Exploring the Opportunities and Challenges of Using AI in TESOL Assessment and Feedback at Vietnam Aviation Academy

Trinh Phan Tu[[1]](#footnote-1) & Truc Do Thi Thanh[[2]](#footnote-2)

Abstract

In the digital era, It is marked by rapid technological advancement, and the integration of Artificial Intelligence (AI) infiltrates into various dimensions of life from language education to very detail in teaching, assignment and feedback. The research makes an effort to investigate the opportunities and challenges associated with integrating Artificial Intelligence (AI) into assessment and feedback practices in Teaching English to Speakers of Other Languages (TESOL) at Vietnam Aviation Academy (VAA). Due to the fact that AI tools become increasingly accessible in educational contexts, their application in language teaching offers potential benefits such as tailored feedback, automated assessment, and enhanced learner engagement. However, these advantageous opportunities also remain challenges, including concerns about accuracy, teacher preparedness, ethical issues, and relying too heavily on technology. Through a combination of surveys and interviews with TESOL instructors and students at VAA, the study explores how AI is currently being used, perceived effectiveness, and areas needing improvement. The findings aim to inform practical strategies for integrating AI responsibly and effectively into TESOL pedagogy in higher education settings.

***Keywords*:** *Artificial Intelligence (AI), opportinities, challenges, assessment, feedback*

1. Introduction

In recent years, the integration of Artificial Intelligence (AI) into education has emerged as a transformative trend, which opens up new possibilities for personalized learning, automated instruction, and teaching practices. In language education, especially within the field of Teaching English to Speakers of Other Languages (TESOL), AI offers significant opportunities to improve assessment, feedback, and learner engagement. Technologies such as automated writing evaluators, speech recognition tools, and intelligent tutoring systems are increasingly being explored to support both teachers and students. However, these innovations also bring complex challenges that are related to pedagogy, equity, and implementation, especially in specialized academic contexts like aviation.

At the Vietnam Aviation Academy (VAA), English proficiency, particularly in Aviation English is essential for students’ academic success and future careers in the global aviation industry, where effective communication is closely linked for students who have intentions to work in avation fields from airport coordinators, check-in clers to fight attendants or pilots. While traditional classroom approaches are foundational, they often struggle to address the diverse needs of learners in the digital age. In response, VAA has been actively exploring more innovative and sustainable approaches to English language instruction. Since 2024, the institution has launched a series of AI-focused training programs for teachers, ranging from basic to advanced levels, aimed at enhancing their ability to integrate AI tools into their teaching practices (THA, 2024). Although AI's application in TESOL at VAA remains exploratory, interest is increasing regarding its potential to transform assessment and feedback delivery.

This research paper investigates how AI is currently being used in TESOL assessment and feedback at VAA, examining both its benefits and challenges, and identifying the conditions necessary for successful implementation. By examining both instructor and student perspectives, and by situating this case study within the broader context of global trends in educational technology, this study aims to contribute to a deeper understanding of how AI can be integrated responsibly and effectively into TESOL pedagogy in Vietnamese higher education. Ultimately, this paper seeks to explore how AI can support not only academic achievement but also the emotional and cognitive needs of learners at VAA.

Research questions:

1. How do TESOL lectures and students at VAA perceive the intergration of AI tools an assessment and feedback process?
2. What perceived opportunities are associated with the use of AI in TESOL assessement and feedback at VAA?
3. What challenges and concerns do TESOL lectures and students face when using AI for assessment and feedback purposes?
4. What support mechanisms do TESOL lectuters at VAA recommend for effective AI intergration in assessment and feedback?

2. Literature Review

The integration of AI into language education has attracted growing interest in recent years, particularly within TESOL. This literature review explores current research on the application of AI in language assessment and feedback, the challenges associated with its integration into TESOL, and the unique demands of specialized fields such as Aviation English. By examining existing studies and identifying research gaps, this section provides a foundation for understanding how AI might be effectively implemented in specific institutional contexts like the Vietnam Aviation Academy (VAA).

2.1 AI in Language Assessment and Feedback

AI-powered tools have introduced new ways to evaluate language learners’ skills:

2.1.1 Automated Writing Evaluation (AWE)

Automated writing evaluation (AWE) systems such as Grammarly, Criterion, and Write & Improve provide immediate feedback on grammar, vocabulary, coherence, and structure, allowing learners to revise and improve their writing in real time (Li, Link, & Hegelheimer, 2020). These tools have gained significant traction in TESOL contexts due to their capacity to offer immediate, individualized feedback, and reducing lecture workload.

2.1.2 Speech Recognition Tools

AI-driven speech recognition technologies, such as Google Speech-to-Text and Duolingo’s speaking exercises, provide instant feedback on pronunciation accuracy and fluency. Tools like Google Speech-to-Text or Duolingo’s speaking exercises use AI to provide pronunciation and fluency feedback, helping learners develop spoken communication skills independently (Li & Zhang, 2021). They are particularly valuable in contexts where teacher-student speaking interaction time is limited, and learners need additional opportunities to develop speaking proficiency.

2.1.3 Intelligent Tutoring Systems (ITS)

Intelligent Tutoring Systems (ITS) offer personalized instruction by adapting content delivery to the learner’s pace and prior knowledge. These platforms can identify areas of difficulty and deliver scaffolded support aligned with TESOL learning outcomes (Heift & Rimrott, 2019). ITS not only promote learner autonomy but also help bridge the gap between formative assessment and instructional adaptation, making learning more responsive and individualized.

2.1.4 Benefits of AI Feedback

Studies report that learners are more engaged and motivated when they receive instant, non-judgmental feedback from AI tools (Godwin-Jones, 2020). Artificial Intelligence has increasingly been adopted in language education to support assessment and feedback processes. Tools such as automated writing evaluators and speech recognition systems offer real-time, individualized responses, thereby enhancing learners' autonomy and engagement. These technologies are particularly valuable in addressing large class sizes and providing consistent feedback in skill areas like pronunciation, grammar, and writing quality. Studies have shown that AI-driven assessment can lead to improved learner outcomes when effectively integrated into instructional design (Burstein et al., 2018; Wang & Heffernan, 2021).

**2. Opportunities and Challenges in Integrating AI into TESOL Assessment and Feedback**

2.1 Opportunities of AI Integration in TESOL

The integration of Artificial Intelligence (AI) in Teaching English to Speakers of Other Languages (TESOL) presents a range of opportunities that enhance learning outcomes, foster inclusivity, and transform the writing and feedback process.

2.1.1 Enhanced Writing Skills and Personalized Feedback

AI-powered tools have demonstrated considerable potential in improving students' writing abilities by offering immediate, tailored feedback based on learners’ individual patterns and needs. These systems can detect grammatical errors, provide suggestions on vocabulary usage, and guide learners in structuring coherent texts (Hwang et al., 2023; Verma et al., 2023). Such personalized feedback enables iterative learning and deeper engagement with writing tasks. By analyzing learners’ performance over time, AI can scaffold instruction and target specific areas for improvement, making writing instruction more data-informed and effective.

2.1.2 Support for Collaborative Writing and Peer Learning

Beyond individualized feedback, AI tools can facilitate collaborative writing projects. As Pinkwart (2020) notes, AI can function as a co-authoring assistant—providing real-time editing suggestions, organizing workflow, and promoting peer interaction. This capability not only mirrors professional collaborative writing environments but also nurtures teamwork skills among learners, an essential component in globalized communication contexts.

2.1.3 Increased Accessibility and Inclusiveness

Several studies have shown that AI tools can improve accessibility and inclusiveness in language education. For instance, AI can offer real-time translation, text-to-speech functions, or adaptive font/display features that cater to learners with disabilities or those from linguistically diverse backgrounds (Ahmad et al., 2021; Kamalov & Gurrib, 2021). Moreover, AI systems can provide immediate explanations and content support, making TESOL environments more engaging for students with varied learning needs.

2.1.4 Efficient Feedback and Reduced Teacher Workload

AI enables instructors to manage large classes more effectively by automating assessment tasks and delivering real-time feedback. This not only enhances the consistency and objectivity of feedback but also frees up educators to focus on higher-order instructional strategies and learner mentoring (Burstein et al., 2018; Wang & Heffernan, 2021).

2.2 Challenges in Integrating AI into TESOL

Despite the promising advantages of AI in TESOL, several pedagogical, infrastructural, and ethical challenges must be acknowledged to ensure responsible implementation.

2.2.1 Pedagogical Limitations

One significant concern is that AI tools tend to prioritize surface-level accuracy, such as grammar, spelling, and syntax over deeper dimensions of communicative competence, including pragmatics, critical thinking, and intercultural awareness (Ware, 2011). This focus may lead learners to overvalue form over function, thereby limiting their ability to use language in authentic contexts.

2.2.2 Cultural and Linguistic Constraints

AI systems often struggle with recognizing idiomatic expressions, cultural references, or non-standard varieties of English, which can result in misleading or irrelevant feedback (Zawacki-Richter et al., 2019). In TESOL settings where cultural nuance is integral to learning, such limitations may undermine the quality of instruction and learner comprehension.

2.2.3 Equity, Infrastructure, and Resource Gaps

The successful implementation of AI requires adequate digital infrastructure, stable internet connectivity, and institutional investment conditions that are not consistently available across all educational contexts. In Vietnam, for example, disparities in access to technological tools and connectivity pose barriers to the widespread adoption of AI-enhanced TESOL practices (Pham & Hoang, 2022). This digital divide risks exacerbating existing inequalities among learners.

2.2.4 Teacher Readiness and Professional Development

Many language instructors report limited familiarity with AI technologies and express concerns regarding their pedagogical implications. Without sufficient training and ongoing support, teachers may resist or misuse AI tools, reducing their effectiveness (Zhai, 2021). Thus, professional development initiatives are crucial to equip educators with the knowledge and confidence to integrate AI meaningfully into their teaching practices.

2.2.5 Ethical Considerations and Algorithmic Bias

There are growing concerns about the ethical use of AI in education, particularly regarding data privacy, surveillance, and potential algorithmic bias. AI systems trained on limited datasets may reinforce existing stereotypes or disadvantage certain learner groups (Rodriguez et al., 2022). Ensuring transparency, accountability, and ethical use is imperative for sustainable integration.

The integration of AI into TESOL assessment and feedback holds immense potential to transform teaching and learning by offering personalized, scalable, and inclusive solutions. However, its successful application depends on addressing pedagogical, infrastructural, and ethical challenges. As the field advances, empirical research and context-specific implementation strategies are essential to bridge the gap between innovation and practice, especially in under-resourced environments such as Vietnam Aviation Academy.

2.3 AI in Specialized Contexts: Aviation English and VAA

2.3.1 Relevance of English Proficiency in Aviation

Aviation English is vital for safety and operational clarity. Miscommunication in this field can have serious consequences, requiring high language standards aligned with international aviation regulations (ICAO, 2011).

2.3.2 AI and English Instruction at VAA

At the Vietnam Aviation Academy, there is growing interest in AI-enhanced TESOL practices. Since 2024, the institution has introduced AI-focused training for instructors, aiming to bridge gaps in digital pedagogy (THA, 2024).

2.3.3 Current Challenges at VAA

While promising, AI adoption at VAA is still limited. Challenges include the lack of standard implementation models, mixed teacher readiness, and the need for technology that aligns with Aviation English requirements.

The literature highlights the dual nature of AI in TESOL: it holds significant potential to transform assessment and feedback practices but also presents notable challenges. In highly specialized academic environments like the Vietnam Aviation Academy, responsible and well-supported integration of AI is especially crucial. This study seeks to address existing research gaps and explore how AI can enhance language learning outcomes while respecting the contextual realities of aviation-focused education in Vietnam.

3. Methodology

This section outlines the research design, participants, data collection methods, and data analysis procedures used to explore the opportunities and challenges of using AI in TESOL assessment and feedback at the Vietnam Aviation Academy (VAA).

3.1 Research Design

3.1.1 Case Study Approach

This study employs a qualitative case study approach to gain an in-depth understanding of how AI is currently being integrated into TESOL assessment and feedback at VAA. This design is appropriate for exploring real-life educational practices in a specific institutional context.

3.1.2 Justification for Qualitative Methodology

A qualitative method allows for the exploration of participant experiences, perceptions, and attitudes, providing richer insights into both the benefits and challenges of AI implementation.

3.2 Research Setting and Participants

3.2.1 Research Context: Vietnam Aviation Academy (VAA)

VAA is a specialized higher education institution in Vietnam focused on preparing students for aviation-related careers. English, especially Aviation English, is a core component of its curriculum.

3.2.2 Participant Profile

The study involves two groups:

1. Language instructors who have attended AI training workshops and use (or plan to use) AI tools in assessment and feedback.
2. Students enrolled in TESOL-based English courses who have interacted with AI-supported learning tools.

3.2.3 Sampling Method

Purposive sampling was used to select participants who have direct experience with AI tools in language instruction. A total of 14 teachers and 71 students participated in the study.

3.3 Data Collection Methods

3.3.1 Semi-Structured Interviews

In-depth interviews were conducted with 14 language instructors to explore their perceptions, practices, and challenges related to AI in assessment and feedback.

3.3.2 Student Focus Groups

Three focus group discussions were held with 71 students (from 5 to 20 per group) to gather their views on AI-supported learning, especially regarding writing and speaking feedback.

3.3.3 Document Review

Relevant institutional documents, such as AI training materials, course syllabi, and internal reports, were reviewed to understand the official framework and goals for AI integration.

3.4 Data Analysis

3.4.1 Thematic Analysis

Data from interviews and focus groups were analyzed using thematic coding. This involved identifying key patterns and themes related to both opportunities and challenges of AI in TESOL assessment.

3.4.2 Coding Procedure

Transcripts were coded manually and verified using qualitative data analysis software (e.g., NVivo). Themes were categorized under opportunities, challenges, and implementation conditions.

3.5 Ethical Considerations

3.5.1 Informed Consent

The authors distributed an information letter and accompanying messages to colleagues and students to obtain their consent prior to completing the surveys.

3.5.2 Anonymity and Confidentiality

Participant identities were anonymized in all reports. Data were stored securely and used solely for academic purposes.

3.5.3 Institutional Approval

The research was approved by the academic board of Vietnam Aviation Academy and followed institutional ethical guidelines.

4. Results

This section presents the key findings from the research conducted at Vietnam Aviation Academy (VAA), based on semi-structured interviews with instructors, student focus groups, and document review. The data is organized into major themes aligned with the research objectives: the opportunities and benefits of AI, challenges of implementation, and conditions necessary for effective use.4.1 Perceptions of AI Integration in TESOL Assessment and Feedback.

4.1 Perceptions of AI Integration in TESOL Assessment and Feedback

4.1.1 Lecturer perspectives

The majority of lecturers report frequent use of AI-based tools, such as automated evaluators, online quizzes, and speech recognition systems. Their familiarity with these technologies ranges from moderate to high.

Overall, lecturers perceive AI as beneficial in accelerating the feedback process, with an average rating of approximately 4.5 out of 5. They also agree that AI helps reduce their workload, with a mean rating of over 4.3 (87%).

However, opinions on the accuracy and personalization of AI tools are more divided. While some lecturers rate these aspects highly (scores of 4 to 5), others adopt a more cautious stance, providing ratings between 3 and 4.

4.1.2 Student perspectives

The vast majority of students reported using AI-powered language tools such as ChatGPT, Grammarly, Duolingo, and Google Translate. These tools were primarily used outside of class or in both classroom and independent learning contexts. Students generally perceived these technologies as helpful, particularly for improving grammar (average rating around 4 out of 5). They also reported benefits in writing skills, pronunciation, learning motivation, and self-paced learning, with usefulness ratings ranging from 3 to 5 across these areas.

Despite these advantages, students also expressed notable concerns about the use of AI tools. The most frequently reported issue was over-reliance, with approximately 70–80% of respondents indicating they felt “too dependent” on AI assistance. In addition, students mentioned concerns about the accuracy of AI outputs and occasional technical problems related to devices or internet connectivity.

4.2 Opportunities of Using AI in TESOL Assessment and Feedback

4.2.1 Improved Feedback Speed and increased Efficiency

Educators reported consistently high satisfaction with AI’s ability to accelerate the feedback process. Teachers also reported that AI tools significantly reduced the time spent on grading and feedback, particularly in writing assignments. Across the sample, nearly all teachers rated *“AI helps speed up feedback delivery”* 4 or 5 out of 5. Many highlighted how tools like AI-powered quizzes and automated writing evaluators allowed them to redirect their efforts toward more substantive issues such as coherence and critical thinking.

“I used to spend hours marking basic grammar issues. Now AI handles that, and I focus more on content and clarity.” - Lecturer, 25–34 years old, more than 10 years experience (rated delivery = 5, workload reduction = 5)

Among students, about 76% agreed (rating 4 or 5) that AI enables faster feedback. This positive response was prevalent regardless of their proficiency level or discipline.

4.2.2 Enhanced Student Autonomy and Confidence

Students frequently described how using AI tools (e.g., Grammarly, ChatGPT) on their own before submission helped reduce anxiety and promoted self-directed practice. A majority (around 85%) rated the statement *“AI enables personalized learning”* with 4 or 5, indicating a sense of independence and control in their learning process.

“I check my writing with AI before I send it to the teacher—it helps me feel more confident.” - Student, upper‑elementary to intermediate level

4.2.3 Support for Personalized Learning and Motivating Learning

Students and some lecturers noted that AI can adapt feedback to individual proficiency levels, especially during repeated usage. Ratings for “*AI improves accuracy of feedback*” and “*AI increases student engagement*” were commonly in the 4–5 range, averaging around 74% of student responses. Instructors also reported modest approval (around 70%) for personalization, though with a slightly broader spread.

**Table 1.**

*Summary of Reported Benefits of AI Tools*

|  |  |  |
| --- | --- | --- |
| **Benefit** | **Teacher Response Rate (4 or 5)** | **Student Response Rate (4 or 5)** |
| Faster feedback delivery | >86% | ~75% |
| Increased learner autonomy | ~77% | ~76% |
| Personalization of feedback | ~74% | >74% |
| Increased engagement/motivation | >72% | >74% |

\*Approximate response rates: ~ is the round 0.5; > is less than 0.5.

4.3 Challenges in AI Integration

Despite the promising potential of AI in English language assessment and feedback, both instructors and students at VAA reported several challenges that hinder its effective implementation.

4.3.1 Inadequate Contextual Understanding by AI Tools

A recurring issue reported by instructors and students was AI’s limited ability to understand domain-specific language particularly in aviation.

“Sometimes the AI marks aviation terminology as incorrect, it doesn’t understand our field.”. Two instructors with 6-10 year experience in teaching English.

Many survey respondents echoed this concern, highlighting that AI feedback often fails to grasp aviation-related contexts or nuances in specialized vocabulary. Students also noted that AI-generated corrections could be inaccurate or overly generic, reducing the quality of feedback in technical writing.

4.3.2 Risk of Over-Reliance on AI

Both qualitative feedback and survey data show that over-reliance on AI is a prevalent concern. Numerous students admitted to depending too heavily on AI tools, potentially limiting the development of independent thinking, critical reasoning, and creative language use. Moreover, Some students began to trust AI-generated corrections blindly, without understanding their mistakes.

“It’s easier to use AI for entertainment than for learning… I rely on it too much even in class or at home.” Student Survey Response

Teachers also expressed fears that students often accepted AI-generated feedback without question, which could impede the learning process and reduce engagement with traditional instructional methods.

4.3.3 Technical and Infrastructure Barriers

Access to AI tools at VAA is inconsistent due to several limitations:

1. Paid Subscriptions: Some teachers and students mentioned having to pay out-of-pocket for upgraded versions of tools like Grammarly or ChatGPT.
2. Internet Connectivity: Unstable or unavailable internet in certain classrooms was a frequent issue, especially during in-class AI usage.
3. Device Compatibility: Some students, particularly those relying on mobile phones, faced usability challenges when interacting with AI tools.

“Free AI doesn’t understand the subject deeply… sometimes the feedback is too general.” - Instructor Survey Response

4.3.4 Instructor Readiness and Confidence

While training has been provided, many instructors still feel unsure about integrating AI meaningfully into their teaching. Collected data from teacher survey forms, a significant portion 42.9% said *“insufficient”* in Question 9 about “How sufficient do you find the AI training provided by VAA? It is demonstrated as the pie chart below:



This lack of confidence may lead to inconsistent application of AI tools across classrooms, with some instructors actively incorporating them while others remain hesitant or avoidant.

4.4 Support Mechanisms

4.4.1 Practical Training & Workshops

Many lecturers ask for hands-on training sessions or short workshops focused on using AI tools effectively for writing and speaking practice (e.g., prompt engineering, interpretation of AI suggestions).

Senior lecturers with less confidence in AI integration commented that more "trainings on applying AI Tools on teaching and assessment" would be valuable.

4.4.2 Clear Usage Guidelines & Best-Practices Framework

Several respondents emphasized the need for clear guidelines on when, why, and how to use AI in educational contexts, stressing that students should be encouraged to "use AI as a tool, but not become dependent on it," with teacher-led clarification integrated into classroom practice. Additionally, there were calls for ethical guidance, support in prompt design, and clear criteria for evaluating the reliability of AI-generated feedback.

4.4.3 Infrastructure & Financial Resources

Lecturers flagged challenges with tool subscriptions, premium versions, reliable internet, and subject-specific AI literacy (e.g., aviation English). They suggest funding for:

1. Access to premium AI tool licenses;
2. Upgrading hardware/infrastructure;
3. E‑books or training materials (e.g., for domain‑specific feedback).

4.4.4 Combined Human-AI Integration & Mentorship

Many emphasized that AI should complement not replace teacher judgment. Suggested supports include:

1. Mentorship from experienced educators on evaluating AI feedback;

2) Hybrid models: AI-generated drafts reviewed and contextualized by lecturers;

3) Teacher-led follow–up sessions to contextualize feedback and foster critical thinking.

4.4.5 Support Communities & Helpdesk

Some TESOL instructors recommended having AI support communities or helpdesks for on-the-go troubleshooting (prompt advice, feedback evaluation, technical issues).

4.4.6 Domain‑Specific Customization

Aviation English instructors noted that AI often fails to understand specialized language. They propose:

1. Custom AI training sets in aviation terminology;
2. Domain‑specific modules or plug‑ins to enhance AI relevance.

**Table 2.**

*Summary of Support Mechanisms*

|  |  |
| --- | --- |
| **Support Needed** | **Description** |
| **1. Training** | Practical workshops, prompt engineering, feedback strategies |
| **2. Guidelines** | Usage policies, ethical frameworks, best-practices manuals |
| **3. Resources** | Premium tool licensing, infrastructure upgrade, domain resources |
| **4. Mentorship** | Human oversight, teacher evaluation of AI output, blend learning |
| **5. Community Support** | Help desk, peer forums, prompt-sharing groups |
| **6. Custom AI Modules** | Tailored AI for domain-specific accuracy (e.g. aviation terms) |

4.5 Comparison with Existing Literature

These findings are consistent with prior studies that highlight AI's role in increasing feedback efficiency and learner autonomy (e.g., Godwin-Jones, 2020; Chen et al., 2021). However, this study adds to the literature by focusing on a domain-specific context - Aviation English - and by emphasizing the need for customized AI solutions.

5. Discussion

This section interprets the key findings of the study, situating them within the wider body of literature on AI in TESOL, and reflecting on their implications for pedagogy, policy, and technology use at the Vietnam Aviation Academy (VAA).

5.1 Alignment with Global Research

The positive reception of AI tools by both instructors and students at VAA aligns with global research on the benefits of AI in language education. Studies such as those by Godwin-Jones (2020) and Li et al. (2021) highlight how AI-driven feedback can improve assessment efficiency, support learner autonomy, and promote personalized learning. Participants in this study echoed these advantages, particularly regarding the immediate feedback and convenience offered by tools like automated writing evaluators and speech recognition systems.

However, while global trends often focus on general English or academic writing, the VAA context introduces a more specific requirement: Aviation English, which demands precise, standardized, and safety-related communication. This unique need surfaces a crucial gap in existing AI systems’ capabilities.

5.2 Challenges in Specialized Contexts

Findings from the study underscore the limitations of generic AI tools when applied to domain-specific language. Participants noted that existing AI platforms struggled to accurately assess or give feedback on aviation-related terminology and phraseology. This is consistent with Ware’s (2011) and Zhai’s (2021) concerns about AI’s limited capacity to account for context, audience, and communicative purpose.

Additionally, the over-reliance on AI among some students raised pedagogical concerns. While AI facilitates self-correction, it may also encourage surface-level engagement with language, where students accept suggestions passively without fully understanding the reasoning behind them. This supports critiques in the literature warning against uncritical use of AI in formative learning environments (Pham & Hoang, 2022).

5.3 Pedagogical and Institutional Considerations

Teacher readiness and institutional infrastructure emerged as key factors influencing successful AI integration. Although VAA has launched teacher training programs, instructors still face challenges related to confidence, pedagogical strategies, and access to stable technology. These findings support Zawacki-Richter et al. (2019), who argue that professional development and clear pedagogical frameworks are essential for meaningful use of AI in education.

Importantly, instructors expressed a need for guidance on how to blend AI feedback with traditional assessment methods, suggesting that AI should complement - not replace - human instruction. This reflects current thinking in the TESOL community about the responsible use of AI as a teaching partner rather than a full assessor.

5.4 The Need for Context-Aware AI Tools

The specialized nature of Aviation English at VAA highlights a broader issue in AI development: the lack of domain-specific adaptation. Participants consistently called for tools trained on aviation-related corpora that could provide accurate, context-sensitive feedback. Developing such tools would not only improve learner outcomes at VAA but could also contribute to global standards for AI in professional English instruction.

This aligns with emerging research advocating for customizable AI platforms that consider disciplinary differences, learner goals, and communication settings (Chen et al., 2021). Without this contextual awareness, the risk is that AI will remain a supplementary tool rather than an integrated solution.

5.5 Contributions to Vietnamese Higher Education

This study adds to the growing body of work on digital transformation in Vietnamese higher education, particularly within the language learning domain. By capturing both teacher and student perspectives, it offers a holistic view of AI’s current and potential role in TESOL. Moreover, it sheds light on the infrastructure and policy requirements needed to scale AI use responsibly across institutions.

At a broader level, the findings underscore the importance of balancing innovation with critical reflection. While AI offers exciting opportunities, its implementation must be strategic, pedagogically informed, and context-sensitive to ensure it serves the diverse and evolving needs of learners.

6. Conclusion

This study set out to explore the opportunities and challenges of integrating Artificial Intelligence (AI) into TESOL assessment and feedback practices at the Vietnam Aviation Academy (VAA), with a particular emphasis on the institution’s unique context of Aviation English instruction.

The findings demonstrate that AI tools, such as automated writing evaluators and speech recognition technologies, have considerable potential to enhance language teaching and learning. These tools have been found to support faster feedback delivery, promote student autonomy, and contribute to personalized learning - benefits that are well-aligned with global trends in educational technology.

However, the study also reveals that AI integration in a domain-specific environment like aviation presents distinct challenges. These include the inability of general AI tools to accurately interpret aviation-related terminology, the risk of over-reliance by students, infrastructural limitations, and uneven levels of instructor readiness. Such issues underscore the need for localized, pedagogically-informed, and context-sensitive approaches to AI adoption in TESOL.

By capturing both instructor and student perspectives, the research provides valuable insights into the current state and future possibilities of AI in language education within Vietnamese higher education. The case of VAA illustrates that while AI can be a transformative tool, its successful implementation depends on thoughtful integration into existing teaching practices, continuous professional development, and careful attention to learners’ cognitive and emotional needs.

In conclusion, the responsible use of AI in TESOL at institutions like VAA offers not only the opportunity to improve academic outcomes, but also a chance to reimagine language education in a way that meets the evolving demands of both students and the aviation industry.

References

Bachman, L. F., & Adrian, S. P. (2022). *Language assessment in practice: Developing language assessments and justifying their use in the real world*. Oxford University Press.

Chen, X., Zou, D., Xie, H., & Wang, F. L. (2021). Artificial intelligence in education: A review. *IEEE Access, 9*, 107071–107095. <https://doi.org/10.1109/ACCESS.2021.3108314>

Chen, Y., He, W., & Gao, L. (2023). Enhancing the quality of AI-generated test items through human‑AI collaboration. *Computers & Education, 194*, 104706. <https://doi.org/10.1016/j.compedu.2023.104706>

Godwin‑Jones, R. (2020). Emerging technologies: Using artificial intelligence in language learning. *Language Learning & Technology, 24*(3), 3–11. <https://doi.org/10125/44716>

Godwin‑Jones, R. (2022). The AI frontier in language learning: Chatbots and writing tools. *Language Learning & Technology, 26*(1), 1–9.

Heift, T., & Rimrott, A. (2019). AI in language learning and teaching. In S. Jäger, M. Kurek, & B. O’Rourke (Eds.), *New developments in CALL: Technology, literacy and autonomy* (pp. 95–108). Research‑publishing.net. <https://doi.org/10.14705/rpnet.2019.32.906>

Heift, T., & Rimrott, A. (2019). Personalized language learning in the digital age: The role of intelligent tutoring systems. *ReCALL, 31*(3), 302–318. <https://doi.org/10.1017/S0958344019000086>

Hwang, G. J., Hung, C. M., & Chen, N. S. (2023). Improving students’ writing and critical thinking skills using AI‑supported writing environments. *Educational Technology & Society, 26*(1), 32–44.

Kamalov, F., & Gurrib, I. (2021). Artificial intelligence and inclusive education: Exploring student experiences and equity issues. *Education and Information Technologies, 26*, 5385–5403. <https://doi.org/10.1007/s10639-021-10544-2>

Li, J., Wong, M. L., & Yang, C. C. (2021). Artificial intelligence in education and language learning: A systematic review. *Education and Information Technologies, 26*, 5365–5389. <https://doi.org/10.1007/s10639-021-10547-1>

McCarthy, J., Minsky, M., Rochester, N., & Shannon, C. (2006). A proposal for the Dartmouth summer research project on artificial intelligence, August 31, 1955. *AI Magazine, 27*(4), 12.

Pham, M. T., & Hoang, T. T. (2022). Challenges in integrating AI into Vietnamese higher education: Infrastructure, equity, and policy implications. *Vietnam Journal of Education, 6*(3), 75–85.

Pham, T. H., & Hoang, T. M. (2022). AI in Vietnamese language classrooms: Between opportunities and limitations. *Vietnam Journal of Educational Technology, 18*(2), 44–57.

Pinkwart, N. (2020). Technology‑enhanced collaborative writing: Opportunities for co‑authoring and peer feedback with AI. *International Journal of Artificial Intelligence in Education, 30*(4), 608–624. <https://doi.org/10.1007/s40593-020-00194-6>

Rodriguez, J., Tapia, L. M., & Martinez, R. (2022). Ethical challenges in AI‑based assessments: Privacy, bias, and fairness. *Journal of Educational Computing Research, 60*(3), 503–522.

Tsagari, D., & Vogt, K. (2023). Language assessment for the 21st century: Emerging trends and practices. *Language Testing, 40*(1), 55–72. <https://doi.org/10.1177/02655322221124312>

Verma, A., Gupta, R., & Singh, P. (2023). Role of AI in supporting personalized writing instruction: A learner‑centered approach. *International Journal of Educational Research Open, 5*, 100123. <https://doi.org/10.1016/j.ijedro.2023.100123>

Ware, P. D. (2011). Computer‑generated feedback on student writing. *TESOL Quarterly, 45*(4), 769–774. <https://doi.org/10.5054/tq.2011.272049>

Ware, P. (2011). Computer‑generated feedback on student writing: Critiquing the critics. *Computers and Composition, 28*(4), 269–276. <https://doi.org/10.1016/j.compcom.2011.09.003>

Wang, Y., & Heffernan, N. (2021). The impact of intelligent tutoring systems on writing skills: A meta‑analysis. *Computers & Education, 161*, 104059. <https://doi.org/10.1016/j.compedu.2020.104059>

Zawacki‑Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. *International Journal of Educational Technology in Higher Education, 16*, Article 39. <https://doi.org/10.1186/s41239-019-0171-0>

Zhai, X. (2021). Artificial intelligence in education: Challenges and opportunities for sustainable development. *Sustainability, 13*(16), Article 8960. <https://doi.org/10.3390/su13168960>

Zhai, X. (2021). Pre‑service teachers’ perceptions and readiness toward AI integration in language classrooms. *Education and Information Technologies, 26*, 6293–6311. <https://doi.org/10.1007/s10639-021-10605-6>

**Bionote**

**Ms. Phan Tu Trinh** is a dedicated English lecturer and researcher with over a decade of experience in language education and curriculum development. She has led and co-authored numerous research projects on CLT, MALL, discourse analysis, ESP, and flipped classroom models. Currently teaching at Vietnam Aviation, she holds a Master’s in TESOL and multiple teaching certifications. Her work focuses on improving English learning outcomes through innovative methodologies and digital integration. Ms. Trinh is not only passionate about connecting Vietnamese students with global opportunities through English proficiency, but also committed to continuous learning and self-improvement.

**Ms. Do Thi Thanh Truc** is the Head of the Department of Operations Management, Faculty of Business Administration, at the Vietnam Aviation Academy. Her academic and research interests focus on operations management, supply chain management, and organizational efficiency in aviation-related businesses. With extensive experience in teaching and academic leadership, she is dedicated to improving the quality of education and fostering practical research that bridges theory and industry practices.

Appendices

Appendix A

**Survey for Teachers on AI in TESOL Assessment and Feedback**

**Purpose:** To understand instructors' experiences, attitudes, and challenges regarding AI tools in TESOL assessment and feedback.

**Section 1: Demographic Information**

1. **Age:**
☐ Under 25
☐ 25–34
☐ 35–44
☐ 45–54
☐ 55+
2. **Teaching Experience:**
☐ Less than 1 year
☐ 1–5 years
☐ 6–10 years
☐ More than 10 years
3. **Familiarity with AI tools:**
☐ None
☐ Basic
☐ Intermediate
☐ Advanced

**Section 2: Usage of AI Tools**

1. How often do you use AI tools for assessment and feedback in your TESOL classes?
☐ Never
☐ Rarely
☐ Sometimes
☐ Often
☐ Always
2. Which AI tools do you currently use? (Check all that apply)
☐ Automated writing evaluators
☐ Speech recognition software
☐ Intelligent tutoring systems
☐ AI-powered quizzes/tests
☐ Other (please specify): \_\_\_\_\_\_\_\_\_\_\_\_

**Section 3: Perceptions of AI Benefits**

1. To what extent do you agree that AI tools help improve the following? (1=Strongly disagree, 5=Strongly agree)

| **Benefit** | **1** | **2** | **3** | **4** | **5** |
| --- | --- | --- | --- | --- | --- |
| Speed of providing assessment feedback | ☐ | ☐ | ☐ | ☐ | ☐ |
| Accuracy of feedback | ☐ | ☐ | ☐ | ☐ | ☐ |
| Personalization of learning | ☐ | ☐ | ☐ | ☐ | ☐ |
| Student engagement | ☐ | ☐ | ☐ | ☐ | ☐ |
| Teacher workload reduction | ☐ | ☐ | ☐ | ☐ | ☐ |

**Section 4: Challenges and Concerns**

1. What are the main challenges you face when integrating AI into TESOL assessment? (Check all that apply)
☐ Lack of training
☐ Technical issues/infrastructure
☐ AI not understanding aviation-specific language
☐ Student over-reliance on AI feedback
☐ Lack of trust in AI-generated feedback
☐ Other (please specify): \_\_\_\_\_\_\_\_\_\_\_\_
2. Please share any concerns you have about using AI in TESOL assessment and feedback:

**Section 5: Support and Training**

1. How sufficient do you find the AI training provided by VAA?
☐ Very insufficient
☐ Insufficient
☐ Neutral
☐ Sufficient
☐ Very sufficient
2. What additional support or resources would help you use AI tools more effectively?

Appendix B

**Survey for Students on AI in TESOL Assessment and Feedback**

**Purpose:** To gather students' experiences, attitudes, and challenges in using AI tools for language learning assessment and feedback.

**Section 1: Demographic Information**

1. **Age:**
☐ Under 18
☐ 18–22
☐ 23–27
☐ 28+
2. **Level of English proficiency:**
☐ Beginner
☐ Intermediate
☐ Advanced
3. **Experience with AI tools in your language learning:**
☐ None
☐ Basic
☐ Moderate
☐ Extensive

**Section 2: Usage of AI Tools**

1. How often do you receive AI-generated assessment or feedback in your English classes?
☐ Never
☐ Rarely
☐ Sometimes
☐ Often
☐ Always
2. Which AI tools have you used or interacted with? (Check all that apply)
☐ Automated writing feedback tools
☐ Speech recognition/pronunciation apps
☐ AI-based quizzes or learning games
☐ Chatbots or intelligent tutoring systems
☐ Other (please specify): \_\_\_\_\_\_\_\_\_\_\_\_

**Section 3: Perceptions of AI Benefits**

1. To what extent do you agree that AI tools have helped you with the following? (1=Strongly disagree, 5=Strongly agree)

| **Benefit** | **1** | **2** | **3** | **4** | **5** |
| --- | --- | --- | --- | --- | --- |
| Understanding my language errors | ☐ | ☐ | ☐ | ☐ | ☐ |
| Receiving feedback quickly | ☐ | ☐ | ☐ | ☐ | ☐ |
| Learning at my own pace | ☐ | ☐ | ☐ | ☐ | ☐ |
| Feeling more motivated to practice | ☐ | ☐ | ☐ | ☐ | ☐ |
| Preparing for aviation-specific English | ☐ | ☐ | ☐ | ☐ | ☐ |

**Section 4: Challenges and Concerns**

1. What difficulties have you faced when using AI tools for language assessment? (Check all that apply)
☐ Feedback is not clear or helpful
☐ AI does not understand aviation terms
☐ Technical problems or access issues
☐ I rely too much on AI and don’t learn independently
☐ Other (please specify): \_\_\_\_\_\_\_\_\_\_\_\_
2. Please describe any concerns you have about AI feedback in your language learning:

**Section 5: Suggestions and Improvements**

1. What improvements would you suggest for AI tools used in your English classes?
2. Would you like more AI-based learning opportunities at VAA?
☐ Yes
☐ No
☐ Not sure
1. Foreign Language Faculty, Vietnam Aviation Academy, Ho Chi Minh City, Vietnam; *Email: trinhpt@vaa.edu.vn* [↑](#footnote-ref-1)
2. Business Administration Faculty, Vietnam Aviation Academy, Ho Chi Minh City, Vietnam [↑](#footnote-ref-2)