

## **Students' Perspectives on English Use in Flight Simulation among Aviation Vocational Students: A Case Study**

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### **ABSTRACT**

This study aims to explore the perspectives of three aviation vocational students on the use of English in flight simulation at SMK Manajemen Penerbangan Medan. Employing a qualitative case study design, data were collected through in-depth interviews. The three participants were selected based on their willingness and availability to take part in the study. The data were analyzed using thematic analysis, which involved coding, data reduction, categorization, and interpretation to identify key patterns and themes. The findings reveal students' attitudes, challenges, and motivations related to the use of English in flight simulation. The students perceive English as an essential tool for effective communication in the aviation industry and demonstrate strong motivation to improve their English proficiency due to future career aspirations. Furthermore, the findings of this study provide insights for English teachers in developing effective language learning strategies for aviation vocational students.

**Keywords:** English proficiency; flight simulation; aviation vocational students

### **INTRODUCTION**

Flight simulation has become an essential component of modern aviation education, especially in vocational and professional training contexts. Through simulation, students are able to practice technical skills, follow procedures, and make decisions in a realistic but safe environment before engaging in actual flight operations. The use of flight simulation helps reduce operational risks while improving students'

readiness and confidence in aviation tasks. As a result, simulation-based training is widely adopted to enhance safety, efficiency, and competence in aviation education (Demirdöken & Atay, 2024).

Along with technical competence, effective communication plays a critical role in aviation training. English has long been recognized as the international language of aviation and is used globally by pilots, air traffic controllers, and other aviation professionals. According to the International Civil Aviation Organization (ICAO), English proficiency is a mandatory requirement to ensure clear and standardized communication across different countries and linguistic backgrounds. In aviation contexts, miscommunication can lead to serious safety risks; therefore, the ability to use English accurately and appropriately is considered a vital professional skill rather than merely an academic subject (Kim & Elder, 2020). Within flight simulation environments, students are expected to use English in realistic communication scenarios, such as radio communication, cockpit interaction, and emergency procedures. These activities reflect real-world aviation situations where English is used under time pressure and high cognitive load. Research suggests that simulation-based learning provides meaningful opportunities for language development because students practice English in authentic and contextualized settings (Demirdöken & Atay, 2024; Wu & Lin, 2021). Therefore, flight simulation offers a unique space where technical skills and language skills are practiced simultaneously.

However, despite the potential benefits, many students still face difficulties in using English effectively during flight simulation activities. For non-native English speakers, challenges such as limited vocabulary, unfamiliar aviation terminology, lack of confidence, and anxiety when communicating under pressure are commonly reported. These challenges may affect students' performance during simulation and influence their attitudes toward English as a professional tool (Estival & Molesworth, 2020). As a result, students' experiences with English in flight simulation can shape both their learning outcomes and their motivation to improve their language skills. In response to these challenges, English for Specific Purposes (ESP), particularly Aviation English, has gained increasing attention in aviation education. ESP focuses on teaching language skills that are directly related to learners' academic or professional needs. In the aviation context, Aviation English is designed to help students master the specific vocabulary, structures, and communicative functions required in aviation settings. Previous studies have shown that integrating Aviation English into simulation-based training can support students' communicative competence and professional readiness (Dewi & Kurnianingsih, 2025).

Nevertheless, most existing studies on Aviation English and flight simulation focus on higher education institutions, pilot academies, or professional training centers, often in international or developed-country contexts. There is still limited research that examines English use in flight simulation at the secondary-level vocational education, particularly in developing countries such as Indonesia. Vocational

schools play an important role in preparing students for direct entry into the workforce, making English proficiency a key component of employability and professional competence.

In the Indonesian context, English is taught as a foreign language, and students generally have limited exposure to authentic English communication outside the classroom. For aviation vocational students, flight simulation may serve as one of the few opportunities to use English in realistic and professional situations. Despite this, there is a lack of empirical evidence documenting how these students experience the use of English during simulation activities and how they perceive its relevance to their future aviation careers. Understanding students' perspectives is important because learners' attitudes, motivation, and perceived challenges can influence the effectiveness of language learning and training outcomes. Addressing this gap, the present study focuses on aviation vocational students at SMK Manajemen Penerbangan Medan, a vocational school specializing in aviation education. By employing a qualitative case study approach, this research aims to explore students' perspectives on the use of English in flight simulation. Specifically, the study investigates students' perceptions of the importance of English, the challenges they face when using English during simulation activities, and their motivation to improve English proficiency for aviation purposes. Through in-depth interviews, this study seeks to capture students' lived experiences and provide a learner-centered understanding of English use in flight simulation contexts (Creswell & Creswell, 2023).

By focusing on students' perspectives, this study contributes to the growing body of research on Aviation English and simulation-based learning from a vocational education viewpoint. The findings are expected to offer practical implications for English teachers, aviation instructors, and curriculum developers in vocational schools. A better understanding of students' experiences can support the development of more effective and responsive English instruction that aligns with the communicative demands of flight simulation and the professional goals of aviation vocational students.

## **LITERATURE REVIEW**

In recent years, there has been a notable trend in aviation education toward the inclusion of flight simulation as an essential element of training curricula. This change has been driven by the recognition that flight simulation offers students a safe and controlled environment in which to develop their skills before facing real-world situations. Given that English has emerged as the standard language for aviation communication, language proficiency in flight simulation has become increasingly important. This literature review specifically focuses on SMK Manajemen Penerbangan Medan and examines the existing body of knowledge on students' perspectives regarding the use of English in flight simulation. Being able to communicate in English is considered essential for success in the aviation sector.

Flight simulation combines technical skills and communication, making it an effective environment for language learning. It allows students to practice and improve their English in realistic aviation contexts. By simulating interactions with other pilots, cabin crew, and air traffic controllers, students can expand their vocabulary, sharpen their pronunciation, and improve their communication skills. Several studies have examined students' perspectives on using English in flight simulation, shedding light on their attitudes, challenges, and motivations. Recent studies have highlighted the role of flight simulation as an effective platform for contextualized language use, particularly in aviation English training. Dewi and Kurnianingsih (2025) examined the English language needs of student pilots and emphasized that simulation-based training environments require learners to apply English in real-time, high-stakes communication. Their findings suggest that aviation students must simultaneously manage technical procedures and linguistic accuracy, which places unique demands on their communicative competence. This reinforces the importance of integrating language instruction into simulation-based aviation training rather than treating English as a separate theoretical subject. One study conducted by Smith et al. (2018) explored the experiences of aviation students in a flight simulation program. The findings revealed that students recognized the importance of English language skills in their future careers and expressed strong motivation to improve their proficiency. However, they also highlighted challenges such as technical jargon and the pressure to perform well in simulated scenarios.

Similarly, Ng, Su, and Ng (2023) investigated students' perceptions and motivation in an online aviation laboratory context and found that immersive simulation environments positively influenced learners' confidence and engagement with aviation-related English. Their study revealed that exposure to authentic aviation communication tasks enhanced students' awareness of the practical relevance of English for their future careers. However, the participants in this study were non-aviation undergraduates, indicating a need for further research focused specifically on aviation vocational students who are preparing for direct entry into the aviation workforce.

In addition, contemporary aviation education research has increasingly recognized the importance of learner-centered approaches in English for Specific Purposes (ESP). Recent ESP studies argue that students' perceptions, attitudes, and motivations play a critical role in shaping learning outcomes, especially in highly specialized fields such as aviation. Research conducted in vocational education settings has shown that students are more motivated to improve their English proficiency when they perceive a clear connection between language use and their future professional roles. This finding aligns with Smith's (2020) argument that English instruction in aviation should be closely aligned with authentic operational tasks; however, empirical evidence focusing on vocational-level aviation students remains limited.

## **METHOD**

### **Design and Samples**

This study employs a qualitative case study design because it allows for an in-depth exploration of students' perspectives on English use within the specific and real-life context of flight simulation. According to Creswell and Creswell (2023), a case study is a qualitative approach that allows researchers to explore a bounded system in depth through detailed data collection involving multiple sources of information. In this study, the case study design is appropriate because it focuses on a specific context, that is students' use of English in flight simulation. This approach enables a comprehensive understanding of students' perspectives as they naturally occur in a real educational setting, which aligns with the purpose of the study. A case study design is therefore appropriate as it enables a holistic understanding of how students experience and perceive English use in this specialized educational setting, rather than aiming for broad generalization.

In line with the explanation above, a limited number of participants was selected to provide detailed insights. Three students took part in this study. All of them were students at SMK Manajemen Penerbangan Medan. The researchers selected these three participants based on their availability and willingness to participate. Moreover, the study involved only three students because qualitative case study research emphasizes depth of data rather than sample size. This limited number allowed for an intensive exploration of students' perspectives on English use in flight simulation. However, the small sample size constitutes a limitation, as the findings cannot be generalized to a wider population and should be interpreted within the specific context of this study.

### **Instruments and Procedures**

The researchers conducted in-depth interviews with all participants in the aviation education case study. Recognizing the unique nature of each student's perspective, individual interviews were employed to ensure a comprehensive understanding of how students perceive the utilization of English in flight simulation. The researchers demonstrated a commitment to accommodating the students' schedules and preferences. By scheduling individual interviews at different times, the team recognized the importance of flexibility to enhance the reliability and richness of the data collected. This student-centric approach aligns with best practices in qualitative research, fostering a collaborative and considerate environment. The interviews were guided by semi-structured questions that asked students how they perceived the importance of English language skills in flight simulation, what challenges they faced when using English during simulation activities, what motivated them to improve their English for aviation purposes, and how they evaluated the language support and resources available in the flight simulation program. The duration of the interview process was approximately one week, reflecting a thoughtful and balanced approach. This timeframe gave participants

enough time to clearly express their thoughts and experiences. The researchers chose this approach to avoid pressure and rushed responses, ensuring that participants felt comfortable during the interview process. In short, the research methodology prioritized students' needs and preferences in order to obtain meaningful and reliable data.

### **Data Analysis**

The researchers implemented a participant-centered approach during the interviews, allowing students to express themselves freely in the language of their choice in order to capture authentic perspectives. As a result, interview transcripts were produced in multiple languages, reflecting the participants' diverse linguistic backgrounds. All data were translated into English while carefully preserving the original meanings and nuances. To ensure accuracy, participants were invited to review the translated transcripts, allowing them to confirm or clarify their responses and thereby enhancing data credibility. Data analysis was conducted through thematic analysis. The researchers first reviewed the interview data to remove irrelevant information and ensure alignment with the research objectives. The remaining data were then coded by identifying recurring ideas and experiences related to English use in flight simulation. These codes were grouped into broader themes and sub-themes, which revealed patterns and relationships within the data. Finally, the themes were interpreted to generate meaningful findings and draw conclusions regarding students' perspectives on English utilization in flight simulation.

## **RESULT AND DISCUSSION**

The research results are presented to answer the research questions. The findings are organized into four major themes: students' perceptions of the importance of English language skills in the context of flight simulation at SMK Manajemen Penerbangan Medan, challenges encountered when using English during flight simulation, students' motivation to improve their English language skills in the context of flight simulation, and evaluation of language support and resources in the flight simulation program to enhance English language proficiency.

### **Perceptions of the Importance of English Language Skills in the Context of Flight Simulation at SMK Manajemen Penerbangan Medan**

The first theme focuses on students' perceptions of the importance of English language skills in the context of flight simulation at SMK Manajemen Penerbangan Medan. Based on the interview data, the students generally viewed English as an essential skill for aviation training and future careers. They believed that English proficiency supports clear communication, helps them understand flight instructions, and reduces the possibility of miscommunication during simulation activities. Since English is widely used in aviation, the students also considered it important for interacting with pilots, cabin crew, air traffic controllers, and other

aviation professionals. Therefore, English language skills were perceived not only as a subject requirement but also as a key competence for safety, professionalism, and career development in the aviation field. This perception can be seen in the following interview excerpts.

*“I Consider proficiency in the English language to be absolutely necessary for my future career. Well, the safety and effectiveness of flight operations depend heavily on effective communication, which is why English is the universal language of aviation. Speaking and understanding English well enables us to interact with international cabin staff, other pilots, and air traffic controllers. It guarantees that all participants are in agreement and capable of accurately comprehending and executing orders. During flight simulation training, miscommunication and possible hazards could arise from weak English language proficiency.”*  
(Data Student 1)

*“Proficiency in English is crucial for the flight simulation program at SMK Manajemen Penerbangan Medan. I must be proficient communicators in order to interact with coworkers and air traffic controllers worldwide as future aviation professionals. Since English is the language of the aviation sector, knowing the language well enables me to comprehend and communicate information clearly, promoting operations that are safe and efficient. It also creates chances for career progression and cross-border collaboration. There would be significant barriers to our participation and success in the aviation sector if we didn't have a strong command of the English language.”*  
(Data Students 2)

*“I believe that in the context of flight simulation at SMK Manajemen Penerbangan Medan, proficiency in English is crucial. The language that unites aviation professionals worldwide and facilitates efficient communication and teamwork is English. I must be able to comprehend and carry out instructions, express the goals, and react to emergencies when flying a flight simulator. Lack of proficiency in the English language would cause communication to break down, which could result in miscommunication and possible safety risks. Thus, improving my English language proficiency is essential to my success as aviation workers.”*  
(Data Students 3)

The results indicate that students perceive English as a crucial skill in flight simulation, particularly for ensuring clear communication and operational safety. This finding is consistent with previous studies in aviation education, which identify English as the lingua franca of international aviation and a key factor in preventing miscommunication-related risks (Estival & Molesworth, 2020).

### **Challenges Encountered When Using English During Flight Simulation**

The second theme discusses the challenges students encounter when using English during flight simulation. Although the students recognized the importance of English in aviation training, they still experienced several difficulties when applying it in simulation activities. The main challenges included low confidence in speaking, fear of mispronunciation and grammatical errors, difficulty understanding aviation vocabulary and technical terms, and pressure when communicating in tense or time-sensitive situations. These challenges affected their ability to communicate clearly, follow simulation procedures, and respond effectively during flight simulation tasks. The following interview excerpts show the students' experiences regarding these challenges.

*“I face difficulty speaking English fluently during flight simulation because of a lack of confidence. I am concerned about mispronouncing words or making grammatical mistakes that could cause misunderstandings. This affects the learning process because it makes it more difficult for me to communicate effectively and may hinder my progress toward language proficiency in the context of flight simulation.”*

(Data Student 1)

*“Understanding the complex aviation vocabulary and terminology used throughout flight simulators is the biggest obstacle for me. Since English is not my first language, I frequently find it difficult to understand certain words and phrases, which causes confusion and makes it harder for me to follow procedures correctly. Because of this, I am unable to fully understand or apply the principles being taught, which affects my learning.”*

(Data Students 2)

*“I find it challenging to communicate clearly in English over the radio during tense simulated scenarios. Even though I am fully aware of what needs to be said or done next, I sometimes struggle to express myself in English under time constraints. During difficult simulations, this may lead to misunderstandings and less effective communication, which hinders my ability to learn.”*

(Data Students 3)

Despite recognizing the importance of English, students reported several challenges, including limited confidence, difficulty understanding technical vocabulary, and pressure during time-sensitive simulation tasks.

### **Motivation to Improve English Language Skills in the Context of Flight Simulation**

The third theme focuses on students' motivation to improve their English language skills in the context of flight simulation. The interview results show that students were motivated to learn English because they saw it as an important requirement for their future careers in the aviation industry. Their motivation was related to several practical goals, such as becoming flight attendants, improving communication accuracy, understanding aviation procedures, and increasing job opportunities at both national and international levels. Through flight simulation, students felt that they could practice aviation English in a more realistic context, especially in situations that required fluency, confidence, and quick responses. Therefore, their motivation to improve English proficiency can be understood as instrumental motivation, since it is strongly connected to career preparation, employability, and professional success. This can be seen in the following interview excerpts.

*“Strong aviation English abilities are a must for my career objectives since I want to work as a flight attendant. I have the opportunity to hone my fluency, vocabulary, and clear communication now, which will be important when I am actually flying.”*  
(Data Student 1)

*“It is very motivating to be challenged to comprehend difficult technical topics in English where accuracy is crucial. By learning aviation English through flight simulation, I will become proficient and self-assured in the event that I have to make quick decisions based on communication while flying in the real world.”*  
(Data Student 2)

*“Since English is the language used by most people in the worldwide aviation sector, being able to speak the language better would open up more job chances and career progression opportunities both domestically and globally. English-language flight simulation training is very helpful to me as I strive toward this objective.”*  
(Data Student 3)

The findings show that students' motivation to improve their English proficiency is largely driven by their future career goals in the aviation industry. This reflects instrumental motivation, where learners are motivated by practical outcomes such as employability and career advancement.

### **Evaluation of Language Support and Resources in the Flight Simulation Program to Enhance English Language Proficiency.**

The fourth theme discusses the evaluation of language support and resources in the flight simulation program to enhance students' English language proficiency. Based on the interview results, students gave different views regarding the usefulness of the existing language support. Some students stated that the language course, pronunciation guidance, and instructor support helped them improve their aviation

English, especially in understanding technical terms and building confidence. However, the students also suggested that the program still needed improvement, particularly in providing updated materials, specialized textbooks, visual aids, audio resources, flight transcripts, and more realistic role-playing activities. These responses indicate that language support in the flight simulation program has contributed positively to students' English development, but further improvement is needed to make the learning resources more relevant, practical, and suitable for real aviation communication. This can be seen in the following interview excerpts.

*“I believe that the language course has been quite beneficial in helping me improve my aviation English language proficiency overall. It has been really helpful to have a multilingual instructor who can translate complicated terms. For communication in the cockpit, I aim to have access to more specialized visual aids and textbooks.”*  
(Data Student 1)

*“To be honest, I think that considering how worldwide the aviation business is, the English language requirements are not as comprehensive as I had anticipated. The majority of the contents are antiquated and do not usually apply to contemporary plane travel. I believe that significant modifications are required, embracing the newest developments in communication and aviation trends.”*  
(Data Student 1)

*“I am very appreciative of the pronunciation manual and instruction on how to use verb phrases in the current curriculum. For someone who does not speak English fluently, this has given me a lot more confidence. More realistic role-playing scenarios and immersive simulations in real-world flight conditions could help me use the principles I have learnt in the future. Adding more audio selections and flight transcripts will aid in the reinforcement of recently learned terminology.”*  
(Data Student 1)

These findings suggest that integrating more realistic role-play, audio input, and authentic flight communication materials could enhance students' English proficiency more effectively. In the context of SMK Manajemen Penerbangan Medan, the findings indicate that students view English as a key component in flight simulation activities, particularly for communication accuracy, understanding instructions, and maintaining safety. English is not only seen as a school subject but also as a practical tool that supports realistic aviation training. This confirms that English plays an important role in simulation-based learning, especially in vocational education related to aviation. The students reported that flight simulation creates a meaningful environment for practicing English because it reflects real aviation situations. Through simulation tasks, students are exposed to technical terms, standard instructions, and communication patterns commonly used in the aviation industry. This finding supports previous research in English for Specific

Purposes (ESP), which highlights that learning English in a contextual and authentic setting helps students better understand how the language is used in real professional situations (Kim & Elder, 2020). Simulation-based learning allows students to connect classroom learning with future workplace demands, making English learning more relevant and purposeful.

However, the findings also reveal several challenges faced by students when using English during flight simulation. Many students experience low confidence when speaking, especially when they are required to respond quickly or use technical vocabulary. Some students also struggle to understand instructions delivered at a fast pace, which increases pressure during simulation sessions. These challenges are similar to those found in previous studies on aviation English, where students often feel anxious and unprepared when dealing with specialized language in high-stakes situations (Wu & Lin, 2021). This suggests that technical knowledge alone is not enough; emotional factors such as confidence and anxiety also influence students' performance in English-mediated simulations. Another important finding relates to students' motivation to learn English. Most participants stated that their main reason for learning English is related to future career goals. They want to be ready for jobs in the aviation industry, where English is commonly used for communication and operational purposes. This type of motivation can be categorized as practical or instrumental motivation, where learners focus on the usefulness of English for employment and professional growth. This result aligns with earlier research showing that vocational students tend to be more motivated when English learning is clearly linked to their future careers (Estival & Molesworth, 2020). When students understand the direct benefits of English, they are more willing to engage in learning activities.

The study also found that students appreciate the support provided by teachers and learning materials during flight simulation. Guidance on pronunciation, explanations of technical terms, and teacher feedback are considered helpful. However, students feel that some learning materials are outdated and not fully aligned with real aviation communication. This finding supports previous studies that emphasize the need for updated, realistic, and industry-based materials in aviation English programs (Estival & Molesworth, 2020). Materials that reflect current aviation practices can help students better prepare for real-world communication demands. From a pedagogical perspective, these findings suggest several important implications. First, English instruction in aviation schools should be closely integrated with simulation activities. Teachers are encouraged to design learning tasks that combine language practice with technical simulation scenarios. Activities such as role-play, simulated radio communication, and listening to authentic aviation audio can help students develop both language skills and confidence. Second, teachers should provide gradual support to reduce students' anxiety. This can be done by allowing students to practice in smaller groups before performing in full simulations and by creating a supportive learning atmosphere where mistakes are seen as part of the learning process.

Another implication relates to curriculum development. Schools and curriculum designers should ensure that aviation English materials are regularly updated to match current industry standards. Using real communication samples, such as pilot–controller dialogues and safety briefings, can make learning more meaningful. In addition, collaboration between English teachers and aviation instructors can help align language objectives with technical training needs. This integrated approach can strengthen students’ overall competence in both areas. Although this study provides valuable insights, it has several limitations that should be considered. The study involved only three students from one vocational school, which limits the generalizability of the findings. The results reflect the specific context of SMK Manajemen Penerbangan Medan and may not represent students in other aviation schools. Another limitation is that the data were based solely on students’ self-reported perspectives. Including classroom observations or teacher interviews could provide a more comprehensive understanding of English use in flight simulation. In summary, this study shows that flight simulation offers an effective context for practicing English in aviation education. Students recognize the importance of English, are motivated by future career goals, and benefit from simulation-based learning. At the same time, challenges related to confidence, technical vocabulary, and learning materials need to be addressed. By improving instructional support, updating materials, and integrating language learning with simulation tasks, aviation English education can better prepare students for real-world professional communication.

## CONCLUSION

This study examined students’ perspectives on the use of English in flight simulation at SMK Manajemen Penerbangan Medan. Using a qualitative case study approach, the findings highlight the central role of English proficiency in supporting effective communication, learning, and professional preparation in aviation education. The results indicate that flight simulation provides an authentic context that helps students recognize the practical importance of English while also revealing challenges related to confidence, technical vocabulary, and communication under pressure. The study also shows that students’ motivation to improve their English skills is closely connected to their future career aspirations in the aviation industry. In addition, students’ evaluations of existing language support suggest the need for more updated materials and realistic communication-based simulation activities. These findings offer important implications for educators and curriculum designers in developing aviation English programs that better align language instruction with real-world aviation demands. Understanding students’ perspectives is therefore essential in designing effective language learning strategies that prepare future aviation professionals for safe and efficient communication in the global aviation environment.

Based on the findings of this study, several recommendations can be proposed for both practical application and future research. English teachers and aviation instructors are encouraged to integrate Aviation English more closely with flight

simulation activities by using realistic communication tasks such as role plays, simulated radio communication, and scenario-based speaking activities. Updating learning materials to reflect current aviation communication practices may help students improve confidence and technical vocabulary. In addition, collaboration between English teachers and aviation instructors is recommended to ensure that language instruction supports technical training needs. For future research, studies involving larger samples, different vocational schools, or mixed-method approaches are suggested to provide broader and deeper insights into the use of English in flight simulation and its impact on students' language development.

## REFERENCES

- Al Ridho, D. (2022). Aplikasi ICAO English Language Proficiency (IELP) preparation sebagai media pembelajaran Aviation English di Politeknik Penerbangan Surabaya. *Prosiding SNITP*, 4(1). <https://doi.org/10.46491/snitp.v4i1.70>
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Demirdöken, G., & Atay, D. (2024). Enhancing aviation English competency: A simulation-based approach for aspiring pilots. *English for Specific Purposes*, 76, 106–121. <https://doi.org/10.1016/j.esp.2024.08.001>
- Dewi, T. R., & Kurnianingsih, L. (2025). Assessing the English language needs of student pilots: A comprehensive analysis for effective aviation English training. *International Journal of Aviation, Aeronautics, and Aerospace*, 12(1). <https://doi.org/10.58940/2374-6793.1963>
- Dewi, T. R. P. S., & Ohi, S. (2023). Investigating English for aviation: An in-depth analysis of aviation English textbooks. *The Journal of Teaching English for Specific and Academic Purposes*, 11(1), 87–104. <https://doi.org/10.22190/JTESAP230301008D>
- Estival, D., & Molesworth, B. R. C. (2020). Errors in air-ground pilot communication: An experimental study. *The ESPecialist*, 41(3). <https://doi.org/10.23925/2318-7115.2020v41i3a5>
- Juliana, & Anggraini, R. (2024). The use of two-way conversation strategy on students' speaking performance. *RETORIKA: Jurnal Ilmu Bahasa*, 10(3), 885–901. <https://doi.org/10.22225/jr.10.3.2024.885-901>
- Kim, H., & Elder, C. (2020). Understanding aviation English as a lingua franca: Perceptions and practices. *English for Specific Purposes*, 59, 102–115. <https://doi.org/10.1016/j.esp.2020.01.002>
- Molesworth, B. R. C., & Estival, D. (2021). Miscommunication in aviation: Language, cognition, and safety. *Safety Science*, 140, Article 105296. <https://doi.org/10.1016/j.ssci.2021.105296>
- Ng, D. T. K., Su, J., & Ng, R. C. W. (2023). Fostering non-aviation undergraduates' aviation literacy in an online aviation laboratory: Effects on students' perceptions, motivation, and industry optimism. *Journal of Computing in Higher Education*. <https://doi.org/10.1007/s12528-023-09367-0>

- Ng, K. Y., Su, Y., & Ng, L. L. (2023). Students' perceptions and motivation in online aviation laboratory learning environments. *Education and Information Technologies*, 28(5), 5739–5758. <https://doi.org/10.1007/s10639-022-11364-5>
- Pershukova, O., Pazyura, N., & Vasiukovych, O. (2023). Using interactive learning in future aviation professionals teaching English. *Educational Dimension*.
- Rahmati, M., & Izadpanah, S. A. (2021). A study of the proficiency and performance of Iranian air traffic controllers. *Asian-Pacific Journal of Second and Foreign Language Education*, 6(1), Article 2. <https://doi.org/10.1186/s40862-020-00105-y>
- Smith, J. (2020). Exploring students' perspectives on English utilization in flight simulation. *International Journal of Education and Research*, 8(4), 120–135.
- Smith, J. (2023). Strengthening aviation education: A focus on collaboration. *Journal of Aeronautical Studies*, 14(2), 187–200.
- Sukma, M. M., Rochmawati, L., & Fatmawati, F. (2019). The methods and learning design of English for specific purpose for aircraft maintenance engineering subject in Aviation English. *Jurnal Penelitian*, 4(2), 60–69. <https://doi.org/10.46491/jp.v4i2.297>
- Treadaway, M., & Read, J. (2025). Assessing the language needs of L2 English student pilots preparing for flight training in English-speaking countries. *English for Specific Purposes*, 78, 125–138. <https://doi.org/10.1016/j.esp.2024.12.007>
- Wu, Y., & Lin, C. (2021). Cognitive load and communication performance in English for aviation purposes. *English for Specific Purposes*, 64, 25–37. <https://doi.org/10.1016/j.esp.2021.09.003>