



## AI in Vocational English Classrooms: Mapping Teachers' Knowledge, Benefits, and Pedagogical Uses

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### Abstract

The rapid progress of educational technology has caused big changes in English for Specific Purposes (ESP) instruction, especially in vocational education. Among these innovations, Artificial Intelligence (AI) has become a revolutionary tool that is changing the way teachers design lessons, assess learning, and engage students. Although AI has the potential to create adaptive and engaging learning environments, the ways in which vocational English teachers apply these tools to ESP instruction remains largely unexplored. The present study addresses the gap in research on vocational English teachers' familiarity with AI tools, their perceived benefits, and the challenges they encounter when integrating these tools into ESP instruction. This study draws on qualitative data obtained through surveys and semi-structured interviews involving vocational English teachers in Malang, Indonesia. The thematic analysis was used to analyze and interpret teachers' attitudes and experiences in leveraging AI tools in the classroom. The findings reveal varying levels of familiarity with AI, categorized as low, middle, or high, indicating different perceptions and practices of integrating AI into ESP instruction. Additionally, the findings indicate that teachers recognize AI's contributions to enhancing student engagement, supporting personalized learning, and improving lesson efficiency. However, teachers also reported challenges, particularly regarding readiness, the need for continuous professional development, and maintaining a balanced relationship between technology use and human interaction. The study underscores the importance of teacher training and institutional support to ensure that AI serves as a complementary tool that enhances, rather than replaces, the human dimension of vocational language teaching. By offering empirical evidence from a vocational ESP context which is a setting rarely explored in existing AI literature, the study extends understanding and offers practical implications for sustainable AI integration in language education.

### Keywords:

Teacher readiness; Personalized learning; Artificial Intelligence (AI); Vocational ESP Instruction

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### A. INTRODUCTION

In line with the rapid and massive development in technology, teachers and researchers are compelled to address the pedagogical and practical consequences arising from these rapid advancements. One of which is the era of Artificial Intelligence (AI) where nowadays it is rapidly becoming a useful and essential tool for education. Jiang (2022) referred to AI as the application of technological advancements, such as machine learning and natural language processing to enable a computerized device to emulate smart human behaviors. However, this rise of generative AI technology such as ChatGPT becomes issues to scholars and teachers regarding its effectiveness

and ethical component in an academic environment (Alberth, 2023). In language teaching, AI has been a significant pedagogical reform. Its application has helped significantly in enhancing the teaching of instruction, supporting the development of adaptive learning environments as well as encouraging learner engagement. Within educational settings, research has shown AI to improve learning, optimize interaction, and advance access (Zhao, 2024; Mahendra et al., 2023).

Teachers' readiness and pedagogical strategies play a pivotal role in determining the extent to which AI serves as a meaningful complement to language instruction rather than functioning as a superficial extension of traditional teaching practices. Teachers recognize AI's potential to support personalized learning, enhance skill development, assist in lesson planning, and provide immediate feedback (Sari & Sari, 2025; Basheer, 2025). Qureshi et al. (2025) showed that there were significant, positive correlations between teachers' perceptions and attitudes and AI readiness of teachers, with digital fluency being the primary driver for adoption. Therefore, exploring how teachers leverage AI in the classroom is essential to understanding its true potential and ensuring its sustainable integration into the broader educational ecosystem.

Teachers' familiarity, confidence, and perceived usefulness of AI tools forms the foundation for successful implementation in classroom contexts (Granström & Oppi, 2025). In vocational English for Specific Purposes (ESP) classes, teachers' familiarity with AI-driven platforms varies a lot. Some teachers know only the basics, while others actively use these platforms in their lesson planning, assessment, and classroom interaction. Understanding this variation is critical due to the extent of prior experience often affects teachers' confidence and values related to new practices. In addition to a sense of familiarity, the perceived impact of AI is an equally important factor in determining teachers' attitudes. Most educators recognise that AI has the potential to enable personalised learning, improve student engagement and save teachers time on menial, repetitive admin tasks. Examining these aspects including familiarity, perceived benefits, and practical classroom applications provides a comprehensive understanding of how AI transforms instructional practices in vocational ESP education.

Prior studies have highlighted the potential advantages of AI in the field of education, including tailored learning experiences, adjustable assessments, and the increase of student engagement. A research by Mahendra et al. (2023) validate the impact of applications based on AI in shaping the opinion of students toward independent learning and fostering their learning independence. Similarly, the investigation of AI tools in language teaching uncovers their potential to increase student engagement and provide immediate practice possibilities as seen in Saraswati's (2023) research on AI Replika. Although the prior studies have given us knowledge on the impact of using AI in language classroom, they are merely talking about how AI is leveraged in the teaching process. Despite such positive findings, the actual attitudes of instructors in terms of adopting AI in ESP instruction have yet to be exhaustively studied. Numerous studies have explored the role of AI in education, particularly its ability to facilitate personalized learning and boost student engagement. For instance, Mahendra et al. (2023) discovered that AI-based learning programs can promote learner autonomy. This is because students can learn and get feedback at their own pace, which enables autonomous learning. Additionally, Solichah (2024) examined the use of ChatGPT in academic writing, weighing its potential benefits against its challenges in fostering genuine student creativity and engagement. In addition, research has examined the benefits and drawbacks of implementing AI technologies like AI Replika in university English speaking classes, with particular focus on future research on how teachers understand and adopt AI technologies in teaching English (Zhao, 2024).

Compared to general English classes that aim at general language skills, ESP is designed to meet the professional and academic language needs of learners (Yuniar, 2022). The course emphasizes technical vocabulary, communication in specialized domains, and the effective application of language in diverse contexts. At the vocational level, ESP is crucial in preparing students for the workforce through language skills congruent with experiential, experiential learning (Mao, 2024). As technology becomes a bigger part of vocational education, it's important to understand how teachers see and use AI in ESP classes. This study does so by examining teachers' attitudes towards AI with specific focus on perceived benefits, problems, and classroom applications. The findings will provide practical advice on creating effective AI incorporation plans

and facilitating vocational students in acquiring specialist communication ability needed in professional achievement.

This study fills a critical gap by focusing specifically on vocational ESP teachers which is an underexplored group in existing AI-in-education research, and by mapping not only their familiarity with AI tools but also their perceived benefits and classroom-level applications. Unlike prior studies centered on student outcomes or general English instruction, this research highlights teachers' perceptions and experiences as the primary lens for understanding AI integration in vocational ESP contexts. In light of the limited research focusing on teachers' roles in AI integration within vocational ESP, this study addresses the following questions:

1. How do vocational English teachers leverage AI tools in their English for Specific Purposes (ESP) instruction?
2. What is the perceived impact of AI tools on students' comprehension in English for Specific Purposes (ESP) instruction?

## **B. METHODS**

This present study employed a descriptive qualitative design, emphasizing more on observing particular phenomena and analyzing the meaning of such things afterward. Concerning the needs of investigating teachers' perceptions towards the use of AI in vocational ESP instruction, this study utilized qualitative research in regard to explore the problem and develop an understanding of the particular phenomenon as stated in Cresswell (2012). To be specific, the study was done in which the qualitative data were obtained from the surveys and semi-structured interview. This study design was selected as the researcher tried to describe, analyze as well as interpret the larger data or findings from the sample selected.

### ***Respondents***

The subjects of this study were Vocational English teachers in Malang gathered in Vocational English Teacher Community (MGMP Bahasa Inggris SMK Kota Malang). There were 50 Vocational English teachers involved consisting 13 male and 37 female teachers. In qualitative research, the research identified the subjects and sites on purposeful sampling in order to obtain best understand this phenomenon (Cresswell, 2012). The selection was primarily based on their practical experiences with AI tools in ESP instruction, availability, and readiness to participate. The recruitment process began with distributing the surveys to WhatsApp Group of Vocational English Teacher Community, outlining the purpose of the study, the subjects' role, as well as data collection method. In addition, the research also provided the ethical research guidelines containing an informed consent form to sign.

### ***Instruments***

There are two types of instruments the researcher used to collect the required data for the study, i.e., surveys or questionnaires and semi-structured interviews. Those two instruments helped the researcher to gather rich qualitative data related to the teachers' perspectives on the use of AI in ESP instruction. The surveys or questionnaires contain three sections, each of which refers to the three main elements the researcher focused on. The first section dealt with teachers' belief in the use of AI in ESP instruction, the second dealt with teaching practices on the use of AI in their classroom, and the last section dealt with the perceived benefits of leveraging AI in ESP instruction. Each section used structured items, including Likert-scale statements, multiple-response options, and short open-ended prompts. The semi-structured interviews involved some teachers who were willing to have further discussions related to the topic. To ensure reproducibility, all items were coded using a predefined coding scheme, and responses were numerically categorized based on familiarity levels (low, middle, and high users). The semi-structured interviews were carried in both *Bahasa Indonesia* and English in order to make it easier for the interviewees to convey their ideas without worrying about the language barriers. Furthermore, the researcher also recorded and transcribed the interviews as stated by Bryman (2012) that recording and transcribing an interview is necessary to obtain the data effectively and efficiently.

### ***Data Collection Procedures***

The online questionnaires were distributed within a week in order to gain rich qualitative data. As the number of participants reached a half of the Vocational English teachers in Malang, the researcher began to analyze the data and listed some names who were willing to have a further discussion through semi-structured interviews. Then, the researcher organized the schedule for each participant to have the interview. Before starting the interview, the researcher briefed the participants about the objective of the study, the interview process, and the personal data protection as well. Then, the researcher secured the informed consent and ensured the participants' comprehension on their right to withdraw from the study any time (Marzuki, et. al, 2023).

### ***Data Analysis***

The data obtained from both questionnaires and semi-structured interview were analyzed by using thematic analysis. According to Braun (2006), the focus of thematic analysis was to discover patterns and relationships among themes derived from the qualitative data. The data obtained were analyzed in six steps, including prepare and organize the data obtained both from the questionnaires and semi-structured interviews; explore and read thoroughly the whole data to find general meaning; begin to analyses the data by using coding or labeling process based on the sections mentioned in data instrument; generate and explain the description of sections; describe the analyzed data in terms of descriptive qualitative; and the last interpret the teachers' attitudes towards the use of AI in Vocational ESP instruction.

## **C. RESULT & DISCUSSION**

The research examined vocational English teachers' attitudes regarding the integration of AI in ESP teaching. The sample of the study consisted of 50 vocational English teachers from Malang, Indonesia. Qualitative data were gathered using surveys and semi-structured interviews that allowed for the in-depth analysis of teachers' familiarity with AI tools, perceived benefits, and practical applications in the classroom.

### ***The leverage of AI tools in ESP instruction***

#### ***Familiarity with AI Tools in Education***

Teachers displayed varying levels of familiarity with AI tools in education. They were categorized into three groups based on their duration of using AI tools for academic purposes. Teachers with less than 6 months of experience with AI are classified as low users. Middle Users is the category for teachers who use AI for 6 months to 1 year. The last category is high users for those with more than 1 year of experience with AI. This variation in experience allowed the study to examine how familiarity with AI tools influenced their perceptions and attitudes towards the integration of AI in ESP instruction.

The findings show that there are three levels of experience with AI tools among vocational English teachers. The levels are: low users (less than six months of experience), middle users (six months to one year), and high users (more than one year). Across all groups, teachers had mostly positive perceptions about using AI in ESP classes. The ratings on a five-point scale were between 3.6 and 4.7. The following table illustrates the mean scores for each statement across the different user groups:

**Table 1.** The mean scores for each statement

<b>Category</b>	<b>Low Users</b>	<b>Middle Users</b>	<b>High Users</b>
Familiarity with AI Tools	4	4	4.5
Enhances Student Engagement	4	4.3	4.5
Provides Personalized Learning	4	4.2	4.5
Interactive Learning	4	4.4	4.6
Customized Lesson Plans	4	4.5	4.7
Efficient Progress Assessment	4	4.3	4.6
Adapts Teaching Strategies	4	4.3	4.5
Creates Engaging Content	4	4.2	4.6

Manages Student Progress	4	4.3	4.6
Focus on Critical Thinking	3	4.0	4.4
Aligns with Teaching Goals	4	4.1	4.5
Reduces Traditional Methods	4	3.6	4.0

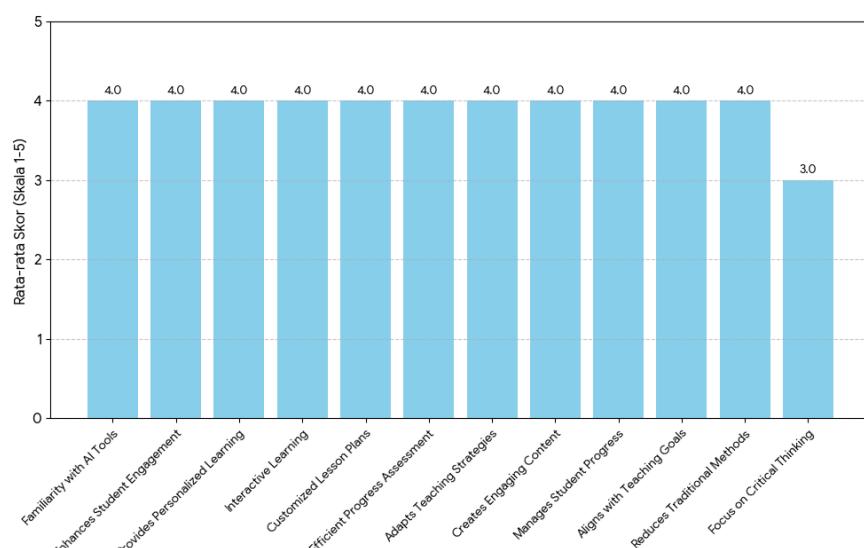
According to the table, it can be seen that teachers with less than six months of experience working with AI tools showed an average familiarity rating of 4 out of 5. Generally, they tend to think that AI plays a large role in enhancing ESP instruction, is able to provide students with personalized learning experiences at 3.75, and create more interactive learning environments at 3.75. However, their belief in its capability for developing critical thinking was somewhat lower at 3.50. These teachers appreciated AI in helping them create customized lesson plans at 3.50 and managed student progress at 3.50. Despite these aforementioned benefits, they expressed certain concerns about fully integrating AI and thus showed a need for more comprehensive training and support.

Middle users reflected growing confidence and adaptability, with mean ratings between 3.8 and 4.3. They valued AI for improving student engagement, lesson efficiency, and instructional creativity but still recognized the importance of continuous professional development to optimize its use. Low and middle users' hesitation reflects the early adoption challenges often seen in educational technology integration (Zhao, 2024), including limited training, lack of institutional guidance, and uncertainty about AI's pedagogical implications. Their lower confidence in AI's ability to foster higher-order thinking suggests a perception that current AI applications mainly assist with surface-level tasks (e.g., content creation or grading) rather than promoting cognitive depth.

The teachers who were most familiar with and confident in the advantages of AI were those who had been utilizing the tools for more than a year. They strongly believed that AI improves ESP instruction by making students more interested in the subject, encouraging critical thinking, and supporting personalized learning ( $M = 4.6\text{--}4.7$ ). Align with the findings, Mahendra et al. (2023) and Qureshi et al. (2025) also found that educators with experience using AI tend to use it more effectively. In addition, Basheer (2025) claimed experienced teachers see AI as a way to personalize and improve efficiency. However, they strongly believe that human connections are still very important for learning.

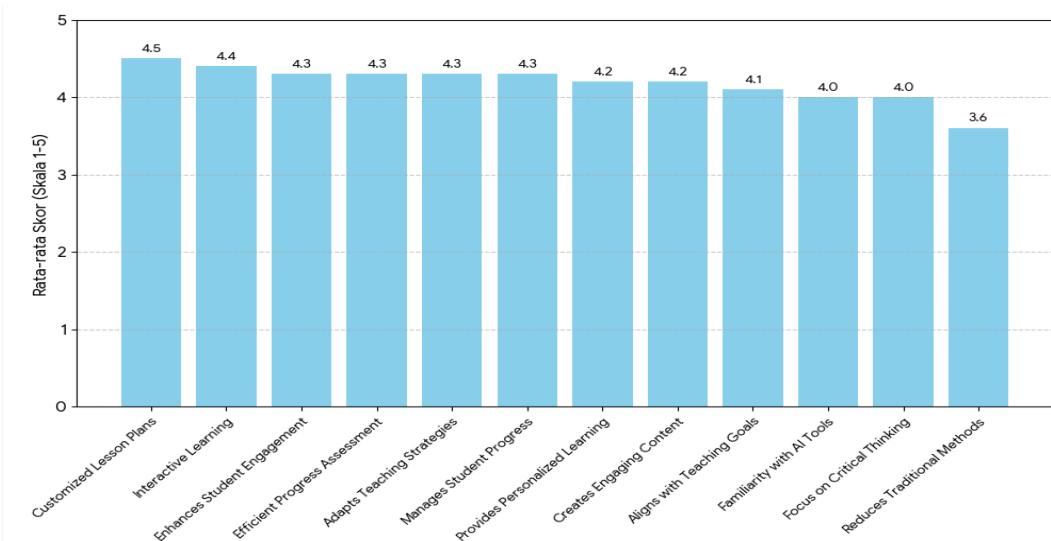
### ***Perceived Impact of AI on ESP Instruction***

There are 50 participants involved in this research. The participants that were categorized as low users consist of 16 teachers, 17 teachers as middle users, and 17 teachers as high users. Each category has different perceived impact of AI on the instruction as shown in the figure 1.



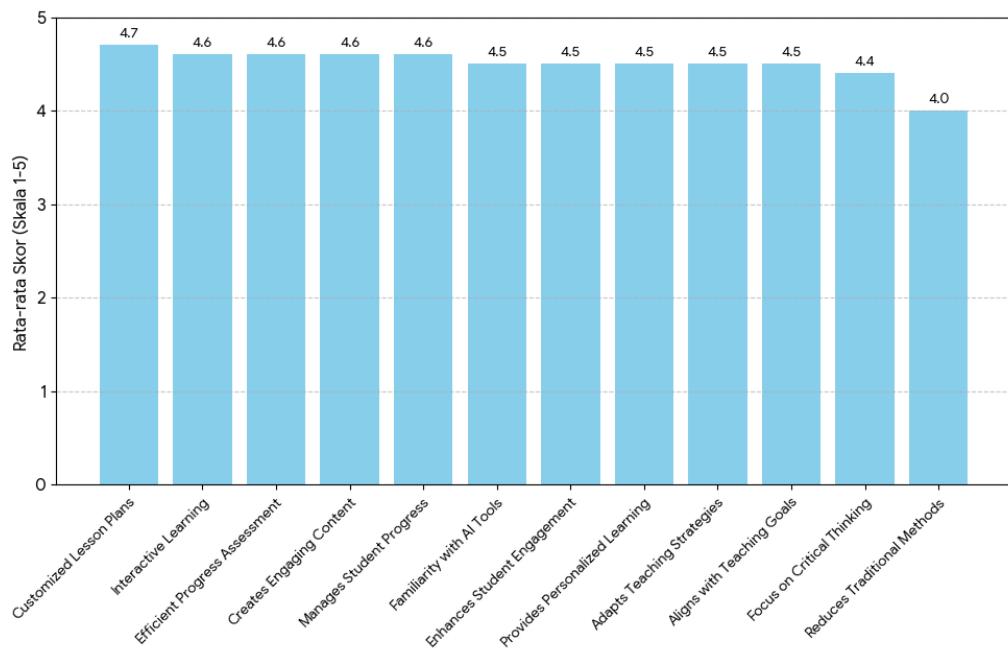
**Figure 1.** Low users answers

Less experienced teachers with less than six months of experience working with AI tools had an average of 4 on the scale of familiarity out of 5 categorized as low users. Their belief in the enhancement of AI in teaching ESP was rated as high as 3.75. These teachers believe AI makes classes more interesting and provides resources for personalized learning in ESP classes. Saraswati et al. (2023) and Harunasari (2023) agree that AI tools like Replika increase student motivation and interaction in speaking classes. AI is useful for customized lesson plans and student progress (rated 3.50-3.75). However, the ability of AI to support critical thinking was graded slightly lower at 3.50. Despite these benefits, they expressed some concerns about the integration process, which signals that more training and resources are needed fully to take advantage of AI tools (Granström & Oppi, 2025; Qureshi et al., 2025).



**Figure 2.** Midle users answers

Teachers who had used the AI tools for between six months and a year described somewhat better ratings compared to low users are categorized as middle users. Their familiarity with the AI tools remained at an average of 4, and their ratings on AI's role in enhancing student engagement were higher, at 4.17. They also recognized its value in offering personalized learning (4.00) and in making learning both interactive and dynamic (4.00). Middle users found AI very useful in assessing the progress of students (3.50) and modifying teaching strategies according to emerging learning patterns (3.67). They also revealed that AI aligns with their teaching goals and is helpful in creating more engaging content for ESP courses, with ratings of 3.83 and 4.17. These ratings support Sari's findings (2025) that AI enhances instructional creativity in ESP contexts. However, like the low users, they again showed a need for continuous support and professional development for the maximum benefits of AI.



**Figure 3.** High users answers

High users is a category for the highest the level of familiarity teachers who had used AI tools for more than a year, averaging 4.5. They strongly believed in the significant benefits of AI, rating as high as 4.67 for the role it plays in enhancing ESP instruction. High users also pointed out that AI has a big impact on student engagement and personalized learning, with the rating standing at 4.67. They praised AI for its customized lesson plans and efficient progress management and analysis ( $M= 4.58-4.75$ ). High users also noted that AI helps them focus more on critical thinking exercises (4.58) and aligns well with their teaching goals (4.67). This lines up with what Alberth (2023) found, that AI has the potential to get students to think analytically and reflectively in the classroom. They agreed that AI doesn't yet eliminate traditional teaching methods, and that merging AI and conventional teaching is important.

### **The effect of AI on the Students' Comprehension on ESP Instruction**

#### ***Practical Applications in the Classroom***

Thematic analysis of the semi-structured interviews with vocational English teachers revealed the practical application insights (Braun & Clarke, 2006; Creswell, 2012). Teachers of all three categories of AI users recorded that AI tools increased significantly the engagement of students in lessons, especially those who were identified as high users of AI, underlining the interactive nature of most AI applications. High users said that AI made learning more exciting and interesting. It also helped to maintain motivation and interest among students (Mahendra et al., 2023; Zhao, 2024). AI tools offer real-time games and simulation learning, which makes the learning experience fun and efficient. All of the AI tools were highly appreciated for the fact that they offered customized learning experiences. Teachers said AI could adapt to different students' needs by offering personalized resources and feedback. High users of AI reported more experience in using this technology in their teaching practice, especially in adapting to the different learning pace and styles of students. They explained that AI could identify areas where students struggled and provide additional practice or alternative explanations. This supports different types of teaching and learning paths that are personalized to each student. These findings align with Jiang's (2022) conceptualization about AI as a system that has a capability to emulate human behavior. It suggested that teachers perceive AI not as a digital tool, but as an instructional partner capable of extending their pedagogical objective. Moreover, Yuniar (2022) also stated that the adaptive features of AI align well with the instructional needs. It occurs because ESP teaching requires sensitivity to technical terminology and communication that is grounded in specific contexts.

Teachers valued the efficiency of AI in assessing the progress of students. The AI tools gave

prompt and precise feedback about student performance, thus facilitating the tracking of learning trends and further facilitated more responsive pedagogy. Both middle and high users reported that these tools facilitated continuous assessment, reducing the administrative burden for teachers. For instance, automated marking systems and AI-generated analytics help teachers easily identify students' strengths and weaknesses. This allows teachers to modify their teaching methods to better suit each student. They also said that because of AI doing routine tasks automatically, they were able to focus on the students' critical thinking more. High users of AI felt that these tools freed up their time, enabling them to engage students in higher-order thinking activities. Some AI applications are very good at encouraging critical thinking. These include problem-solving exercises, learning through scenarios, and project-based assessments (Sari & Sari, 2025; Saraswati et al., 2023). Teachers noticed that these activities encouraged students to analyze, evaluate, and create rather than just remember and understand information.

While there are so many benefits, the teachers also reported some challenges in integrating AI into already existing curricula. Low and middle users, who were still getting used to the AI technologies, have particularly highlighted proper training and resources. They were afraid of the initial learning curve and technical support. Teachers also added that training is required more frequently to stay updated with emerging tools and methods of the use of AI in teaching. Some teachers were very careful while using AI for teaching, believing that it will totally override and affect the balance of technology-human contact in classrooms (Basheer, 2025; Alberth, 2023). These findings confirm the Introduction's claim that the successful integration of AI in vocational ESP classrooms depends on teachers' familiarity, perceived usefulness, and confidence in using these tools. The practical experiences shared by teachers illustrate that AI has the potential to transform ESP instruction. However, this transformation requires adequate training, ethical awareness, and the development of pedagogical strategies that ensure human-technology balance in the classroom.

#### **D. CONCLUSION**

In a nutshell, this might be the integration of AI in ESP vocational teaching methodology, a shift that could revolutionize teaching methodologies along with learning experiences. The current study has provided important insights into the attitudes of vocational English teachers toward AI and both the benefits and challenges of its adoption. With the identified challenges being addressed and the teachers supported and trained sufficiently, educational institutions can make better use of AI to improve learning outcomes among vocational students. A balanced approach can be emphasized wherein AI and traditional teaching practices complement each other to ensure that technology enhances rather than diminishes the essential human elements of education.

This research enriches the emerging literature on AI in education and points to the importance of consideration of teachers' attitudes and experiences for the successful implementation of AI technologies. Future research could investigate how students perceive AI-supported ESP instruction, compare learning outcomes between AI-assisted and traditional approaches, and explore long-term impacts of AI integration on teaching practices. Additionally, examining specific AI tools across different vocational disciplines or conducting longitudinal studies could offer deeper insights into sustainable and effective implementation models. As the educational landscape continues to shift, such research will be essential for ensuring that AI integration meaningfully enhances the learning experiences and professional preparedness of vocational students.

#### **REFERENCES**

Alberth. (2023). The Use of Chatgpt In Academic Writing: A Blessing Or A Curse In Disguise?. *TEFLIN Journal*, 34(2), 337–352. <https://doi.org/10.15639/teflinjournal.v34i2/337-352>

Basheer C., F.B. (2025). English Teachers' Perceptions of AI Tools: Friend Or Foe? ShodhGyan-NU: *Journal of Literature and Culture Studies*. <https://doi.org/10.29121/shodhgyan.v3.i2.2025.50>

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>

Bryman, A. (2012). *Social research methods* (4th ed.) New York: Oxford University Press

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage Publications, Inc.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Granström, M., & Oppi, P. (2025). Assessing teachers' readiness and perceived usefulness of AI in education: an Estonian perspective. *Frontiers in Education*. <https://doi.org/10.3389/feduc.2025.1622240>

Harunasari, Siti. (2023). Examining the Effectiveness of AI-integrated Approach in EFL Writing: A Case of ChatGPT. *International Journal of Progressive Sciences and Technologies*. 39(2). 357-368. <http://dx.doi.org/10.52155/ijpsat.v39.2.5516>

Jiang, R. (2022). How does artificial intelligence empower EFL teaching and learning nowadays? A review on artificial intelligence in the EFL context. *Frontiers in Psychology*, 13, 1049401. <https://doi.org/10.3389/fpsyg.2022.1049401>

Mahendra, M. W., Nurkamilah, N., & Sari, C. P. . (2023). Artificial-intelligence powered app as learning aid in improving learning autonomy: Students' perspective. *JEES (Journal of English Educators Society)*, 8(1).

Mao, F., & Zhou, J. (2024). A needs analysis of ESP courses in colleges of art and design: Consensus and divergence. *Plos one*, 19(6), e0305210. <https://doi.org/10.1371/journal.pone.0305210>

Marzuki, Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education*, 10(2), 2236469. <https://doi.org/10.1080/2331186X.2023.2236469>

Qureshi, N.M., Qureshi, F.S., Bandeali, D.M., & Akbar, S. (2025). Teacher Perceptions and Readiness for AI-Enhanced Teaching in Developing Countries. The Critical Review of Social Sciences Studies. <https://doi.org/10.59075/8tsejm76>

Saraswati, G. P. D., Farida, A. N., & Yulianti, Y. (2023, November). Implementing AI Replika in higher education speaking classes: Benefits and challenges. In *ELT Forum: Journal of English Language Teaching*. 12(3), 207-215. <https://doi.org/10.15294/elt.v12i3.76525>

Sari, L.I., & Sari, R.H. (2025). AI Integration in English Language Teaching: Insights into ESP Teachers' Views and Readiness. *English Review: Journal of English Education*. 13(2), 779-792. <https://doi.org/10.25134/erjee.v13i2.11505>

Solichah, N., & Shofiah, N. (2024). Artificial Intelligence (AI) Literacy in Early Childhood Education: A Scoping Review. *Psikologika: Jurnal Pemikiran dan Penelitian Psikologi*, 29(2), 173-190. <https://doi.org/10.20885/psikologika.vol29.iss2.art1>

Yuniar, R. F., & Radita, C. (2022). The effectiveness of using "new big city adventure game" in enhancing students' vocabulary mastery in vocational high school level. *English Edu: Journal of English Teaching and Learning*, 1(2), 55-65.

Zhao, Y. (2024). Artificial Intelligence and Education: End the Grammar of Schooling. *ECNU Review of Education*, 8(1), 3-20. <https://doi.org/10.1177/20965311241265124>