.

The research contributes novelty by focusing on an underexplored group ground staff trainees while integrating both routine and emergency communication into a cohesive program. By combining CLT and TBLT principles with authentic workplace documents and technology-enhanced resources, the study offers a replicable model for aviation ESP training. Importantly, the outcomes go beyond linguistic improvement to include higher levels of learner motivation, participation, and confidence. Another key achievement is the familiarization of aviation terminology and the development of respect for aviation regulations, which helps learners view English not only as a communication tool but also as part of their professional responsibility tied to compliance and safety.

Despite these promising outcomes, the study is limited by its small sample size and short implementation period. Future research should adopt larger, longitudinal designs and incorporate quantitative measures such as pre- and post-tests to assess gains in vocabulary, pronunciation, and fluency. Blended delivery modes combining face-to-face and online instruction also hold potential for enhancing accessibility and learner engagement. This study confirms that ESP for aviation ground staff is most effective when it is needs-based, communicative, authentic, and aligned with regulatory frameworks. Such an approach not only develops language skills but also strengthens confidence, workplace readiness, and safety-oriented professional attitudes. By integrating aviation terminology, regulatory awareness, and communicative competence, the research offers both theoretical contribution and practical guidance for advancing ESP in aviation contexts in Indonesia and beyond.

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