

English Language Learning in Encouraging the Aviation Security: Case Study at Vocational Training Program

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ABSTRACT

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Indonesian Language is playing a crucial role as a unifying tool and the official language for government communications as stated at Article 36 of the 1945 Constitution of Indonesia. However, the International Civil Aviation Organization (ICAO) designates six official languages: French, English, Spanish, Russian, Arabic, and Chinese, to facilitate communication among its 193 member states. This study employs a qualitative design, utilizing document analysis and interviews to explore the potential strategies for improving English language proficiency in the aviation sector. The results indicate that to enhance English proficiency among aviation personnel in Indonesia, tailored ESP Programs, simulation-based training, regular assessments, and blended learning approaches should be implemented. Collaborations with international organizations and support from the government will further ensure alignment with ICAO standards, fostering effective communication in critical situations. The discussion highlights the importance of English proficiency at Indonesian airports for providing directions and services, in compliance with Indonesia's ratification of ICAO's six languages. This study recommends some potential strategies to strengthening English language education in Indonesia's aviation sector to support effective international communication and enhance service quality at airports, aligning with ICAO standards.

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Introduction

Language is an absolute and crucial necessity in a nation, including in Indonesia as stated in Article 36 of the 1945 Constitution which declares that the national language is Indonesian. This statement asserts that language plays an important and strategic role for the nation used in both the state administration and official communications. Similarly, in the international civil aviation

organization known as the International Civil Aviation Organization (ICAO), which has established six official languages: French, English, Spanish, Russian, Arabic, and Chinese Widiyanto (2023). This designation is one of the efforts to enable the 193 member states of ICAO to communicate officially using one of the designated languages agreed upon by all ICAO member states.

As a member state, Indonesia is obliged to comply with ICAO's Standards and Recommended Practices (SARPs) by preparing human resources, which are a key component of the Universal Security Audit Programme (USAP) conducted by ICAO to assess the effective implementation of aviation security measures. The requirement for language proficiency originates from the Chicago Convention, specifically Article 33, which mandates that flight crews and ground staff demonstrate their language proficiency. Additionally, Farris (2016) states ICAO's standards and recommended practices related to Language Proficiency Requirements (LPRs) are detailed in Annex 1 on Personnel Licensing; Annex 6 on Operation of Aircraft, Parts I and III; Annex 10 on Aeronautical Telecommunications (Volume II); and Annex 11 on Air Traffic Services.

In aviation, effective communication in English has long been recognized as essential for safety, efficiency, and operational consistency. As a profession, flight crews and ground staff are constantly required to interact not only with passengers but also with various stakeholders, including air traffic control (ATC), airport operations, and other personnel, where miscommunication can lead to safety risks. Consequently, being proficient in Aviation English is a fundamental skill, one regulated and monitored through international standards set by the ICAO.

The methodology and effectiveness of teaching Aviation English have been a topic of growing interest, particularly in light of safety incidents linked to communication failures. Santos et al (2018) conducted an analysis of the Aviation English Course methodology at a military school, highlighting a significant gap in student awareness of critical resources such as the ICAO Language Proficiency Requirements Guide and the ICAO Standard Phrase Manual. Their findings suggest that many Aviation English programs, including the one at *École Supérieure des Métiers de l'Aviation (ESMA)*, need substantial improvements in both curriculum design and instructional delivery.

Hidayat (2018) using a mixed-methods design to evaluate an Airline Staff Program, concluded that students increasingly recognize the need for English proficiency as a core skill in aviation. His study identified speaking, listening, reading, and writing as key areas for improvement, underscoring the importance of a communicative syllabus that integrates these language skills into practical, job-related scenarios.

Aviation security personnel, in particular, play a critical role in maintaining safety standards, and their ability to use English effectively in high-pressure situations is paramount. Miscommunications in this domain can have severe consequences, ranging from minor delays to catastrophic safety failures. According to Estival et al (2016) linguistic barriers have been directly linked to operational errors, especially in non-native English-speaking countries.

The importance of strengthening English language learning in Indonesia's aviation sector cannot be overstated. With Indonesia becoming an increasingly significant hub for global travel and tourism, the demand for skilled personnel who are proficient in English continues to rise Masita et al (2022). However, the aviation industry in Indonesia faces a unique set of challenges due to linguistic diversity and varying levels of English proficiency among its workforce (Rashid and Teslenko (2020). Strengthening Aviation English training can ensure that all personnel, particularly in aviation security, can operate in alignment with international safety standards.

To meet these demands, English language learning programs for aviation security need to focus on both general and specific communication skills Purwanti et al (2022). English for Specific Purposes (ESP) methodologies have proven effective in other sectors by tailoring language instruction to the specific contexts in which students will use the language. Within the aviation security sector, this approach could involve simulating real-life scenarios where communication failures could lead to breaches in security protocols.

The role of English language proficiency in enhancing aviation security has been emphasized in numerous studies. Kim (2024) found that aviation personnel in non-native English-speaking countries often struggle with radiotelephonic communication, leading to misunderstandings with air traffic controllers. This can be particularly problematic in high-pressure situations, such as when security protocols are being enforced, as even minor communication errors can compromise the safety of an entire airport or flight operation.

Further research by Derrickson and Tripathi (2022) suggests that training aviation security personnel in Aviation English can significantly reduce the number of security incidents. By improving the clarity and precision of communications, staff are better equipped to identify and respond to potential threats. Moreover, clear communication is vital for coordination between different stakeholders, such as security personnel, flight crews, and ground staff, all of whom play a part in maintaining airport and flight security.

Indonesia's unique geographical makeup, cultural diversity, and rapidly expanding aviation industry pose specific challenges to ensuring effective communication. Indonesia comprises over

17,000 islands, and the aviation industry plays a crucial role in connecting these regions. As such, it is imperative that all aviation professionals, especially those involved in security, are proficient in English. However, the inconsistency in English language training across Indonesia's aviation schools, noting that many programs lack a standardized curriculum aligned with ICAO guidelines.

Given these challenges, there is a growing need for Aviation English programs in Indonesia that not only meet ICAO standards but also reflect the specific linguistic needs of Indonesian aviation professionals. For instance, incorporating elements of Bahasa Indonesia in early stages of training may help bridge the gap for learners with limited English proficiency. Incorporating these language training programs into existing aviation security training courses would not only improve operational efficiency but also enhance Indonesia's reputation as a safe and reliable aviation hub. This, in turn, would contribute to the broader goal of strengthening aviation security across the region.

Method

Search strategy

This study employs a qualitative research design to investigate the current landscape of English language instruction within Indonesia's aviation industry, particularly as it pertains to aviation security. This design is socially embedded phenomena, such as the influence of language proficiency on aviation safety. By utilizing document analysis and interviews as key data collection techniques, this study aims to generate a thorough understanding of the role that English proficiency plays in maintaining security within aviation contexts in Indonesia to explore strategies that could enhance English proficiency, especially in ways that strengthen aviation security by using document analysis and semi-structured interviews in Figure 1.

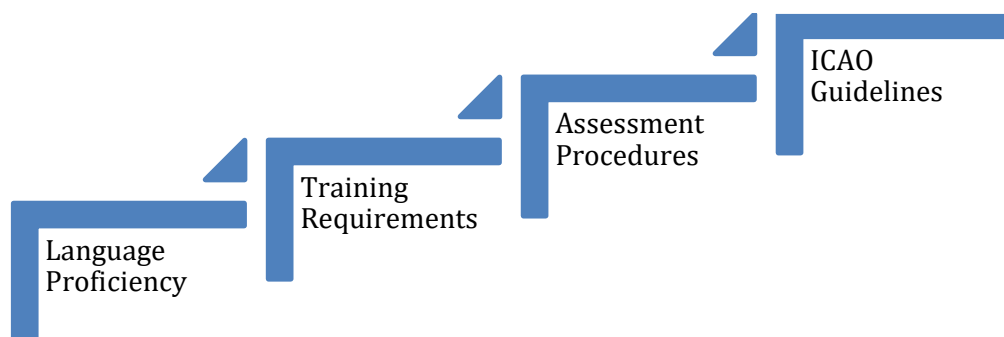


Fig 1: Document Analysis

Document analysis used to examine a range of official documents related to English language training in aviation, ICAO guidelines, and Indonesia aviation policies. The types of documents to be analyzed: ICAO Language Proficiency Requirements (2004 and 2010 editions); ICAO Annex 17; Manual on the Implementation of ICAO LPRs; ICAO Document 8973 and Indonesian Aviation Security Training Manuals. The documents analyzed thematically, focusing on key aspects such as the language proficiency requirements, training requirements, assessment procedures, and alignment with ICAO guidelines. The analysis also explored the potential strategies for improving English language proficiency in the aviation sector, particularly for enhancing aviation security. Semi-Structured Interview in Figure 2.



Fig 2: Semi-Structured Interview

Semi-structured interviews were conducted with aviation security personnel, English instructors, and training program administrators. These interviews provide first-hand insights into the experiences and perceptions Yin (2018) of those directly involved in Aviation English training and its application in real-world security contexts by using purposive sampling to select participants who are knowledgeable about aviation security and English language training including aviation security officers, English Instructors, and training administrators. This semi-structured interview allowing flexibility exploring topics in depth and focus on participants' experiences with Aviation English training programs; the perceived effectiveness of this program; the perceived effectiveness of these programs in relation to aviation security; challenges faced by aviation security personnel in using English; and recommendation for improving English language training in the aviation sector.

The data from both document analysis and interviews analyzed thematically, to identifying, analyzing, and reporting patterns within the data Miles et al (2018). The data triangulated to identify common themes and discrepancies between the official documents and the experiences of the personnel to allow deeper understanding of how English language learning impacts aviation security in Indonesia and provide valuable insights into the challenges and opportunities in aligning aviation security training with international standards.

Result and Discussion

Documents

Figure 3 explain the ICAO Language Proficiency Rating Scale (Attachment A), which describes six stages of language ability from Pre-elementary (Level 1) to Expert (Level 6) framework evaluates communicative competence across five dimensions: pronunciation, grammar and structure, vocabulary, fluency, and both comprehension and interaction skills. According to ICAO standards, Level 4 (Operational) is the lowest acceptable threshold for safe and effective radiotelephony communication.

ANNEX 1

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**ATTACHMENT A
ICAO LANGUAGE PROFICIENCY RATING SCALE**

1.1 Expert, extended and operational levels

LEVEL	PRONUNCIATION <i>Assumes a dialect and/or accent intelligible to the aeronautical community.</i>	STRUCTURE <i>Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task.</i>	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
Expert 6	Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.	Both basic and complex grammatical structures and sentence patterns are consistently well controlled.	Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.	Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues and responds to them appropriately.
Extended 5	Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.	Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work-related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.	Comprehension is accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively.
Operational 4	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work-related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	Comprehension is mostly accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.	Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.
<i>Levels 1, 2 and 3 are on subsequent page</i>						

1.2 Pre-operational, elementary and pre-elementary levels

LEVEL	PRONUNCIATION <i>Assumes a dialect and/or accent intelligible to the aeronautical community.</i>	STRUCTURE <i>Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task.</i>	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
<i>Levels 4, 5 and 6 are on preceding page.</i>						
Pre-operational 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.
Elementary 2	Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.	Shows only limited control of a few simple memorized grammatical structures and sentence patterns.	Limited vocabulary range consisting only of isolated words and memorized phrases.	Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.
Pre-elementary 1	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.

Note.— The Operational Level (Level 4) is the minimum required proficiency level for radiotelephony communication. Levels 1 through 3 describe Pre-elementary, Elementary, and Preoperational levels of language proficiency, respectively, all of which describe a level of proficiency below the ICAO language proficiency requirement. Levels 5 and 6 describe Extended and Expert levels, at levels of proficiency more advanced than the minimum required Standard. As a whole, the scale will serve as benchmarks for training and testing, and in assisting candidates to attain the ICAO Operational Level (Level 4).

Fig 3: ICAO Language Proficiency Rating Scale

Analysis of the participants' performance revealed that most were situated at Levels 3 (Pre-operational) and 4 (Operational). The most persistent difficulties were observed in sustaining fluency and managing interactions. These findings suggest a gap between current proficiency and the higher benchmarks of Levels 5 (Extended) and 6 (Expert), which are regarded as desirable for achieving both aviation safety and intercultural communicative effectiveness. Table 1 explain manual on the implementation of ICAO language proficiency requirements.

Table 1. Manual on the Implementation of ICAO Language Proficiency Requirements

<i>Aspect</i>	<i>Manual on the Implementation of ICAO Language Proficiency Requirements (Doc 9835)</i>
Purpose	To give guidance on how to apply and assess the language requirements set by ICAO.
Main Focus	Explains how to implement, assess, and train aviation personnel to meet ICAO standards.
Target Users	Language assessors, training providers, regulatory bodies.
Proficiency Levels	Gives detailed explanation and examples of what each level looks like in practice.
Minimum Required Level	Provides guidance on how to reach Level 4, including sample test formats and training suggestions.
Skill Areas Assessed	Offers descriptors and examples to help evaluators understand and apply these skill areas.
Testing Requirements	Includes criteria for selecting or creating valid tests, and examples of good practices.
Re-evaluation	Recommends setting up a systematic re-evaluation process to maintain proficiency levels.
Emphasis	Practical steps to help organizations train and assess language skills effectively.
Compliance Deadline	Supports the step-by-step development of a national program to comply with ICAO standards.

The key points from the Manual on the Implementation of ICAO Language Proficiency Requirements. The document serves as a practical guide for aviation stakeholders, offering detailed instructions on how to apply, assess, and maintain ICAO's language standards. It highlights the importance of Level 4 as the minimum acceptable standard and provides concrete examples of how proficiency levels are demonstrated in practice. In addition, it outlines the roles of different users, such as assessors, training providers, and regulators in ensuring consistent application of the standards. The manual also emphasizes the need for valid testing, regular re-evaluation, and structured training programs, which together support both compliance with ICAO policies and the development of more effective communication skills among aviation personnel.

The provisions of ICAO Annex 17 on Aviation Security, which emphasizes the importance of

language competence as part of global aviation security. The Annex requires that security staff, airline personnel, and law enforcement be able to communicate effectively in English, particularly in international and emergency contexts. Personnel must demonstrate the ability to report threats, coordinate with foreign authorities, and respond clearly during crisis situations such as bomb threats or suspicious activities.

Table 2 explain the document also stresses the role of English in cross-border cooperation, incident investigation, and intelligence sharing. By mandating training programs that include communication skills and by promoting standardized reporting, Annex 17 reinforces that effective and unambiguous use of English is central to preventing unlawful interference and ensuring coordinated international security operations.

Table 2. ICAO Annex 17 on Aviation Security

<i>Aspect</i>	<i>Explanation</i>
Annex Focus	Annex 17 provides standards and recommended practices (SARPs) for protecting civil aviation from unlawful interference (e.g., hijacking, sabotage, terrorism)
Use of Language	Clear and effective communication is required between aviation security personnel, airline staff, and law enforcement, especially in international environments
ICAO Guidance Materials	ICAO encourages States to refer to Doc 8973 (Aviation Security Manual), which supports Annex 17 and includes guidance on language use in security communication
Goal of Annex 17	To enhance the global consistency and safety of civil aviation through effective procedures, personnel competence, and international cooperation, including clear communication

The document also highlights the crucial role of English as the primary medium for international aviation security communication. In the context of global aviation operations, security threats often involve multiple countries, agencies, and stakeholders that must coordinate rapidly and accurately. Therefore, the use of standardized English terminology enables aviation personnel, airline operators, airport authorities, and law enforcement agencies to exchange information efficiently without misunderstanding. This is particularly important during emergency situations such as hijacking threats, bomb alerts, cyberattacks, or unlawful interference, where delayed or unclear communication may endanger passengers, crew members, and airport infrastructure. Through the implementation of standardized communication procedures, Annex 17 seeks to minimize ambiguity

and strengthen interoperability among international aviation security organizations. ICAO document 8973 explain in Table 3.

Table 3. ICAO Document 8973

Aspect	Explanation
Document Title	ICAO Doc 8973 – <i>Aviation Security Manual</i>
Purpose of the Manual	Provides practical guidance to help countries and airports implement effective aviation security measures
Link to Language Proficiency	Stresses the need for clear and effective communication, especially in English, during routine and emergency operations
Targeted Personnel	<ul style="list-style-type: none"> - Aviation security officers (AvSec) - Screening staff - Supervisors - Emergency response teams - Airport and airline personnel involved in security
Importance of English Skills	English is necessary to: <ul style="list-style-type: none"> - Communicate with foreign passengers - Report threats clearly - Coordinate with international agencies
Training Recommendations	Training programs should include: <ul style="list-style-type: none"> - Basic and intermediate English - Security-specific vocabulary - Role plays and practical scenarios in English
Operational Use of English	Personnel should use English to: <ul style="list-style-type: none"> - Ask screening questions - Provide safety instructions - Handle international passengers - Write reports or logs
Use in Emergency Situations	Personnel must be prepared to use plain and direct English to respond to threats or communicate during emergencies
Standard Communication Practices	Encourages using standard terms and phrases across all security operations to prevent misunderstandings
Coordination with Annex 17	Supports ICAO Annex 17 by providing step-by-step examples of how English can be integrated into security operations
Global Application	Emphasizes English because it is the international working language of aviation, ensuring consistent security worldwide

The content of ICAO Document 8973 on Aviation Security Manual, which provides countries and airports with practical guidance for implementing effective aviation security procedures. The manual underlines the importance of English proficiency in both routine and emergency operations, particularly for personnel such as aviation security officers, screening staff, supervisors, and emergency response teams. It highlights that English is essential for tasks such as communicating with foreign passengers, reporting threats, and coordinating with international agencies. Training

is therefore expected to include not only basic and intermediate English skills but also security-specific vocabulary and practical exercises. The document also stresses the operational use of English in screening, safety instructions, and report writing, while requiring clear and direct English in emergency responses. By supporting ICAO Annex 17 and promoting standardized communication practices, Document 8973 reinforces English as the global working language of aviation security. Table 4 explain Indonesian aviator security manual.

Table 4. Indonesian Aviation Security Manual

<i>Aspect</i>	<i>Explanation</i>
Purpose	To ensure that aviation security (AvSec) personnel can communicate clearly in English during their duties, especially in international contexts
Who Must Be Proficient	<ul style="list-style-type: none"> - Aviation Security Officers at international airports - Supervisors and security screeners - Personnel communicating with foreign passengers or authorities
Level of English Required	A basic to intermediate level of English, with the ability to: <ul style="list-style-type: none"> - Understand and give safety instructions - Handle passenger inquiries - Report incidents in English
Use in Daily Operations	English is used for: <ul style="list-style-type: none"> - Communication with non-Indonesian passengers - Emergency response coordination - Reporting security threats and actions taken
Training Requirement	AvSec personnel must receive English communication training as part of their basic and recurrent training programs
Training Content	<ul style="list-style-type: none"> - Common airport vocabulary - Security-related terms - Role plays and simulations in English - Standard questioning techniques for passengers
Communication in Emergencies	Personnel must be able to use clear English to report and respond to emergency or threat situations involving foreign nationals
Compliance with ICAO Standards	The manual aligns with ICAO Annex 17 and ICAO Doc 8973 guidelines on aviation security and international communication standards
Assessment of Skills	English communication skills are to be assessed during training and drills, and documented in personnel records
Objective	To support national and international aviation security through effective communication and professional interaction

The Indonesian Aviation Security Manual highlights the importance of English proficiency as a critical tool for aviation security personnel, not only to fulfill international obligations but also to ensure smooth daily operations in airports that serve global travelers. By requiring consistent training, clear communication during emergencies, and alignment with ICAO standards, the manual ensures that AvSec officers are well-prepared to handle both routine and unexpected situations.

Ultimately, this framework strengthens aviation safety by reducing the risk of miscommunication, improving coordination with international stakeholders, and enhancing the overall passenger experience.

Interviews

a. Aviation Security Personnel

“Most of our training materials are generic, which makes it hard to connect the language to what we do. Having specific lessons on aviation terms and security protocols would make our training more relevant”

“I believe simulation-based training is essential. It would allow us to practice our English in situations that are close to real life, such as dealing with security breaches or passenger interactions. It’s one thing to learn a language in a classroom, but applying it in a real environment is where we really need the practice. I hope the simulation-based training will be given at least for six months”

“Study Groups help each other out with language challenges. More organized study groups would definitely enhance our learning experience and provide a platform for us to practice together”

“English Regular assessments help keep us accountable; it shows us our progress and highlight areas that need improvement. I think having clear benchmarks based on ICAO standards would really guide our learning”

b. English Instructors

“We make sure our materials are relatable and consider local communication styles. Training in culturally responsive teaching methods helps us connect better with our students, making the learning process more engaging”

c. Training Program Administrator

“To ensure that we meet international standards, which is especially important for personnel who interact with international travellers, our curriculum is designed to cover all ICAO areas, which helps in building comprehensive language skills. Government and industry support are crucial. We need funding for resources and training development. Incentives like certification programs or bonuses for achieving language proficiency can motivate personnel to enhance their skills continuously”

The findings indicate a consistent gap between ICAO’s prescribed standards and the realities of English language training in Indonesia’s aviation sector. Interview data reveal that many aviation

security personnel view their current training materials as “too general” (Aviation Security Personnel, Interview 3) and not directly applicable to daily operations. This concern echoes the emphasis in ICAO Annex 17 and the Aviation Security Manual (Doc 8973), which highlight the operational relevance of communication, particularly in security-related contexts. To address this, tailored English for Specific Purposes (ESP) programs focusing on aviation-specific vocabulary, security protocols, and scenario-driven tasks are essential.

Participants also stressed the importance of longer simulation-based training, with several recommending “six-month practice in real security scenarios” (English Instructor, Interview 5) to prepare for operational demands. This need for experiential practice is supported by ICAO Doc 8973, which advises the use of role-play and scenario-based exercises as effective methods for language development in aviation security. In addition, aviation security personnel emphasized the value of peer study groups in overcoming language barriers, describing them as “a safe way to practice outside class” (Aviation Security Personnel, Interview 7). While this practice is not explicitly mandated in ICAO documents, it aligns with the broader principle of continuous professional development encouraged in international aviation training policies.

Another major theme was the demand for regular language assessments with transparent benchmarks. Aviation security personnel specifically requested “clear standards to measure our English level” (Aviation Security Personnel, Interview 2), reflecting the requirement in ICAO Annex 1 for periodic re-assessment of proficiency levels. At the same time, training administrators noted practical challenges such as “limited resources and distance between training centers” (Training Administrator, Interview 1), which they argued could be mitigated by blended learning models. This approach, combining online and face-to-face instruction, is already recommended in national aviation training manuals, reinforcing the feasibility of such a strategy. Documents analysis also revealed the importance of aligning curricula with ICAO’s six language proficiency skill areas: pronunciation, structure, vocabulary, fluency, comprehension, and interaction. Interviews with training administrators confirmed that while curriculum design aims to cover these areas, gaps remain in practical implementation. One administrator noted, “we follow ICAO on paper, but not fully in practice” (Training Administrator, Interview 4). To bridge this, both documents and interview data highlight the importance of integrating ICAO guidelines directly into training modules. Administrators further stressed the role of partnerships with international aviation organizations, noting that “without external support, resources are limited” (Training Administrator, Interview 6). This aligns with ICAO’s encouragement of global cooperation in

training.

English instructors additionally underscored the importance of cultural sensitivity in language training. They explained that learners in Indonesia's multilingual context often "learn better when examples reflect local culture" (English Instructor, Interview 3). Although such an approach is not formally outlined in ICAO guidelines, it is vital for ensuring training effectiveness. Aviation security personnel, meanwhile, consistently highlighted the need for workplace-specific communication skills, such as "how to question passengers effectively" (Aviation Security Personnel, Interview 8) and "report threats clearly" (Aviation Security Personnel, Interview 9). These findings strongly resonate with ICAO Annex 17, which underscores the necessity of clear, concise, and effective communication in security operations. Finally, training administrators pointed to the crucial role of government and industry support, with one administrator remarking, "funding and certification incentives are the only way to make this sustainable" (Training Administrator, Interview 2). This mirrors the requirements outlined in Indonesia's national aviation security regulations, which stress the need for government-backed training standards.

Taken together, the interview findings and document analysis point to ten interconnected strategies that address the current training gap. By tailoring ESP programs, expanding simulation-based practice, supporting peer learning, implementing systematic assessment, adopting blended models, aligning curricula with ICAO skill areas, strengthening partnerships, ensuring cultural sensitivity, emphasizing workplace communication, and securing systemic government support, Indonesia can move closer to fulfilling ICAO's international language proficiency requirements in aviation security.

Result and Discussion

Research consistently demonstrates the critical need for customized English language training in aviation, particularly in the Asia-Pacific region including Indonesia. Lomperis (2019) emphasizes that while English serves as the international language of civil aviation by UN mandate, current General English training fails to meet specialized Aviation English requirements, necessitating customized workplace language training following systematic needs assessment and industry collaboration. Studies in Malaysia reveal that English proficiency is vital for aviation management personnel's professional communication in both speaking and writing activities Singh et al (2021). Indonesian research highlights significant communication challenges faced by airport staff, with passenger-handlers experiencing difficulties in English oral communication that could be addressed

through targeted ESP courses Cahyani and Drajadi (2017). At Pattimura International Airport, despite unanimous recognition of English importance, ground staff face substantial speaking anxiety (60%) and listening comprehension difficulties (40%), with 100% lacking formal language training and relying on self-directed learning methods Siwa (2023).

Building upon these findings, it becomes evident that the demand for English proficiency in aviation is not limited to general staff but extends critically to specialized roles such as aviation security personnel. In the rapidly evolving aviation sector, effective communication is paramount, particularly in areas concerning security. Recognizing this necessity, various stakeholders have highlighted the importance of tailored English language training programs specifically designed for aviation personnel in Indonesia. Interviews with aviation security personnel, English instructors, and training program administrators reveal a shared consensus on the need for specialized training that addresses the unique communication challenges faced in high-pressure environments. From the perspective of security staff, tailored ESP programs and simulation-based training can significantly enhance their ability to communicate effectively during critical situations, thereby ensuring a safer operational framework.

In the rapidly evolving aviation sector, effective communication is paramount, particularly in areas concerning security. Recognizing this necessity, various stakeholders have highlighted the importance of tailored English language training programs specifically designed for aviation personnel in Indonesia. Interviews with aviation security personnel, English instructors, and training program administrators reveal a shared consensus on the need for specialized training that addresses the unique communication challenges faced in high-pressure environments. From the perspective of security staff, tailored ESP programs and simulation-based training can significantly enhance their ability to communicate effectively during critical situations, thereby ensuring a safer operational framework.

Moreover, the insights gathered underscore the value of collaborative learning and regular assessments in fostering a supportive learning environment. Aviation staff expressed a strong preference for peer support initiatives, emphasizing that study groups could bridge language gaps and enhance proficiency. Instructors also noted the importance of integrating cultural sensitivity into training, as it not only engages learners but also makes the material more relatable. The alignment of training with ICAO guidelines and support from government and industry are further recognized as essential components that can drive ongoing professional development and improve overall language competency in the aviation sector.

Across the interviews, there is strong support for tailored ESP programs and simulation-based training as essential strategies for improving English proficiency among aviation personnel. Collaborative learning, regular assessments, and cultural sensitivity in instruction were also highlighted as vital components. The importance of aligning training with international standards like ICAO and the need for government and industry backing were emphasized as necessary for fostering a more effective language training environment in Indonesia's aviation sector.

Explained in Figure 4. There are some potential strategies for improving English Language Proficiency in the aviation sector, particularly for enhancing aviation security in Indonesia:



Fig 4: Potential strategies for improving English Language Proficiency

1. Tailored English for Specific Purposes (ESP) Programs

Developing English for Specific Purposes (ESP) programs tailored to aviation security can directly address the communication needs of personnel. These programs should focus on aviation-specific terminology, security protocols, and the unique communication scenarios that arise in airports Hariri et al (2020). By contextualizing language instruction within the field of aviation security, learners can more effectively apply their skills in real-world settings.

2. Simulation-Based Training

Implementing simulation-based training in English can immerse aviation security personnel

in realistic scenarios that require them to communicate effectively in high-pressure situations. These simulations could mimic situations such as security breaches, emergency responses, or routine passenger screening, allowing personnel to practice their language skills in context. This hands-on approach not only improves language proficiency but also builds confidence in using English during critical moments.

3. Collaborative Learning and Peer Support Programs

Encouraging peer learning among aviation staff by forming study groups or language learning communities can create a supportive environment for language development. In these groups, more proficient English speakers can mentor their colleagues, helping to bridge language gaps and foster a culture of continuous improvement in English language skills.

4. Regular Language Assessments and Feedback

To ensure ongoing progress, aviation security personnel should undergo regular language assessments based on the ICAO Language Proficiency Rating Scale. These assessments can identify areas for improvement and provide personalized feedback. By continually monitoring proficiency levels, training programs can be adapted to meet individual and group needs, ensuring that personnel maintain a high level of competency in English.

5. Blended Learning Approaches

Combining online platforms with face-to-face instruction can enhance the flexibility and accessibility of English language learning for aviation security personnel Rossydi, (2020). E-learning modules, mobile apps, and interactive digital content can complement traditional classroom instruction, allowing learners to study at their own pace Masita and Rossydi, (2021) while still receiving structured, in-person training. This blended approach can be especially useful in Indonesia, where geographical challenges might limit access to in-person training programs.

6. Integration of ICAO Language Proficiency Guidelines

Ensuring that all English language training programs align with ICAO's Language Proficiency Requirements is crucial. Curriculum development should explicitly focus on the six key areas outlined by ICAO: pronunciation, structure, vocabulary, fluency, comprehension, and interaction (ICAO, (2010); Farris (2016); Sirikanjanawong and Wasanasomsithi (2018). This alignment guarantees that the training meets international standards, equipping aviation security personnel to communicate effectively in both routine and emergency situations.

7. Partnership with International Aviation Organizations

Collaborating with international aviation bodies such as ICAO, the International Air Transport Association (IATA), and global security training institutes can provide Indonesian aviation personnel with access to world-class training materials, resources, and expertise. These partnerships could include exchange programs, joint training sessions, or access to global best practices, which can be adapted to Indonesia's specific needs.

8. Cultural Sensitivity and Language Adaptation

Recognizing Indonesia's diverse linguistic and cultural background, Rima et al (2024) claims that English language training should incorporate strategies that account for cultural differences in communication styles. This could involve training instructors in culturally responsive teaching methods and adapting learning materials to be more relatable to Indonesian learners Hidayati et al (2024). By making the training culturally relevant, it can become more engaging and effective.

9. Incorporation of Workplace-Specific Communication Skills

Aviation security personnel need not only general language proficiency but also the ability to handle specific workplace communication tasks, such as issuing instructions, questioning passengers, and reporting incidents. Training should therefore emphasize workplace-specific communication strategies that are directly relevant to the day-to-day operations of airport security, helping learners to apply their English skills in practical, task-oriented situations (Pujiastuti et al., 2022; Siwa, 2023).

10. Government and Industry Support for Language Programs

Government and industry bodies should support the development of comprehensive English language training programs through policy-making, funding, and collaboration with educational institutions Siwa (2023). Creating incentives for ongoing professional development, such as certification programs or language proficiency bonuses, can motivate aviation security personnel to continually improve their English language skills. By implementing these strategies, Indonesia can strengthen the English proficiency of its aviation security personnel, thereby enhancing overall safety and operational effectiveness in its airports.

Conclusion

The enhancement of English language learning within the context of aviation security is vital for several compelling reasons. Firstly, English serves as the international language of aviation, recognized officially by the ICAO as the standard medium of communication. This designation underscores the necessity for proficient English communication in facilitating safe and efficient

aviation operations.

Moreover, effective communication is crucial for flight safety. Miscommunication can lead to serious accidents, emphasizing the need for all personnel involved in aviation to possess strong English language skills. Mastery of English ensures that instructions and critical information are conveyed and understood accurately. ICAO's LPRs further mandate specific language competencies, encompassing understanding, speaking, listening, and interaction. By reinforcing English language learning, the risk of misunderstandings that contribute to aviation incidents can be minimized, thereby enhancing overall flight safety. Furthermore, proficiency in English is essential for professional development within the aviation industry, as much of the technical literature, training, and international certification materials are available primarily in English. This access enables aviation professionals to stay updated with the latest information and best practices.

Additionally, the global nature of the aviation industry necessitates collaboration among various nations, with English acting as the lingua franca that facilitates international cooperation in aviation operations, research, and technological development. Compliance with regulations and policies aligned with ICAO standards further requires a strong command of English among aviation personnel, ensuring adherence to high safety standards. In emergency situations, the ability to communicate swiftly and clearly in English allows pilots and air traffic controllers to respond effectively, thereby reducing potential risks. Consequently, strengthening English language learning is not merely a regulatory compliance issue; it is a critical step toward ensuring safety, efficiency, and professionalism in the global aviation industry, particularly in Indonesia.

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