



**PROCESS: Journal of Professional  
Communication and English Studies**  
International Conference on Vocational English Language  
(ICOVEL) Edition

journal homepage: <https://ejournal1.pnp.ac.id/process/index.php/files/index>



## How do the esp students use ai for english language learning?

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### article info

Article history:  
Received: 09 04 2026  
Accepted: 17 04 2026  
Available online: 22 06 2026

Keywords:  
AI  
English Learning  
ESP Students

### abstract

The integration of Artificial Intelligence (AI) in English Language Learning has gained increasing attention, particularly in the context of English for Specific Purposes (ESP). This study aims to explore ESP students' perspectives on the use of AI in learning English. The participants of this study were 76 students from the Midwifery Department at Poltekkes Kemenkes Malang. A survey research design was employed, utilizing a questionnaire and semi-structured interviews to collect data. The collected data were analyzed using descriptive statistical analysis to identify patterns of students' responses and experiences. The findings reveal that the respondents generally demonstrated positive attitudes toward the use of AI in English language learning. Students perceived AI tools as helpful in improving their understanding of English, particularly in ESP contexts such as medical terminology, translation, and professional communication. In addition, AI was considered beneficial in supporting independent learning, increasing learning flexibility, and providing immediate feedback. Many students reported that AI tools enhanced their confidence in using English, especially in completing academic tasks and practicing language skills. In conclusion, the study highlights the potential of AI as an effective supplementary tool in ESP-based English learning. It also underscores the importance of continuous institutional support through structured programs to maximize students' learning outcomes. These findings contribute to the growing body of research on AI integration in language education, particularly within healthcare education contexts.

## 1. Introduction

The rapid development of Artificial Intelligence (AI) has significantly transformed various aspects of education, including English Language Learning. AI-powered tools such as chatbots, automated writing assistants, and translation applications are increasingly accessible and widely used by students. These technologies enable personalized learning, provide immediate feedback, and support flexible learning environments. In language education, AI has been recognized as a transformative tool that enhances learning experiences by adapting to individual learner needs and improving engagement (Peña-Acuña, B., & Corga Fernandes Durão, 2024).

In the context of English for Specific Purposes (ESP), particularly in health-related disciplines such as midwifery and nursing, students are required to master both general English and profession-specific communication skills. These include understanding medical terminology, interacting with patients, and interpreting clinical information in English. However, many students still face challenges due to limited exposure to authentic

communication and insufficient opportunities for practice. The integration of AI tools has the potential to address these challenges by providing interactive and context-based learning support that aligns with students' academic and professional needs.

Recent studies indicate that students generally demonstrate positive perceptions toward the use of AI in English language learning. AI tools are considered beneficial in enhancing motivation, improving writing skills, and providing instant feedback, which supports students' language development (Erito, 2023). These findings suggest that AI plays a significant role in shaping students' learning experiences. However, most existing studies have primarily focused on general English learning contexts or specific skills, such as writing, rather than exploring broader experiences in ESP settings.

Crucially, there exists a substantial gap in the literature regarding the contextual application of AI in ESP, particularly in healthcare education. Much of the existing research fails to address discipline-specific necessities such as clinical communication and medical terminology, which are vital for nursing and midwifery students. Moreover, previous studies tend to evaluate AI tools' effectiveness rather than exploring students' lived experiences, perceptions, and usage patterns in genuine ESP learning environments. Furthermore, limited empirical evidence is available from developing country contexts, including Indonesia, where technological access, digital literacy, and educational practices may differ significantly from those in more frequently studied settings.

Addressing these deficiencies is crucial for ensuring that AI integration in ESP learning is both educationally effective and suitable for the context. Consequently, this study intends to investigate the views of ESP students in the Midwifery Department at Poltekkes Kemenkes Malang on AI utilization in English language education. By exploring their experiences, attitudes, and AI usage patterns, this research aims to offer detailed insights into AI's role in supporting English learning within healthcare. The findings are expected to aid in creating more effective, contextually relevant, and technology-enhanced strategies for ESP learning, particularly in health education programs.

## **2. Method**

This section describes in detail how this study was conducted. It includes information on the participants/population/sample, instruments, procedures, and data analysis.

### **2.1 Kind of Research**

This study employs a mixed-method approach to examine the research problem. A mixed-method design is considered appropriate as it allows researchers to combine the strengths of numerical data and in-depth insights, thereby providing a more complete analysis of complex educational phenomena (Creswell, J. W., & Plano Clark, 2018). The research design adopted in this study is survey research, which is commonly used to collect data on participants' attitudes, perceptions, and experiences in a structured manner (Cohen, L., Manion, L., & Morrison, K. Cohen, L., Manion, L., & Morrison, 2018). The study aims to explore the perspectives of ESP students in the Midwifery Department at Poltekkes Kemenkes Malang regarding the use of AI in English language learning.

### **2.2 Data Collection**

Data were collected using questionnaires and in-depth interviews. The questionnaire was utilized to gather quantitative data regarding students' frequency of AI use, perceptions, and attitudes toward AI in English language learning. Questionnaires are widely recognized as efficient instruments for collecting standardized data from a relatively large number of participants (Sekaran, U., & Bougie, 2016) . Meanwhile, in-depth interviews were conducted to explore students' experiences, opinions, and challenges in greater detail, allowing for richer and more contextualized data (Saldaña, 2016).

The questionnaire was designed according to the literature review and modified from previous research. It contained 5 sections, namely demographic information (5 questions), AI Usage in English Learning (5 questions), Perceived Usefulness (7 questions), Perceived Ease of Use (4 questions), Attitude and Behavioral Toward AI in Learning (7 questions). The questionnaire was measured using a Likert Scale (1-4); strongly disagree and strongly agree, short answer, and tick boxes. In addition to the questionnaire, an in-depth interview in the form of open-ended questions was also administered to collect additional data, and it contained 3 questions. For surveys, a structured questionnaire was designed, containing (mention number of items and type, e.g., Likert scale, open-ended, multiple-choice). The interview was to allow flexibility in responses.

## 2.3 Data Analysis

The data collected in this study were analyzed using both quantitative and qualitative techniques in line with the mixed-method approach. The quantitative data obtained from the questionnaires were analyzed using descriptive statistical analysis, including frequency, percentage, mean, and standard deviation, to identify patterns of students' responses regarding their use of AI and perceptions toward English language learning. Descriptive statistics are commonly used in survey research to summarize and interpret numerical data in a meaningful way (John W. Creswell & Creswell, 2018). Meanwhile, the qualitative data collected from in-depth interviews were analyzed using thematic analysis, which involves coding, categorizing, and identifying emerging themes from participants' responses to gain deeper insights into their experiences and perspectives (Virginia Braun & Victoria Clarke, 2006). By integrating the findings from both quantitative and qualitative data, this study provides a more comprehensive understanding of students' perspectives on the use of AI in English language learning within the ESP context

## 3. Results and Discussions

This section presents the research findings and discusses them in relation to previous studies and relevant theories.

### 3.1 Results

The results obtained from the data collection of the questionnaire and interview. Table 1 below illustrates the demographic information of the respondents.

Table 1. Demographic Information

| Item | N | Percentage |
|------|---|------------|
|------|---|------------|

|                           |    |             |
|---------------------------|----|-------------|
| Gender: female            | 74 | 100%        |
| Department of Midwifery   | 74 | 100         |
| Semester: 6               | 74 | 100%        |
| Have got English Course   | 74 | 100%        |
| The frequency of AI usage |    |             |
| Always                    |    | 4.1%        |
| Often                     |    | 50%         |
| Seldom                    |    | 45.9%       |
| <b>Total</b>              |    | <b>100%</b> |

The demographic data provided important information regarding the research respondents in term of gender, department, semester, the English course, and the frequency of AI usage. According to Table 1 above, all the respondents were female related to their department of midwifery. The total number was 74 students, and they had already taken the English course in advance. 50% of them used to use AI to help them in English language learning.

Table 2. AI Usage Perception

| Item                                                        | SD/D     | A/SA      |
|-------------------------------------------------------------|----------|-----------|
| I use AI tools to help me write in English                  | 6.6/31.1 | 56.8/5.4  |
| I use AI to check grammar and vocabulary.                   | 1.4/29.7 | 48.6/20.3 |
| I use AI to practice speaking or conversation               | 5.4/20.3 | 40.5/33.8 |
| I use AI to translate medical/ESP terms                     | 6.8/18.9 | 58.1/16.2 |
| I use AI to prepare assignments or presentations in English | 4.1/31.1 | 59.5/5.4  |

The findings indicate that ESP students in the Midwifery Department demonstrate a relatively high level of AI utilization across various English learning activities, particularly for writing, grammar checking, translation of medical terms, and assignment preparation. A large proportion of students reported frequent use of AI for writing (56.8%) and preparing assignments (59.5%), suggesting that AI tools play a significant role in supporting productive language skills. Similarly, the use of AI for translating medical or ESP-related terminology (58.1%) highlights its importance in facilitating discipline-specific language comprehension.

Table 3. Perceived Usefulness

| Item                                                      | SD/D     | A/SA      |
|-----------------------------------------------------------|----------|-----------|
| AI helps me improve my English skills                     | 2.7/9.5  | 62.2/25.7 |
| AI improves my understanding of medical English (ESP).    | 1.4/12.2 | 68.9/17.6 |
| AI supports my learning in midwifery/nursing contexts     | 0/16.2   | 64.9/18.9 |
| AI helps me communicate in clinical situations in English | 0/20.3   | 59.5/20.3 |
| AI makes learning English more effective                  | 1.4/20.3 | 64.9/13.5 |

|                                            |          |           |
|--------------------------------------------|----------|-----------|
| AI helps me complete English tasks faster  | 4.1/32.4 | 54.1/9.5  |
| AI improves my confidence in using English | 0/29.7   | 55.4/14.9 |

Table 3 indicate that students hold strongly positive perceptions of AI in supporting their English language learning, particularly within ESP contexts. A substantial proportion of respondents agreed that AI improves their overall English skills (62.2%) and enhances their understanding of medical English (68.9%), suggesting that AI plays a significant role in facilitating both general and discipline-specific language acquisition. Similarly, more than half of the students perceived AI as supportive in midwifery or nursing contexts (64.9%) and helpful in clinical communication (59.5%), indicating its relevance to professional language use. In addition, the majority of students agreed that AI makes learning more effective (64.9%) and helps them complete tasks faster (54.1%), while also improving their confidence in using English (55.4%).

Table 4. Perceived Ease of Use

| Item                                            | SD/D     | A/SA      |
|-------------------------------------------------|----------|-----------|
| AI tools are easy to use                        | 0/12.5   | 54.2/33.3 |
| I can use AI without much effort                | 6.8/33.8 | 43.2/16.2 |
| It is easy to learn how to use AI tools         | 0/25.7   | 50/24.3   |
| Interacting with AI is clear and understandable | 0/39.2   | 48.9/12.2 |

The findings indicate that students generally perceive AI tools as easy to use, although some variations in responses suggest differing levels of familiarity and confidence. A majority of respondents agreed that AI tools are easy to use (54.2%) and very easy to use (33.3%), indicating a strong perception of usability. Similarly, half of the students agreed that learning how to use AI tools is easy (50%), with an additional 24.3% strongly agreeing. These results suggest that AI technologies are accessible and user-friendly for most students. However, slightly lower agreement is observed in terms of using AI without much effort (43.2%) and clarity of interaction (48.9%), with a noticeable proportion of students expressing uncertainty or lower agreement.

Table 5. Attitude and Behavioral Toward AI in Learning

| Item                                               | SD/D      | A/SA      |
|----------------------------------------------------|-----------|-----------|
| I enjoy using AI for learning English.             | 0/29.7    | 55.4/14.9 |
| Using AI is a good idea in English learning        | 2.7/35.1  | 54.1/8.1  |
| AI makes learning English more interesting         | 0/35.1    | 50/14.9   |
| I feel comfortable using AI in my studies          | 0/35.1    | 50/14.9   |
| I intend to continue using AI for English learning | 12.2/39.2 | 43.2/5.4  |
| I will recommend AI tools to my classmates         | 8.1/37.8  | 47.3/6.8  |

The findings reveal that students generally demonstrate positive attitudes and behavioral intentions toward the use of AI in English language learning, although the level of agreement varies across items. A majority of respondents reported that they enjoy using AI (55.4%) and consider it a good idea in English learning (54.1%), indicating favorable attitudes toward AI integration. Similarly, half of the students agreed that AI makes learning more interesting (50%) and that they feel comfortable using it in their studies (50%), suggesting that AI contributes to an engaging and supportive learning environment. In terms of behavioral intention, 43.2% of students expressed willingness to continue using AI, and 47.3% indicated that they would recommend AI tools to their peers.

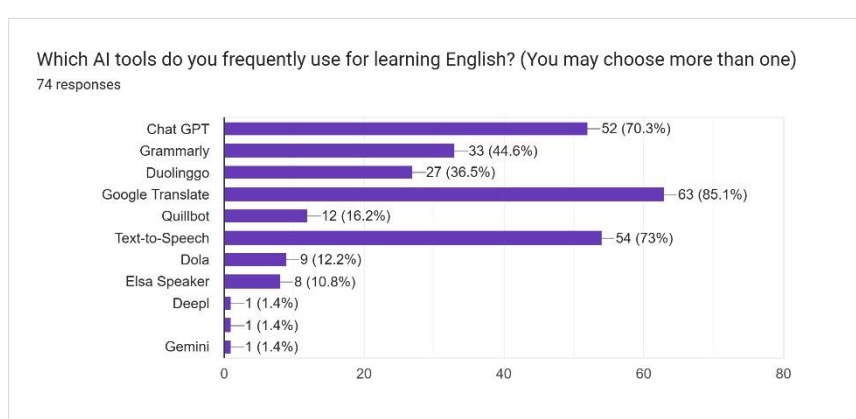


Figure 1. The Most Frequent AI Usage

The next data was the result of an interview; the first was about the challenges in using AI for their English learning process, the second was the benefits of AI usage, and the last was the common use of AI in language learning. Table 6 below displays the information from the interview, which has been classified.

Table 6. Interview Result

| Item       | Result                | Statement                                                                                                                                                                                                                                                                                                                                                               |
|------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Challenges | Accuracy & Limitation | Tantangannya pakai AI itu soal keakuratan, kadang dia ngasih jawaban yang kelihatan bener tapi ternyata cuma ngarang atau halusinasi. Selain itu, hasilnya sering kurang pas kalau kita nggak pinter-pinter bikin instruksi yang detail. Belum lagi masalah data yang nggak selalu update dan adanya risiko bias atau privasi data yang harus kita waspadai setiap saat |
| Benefits   | Fast & Easy Usage     | “Cepat Dan Ringkas”; AI helps me get information quickly, understand difficult topics, <u>and finish tasks more easily.</u>                                                                                                                                                                                                                                             |

|              |                                                                |                                                                                                                                                                                                                                                                                                 |
|--------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common Usage | Grammar, Vocabulary,<br>Translation,<br>Pronunciation/Speaking | It also saves time and makes<br>my work more efficient<br>“improve grammar”;<br>“biasanya untuk translate dan<br>juga merangkai tata bahasa<br>yang lebih tepat”; “makes it<br>easier to find vocabulary, the<br>correct way to read”; “Untuk<br>kebutuhan translate,<br>grammar, dan speaking” |
|--------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 3.2 Discussion

The first findings related to AI usage suggest that students tend to rely more on AI for receptive and written tasks than for interactive oral communication. These findings are consistent with previous studies reporting that learners predominantly use AI tools for writing assistance, grammar correction, and translation due to their practicality and immediate feedback (Arifatin, F. W., & Setyaningrum, 2024; Erito, 2023). However, the relatively lower use of AI for speaking practice contrasts with emerging research emphasizing the growing role of AI-powered conversational tools in enhancing oral proficiency. This discrepancy may be influenced by students’ limited awareness of such features or a preference for more traditional learning approaches in speaking practice. Therefore, while the overall findings align with prior research in terms of dominant AI usage patterns, they also reveal a gap in the utilization of AI for interactive language skills, particularly speaking, within the ESP context.

The second finding about the perceived usefulness is also in line with previous studies, which report that AI tools contribute positively to students’ language development, learning efficiency, and motivation due to their ability to provide immediate feedback and personalized support (Arifatin, F. W., & Setyaningrum, 2024; Erito, 2023). Moreover, recent research highlights that AI can enhance learners’ confidence and autonomy, particularly in writing and comprehension tasks (Peña-Acuña, B., & Corga Fernandes Durão, 2024). However, although the findings align with prior studies in demonstrating positive perceptions, this study provides additional evidence that AI is also perceived as beneficial in ESP-specific contexts, such as medical communication and clinical interaction, which are less explored in earlier research. This suggests that AI has the potential not only to support general English learning but also to enhance professional communication skills in specialized fields, particularly in healthcare education.

In addition to the discussion above, previous studies have reported that students tend to perceive AI tools as user-friendly and easy to learn, contributing to their widespread adoption in language learning contexts (Arifatin, F. W., & Setyaningrum, 2024; Peña-Acuña, B., & Corga Fernandes Durão, 2024). However, the present findings slightly differ from some recent studies that report higher levels of ease and confidence in interacting with AI, as a considerable number of students in this study still expressed hesitation regarding clarity and effort. This discrepancy may be influenced by differences in digital literacy levels or the extent of prior experience with AI tools. Therefore, while the results generally support existing literature, they also highlight the need for guided instruction to optimize students’ interaction with AI in ESP learning contexts.

Dealing with the attitude and behavior of students towards AI usage, the results showed a positive attitude in the use of AI because of some reasons, namely convenience, interactivity, and ability to enhance learning engagement (Arifatin, F. W., & Setyaningrum, 2024; Erito, 2023). Furthermore, within the framework of the Technology Acceptance Model, positive attitudes are closely linked to users' intention to adopt and continue using technology (Davis, 1989). However, compared to some recent studies reporting stronger behavioral intention toward AI adoption, the present findings indicate slightly lower commitment to continued use. This difference may be influenced by factors such as limited experience, concerns about accuracy, or lack of structured integration of AI into formal learning. Therefore, while the results align with existing literature in demonstrating generally positive attitudes, they also highlight the need to strengthen students' confidence and sustained engagement with AI in ESP learning contexts.

#### **4. Conclusion**

The findings of this study demonstrate that ESP students in the Midwifery Department at Poltekkes Kemenkes Malang generally hold positive perceptions toward the use of Artificial Intelligence (AI) in English language learning. Students reported frequent use of AI tools, particularly for writing, grammar checking, translation of medical terminology, and completing academic tasks, indicating that AI has become an integral part of their learning practices. In terms of perceived usefulness, AI was considered effective in improving English skills, enhancing understanding of ESP-related content, and supporting learning in professional contexts such as clinical communication. Additionally, most students perceived AI tools as relatively easy to use, although some still experienced challenges in terms of effort and clarity of interaction. Positive attitudes toward AI were also evident, as students expressed enjoyment, comfort, and interest in using AI, along with a moderate intention to continue using and recommending these tools.

However, the findings also reveal several important considerations. The use of AI for speaking or conversational practice remains relatively limited compared to other skills, indicating an imbalance in how AI is utilized across language competencies. Furthermore, while students generally showed positive attitudes, their behavioral intention to continue using AI was not uniformly strong, suggesting the presence of underlying concerns such as over-reliance, accuracy, or limited guidance in using AI effectively. These results highlight that although AI offers significant potential as a supportive tool in ESP learning, its integration should be accompanied by pedagogical guidance to maximize its benefits. Overall, this study underscores the importance of strategically incorporating AI into ESP instruction to enhance students' language proficiency and better prepare them for professional communication in healthcare contexts.

#### **Acknowledgements**

We would like to say thank you to the students of the Midwifery Department as your willingness to be the respondents of this research.

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