

CHAPTER IV

FINDINGS AND DISCUSSION

After finishing the research, the researcher developed the findings and discussions in this chapter. Discussing these findings holds significant implications for every aspect of the research project. The discussion aims to offer explanations regarding the problem definition and to interpret the results according to the relevant theoretical review.

A. Findings

It is important to point out the sources of the data that were used in this study in order to fully analyze its findings. Three different people who are referred to as participants 1 (P1), participants 2 (P2), participants 3 (P3), actively participated in the creation of the dataset that is being analyzed. The data came from structured interviews to acquire a thorough understanding of the approach and experience that participants faced when using AI tool for completing academic assignment.

Three participants were given three sets of specific questions as part of the research design, with the goal of eliciting in-depth answers that shed light on their viewpoints and AI tools utilization. In order to complete the current investigation, two research questions need to be answered. The first research

question is about the way English Language Education students choose AI tools for helping them with academic assignments. Meanwhile, the second research question is about the students' experience when embedding AI tools in completing academic assignments.

1. Types of AI tools used by English Language Education Students

In this section, the researcher will address the first research question by examining which AI tools students selected from several options provided. Participants also explained when they began using these AI tools, along with their reasons and considerations for their choices. Specific activities involving the AI tools are also explored. To address the underlying subject matter of this research, the information contained in this section will be formed into three declaration sections, each of which will comprise systematic responses to the interview questions put forward by Participant 1 (P1) through Participant 3 (P3).

a. Writing Assignment

P1 reported using only one AI tool, Grammarly, to assist with writing assignments. P1 first learned about Grammarly through a friend's suggestion when facing difficulties. The primary factor influencing P1's choice was its effectiveness in checking grammatical accuracy. P1 did not conduct a trial before using Grammarly for the first time, relying on the friend's recommendation. Grammarly was used

particularly for academic writing assignments and for checking grammar in essays for midterm and final exams in other courses.

“I prefer to use Grammarly when working on assignments because I want to check the accuracy of the grammar in my work. Without any trial, I immediately used AI tools because I trusted my friend's recommendation.”

In contrast to P1, P2 utilized Chat GPT and Grammarly, discovering them via social media and peer discussions. The tools were chosen for their ease of use and suitability for writing tasks. Similar to P1, P2 did not perform initial trials. Chat GPT was employed for brainstorming ideas and generating additional paragraphs, while Grammarly was used for correcting grammatical errors post-writing.

“When I use AI for writing, I use both Chat GPT and Grammarly. I use Chat GPT when I'm unsure about the theme of my writing, and I also use it to add a few paragraphs that are not perfect in my writing. Then, I use Grammarly after I have finished writing and want to correct the grammar in my work.”

P3 had similar preferences to P2, utilizing Chat GPT and Grammarly for writing assignments. P3 discovered these tools through educational content on social media platforms like TikTok and X. The

decision to use these tools was influenced by their convenience in handling difficult tasks. P3 did not conduct preliminary trials, trusting social media recommendations. Chat GPT was used to organize paragraphs and clarify word meanings, whereas Grammarly was employed for grammatical accuracy checks.

“I learned about that AI from social media platforms like TikTok and X. Many content creators in the education field on TikTok recommend AI to make writing tasks easier, and one of them is ChatGPT. That's why I became interested in using it. I use ChatGPT when I'm unsure if the paragraphs I've written are well-structured or not. Or when I don't fully understand a specific word choice that I want to explain. As for Grammarly, I use it to check the accuracy of the grammar in the sentences I've typed.”

b. Research Paper

Among the provided options, P1 reported predominantly using Chat GPT to assist with research papers. P1 first used Chat GPT in the sixth semester, having learned about it from a friend. Despite the variety of features offered by Chat GPT, P1 exclusively used it for paraphrasing sentences from journal articles. These journal quotes were used while composing the final thesis. Since P1 chose only one type of AI tool for

the research paper, no collaboration between different AI tools was undertaken.

Among the options provided, P1 predominantly utilized Chat GPT to assist with research papers. P1 first used Chat GPT during the sixth semester, learning about it through a friend. Despite the wide range of features offered by Chat GPT, P1 exclusively used it for paraphrasing sentences from journal articles, which were then incorporated into the final thesis. Since P1 relied solely on this single AI tool for the research paper, no collaboration with other AI tools was necessary.

“I tend to use Chat GPT. I use it when working on my thesis. I use chat only to paraphrase sentences that I get from journals. Although Chat GPT can be used to find references, I don't use that feature.”

In contrast to P1, P2 employed multiple AI tools for different functions, selecting Chat GPT, Perplexity, and QuillBot. P2 was introduced to these tools by a friend's recommendation. Chat GPT was utilized for brainstorming ideas and refining paragraphs, similar to its use in writing assignments. Perplexity was used for searching journal article references, and QuillBot was employed for paraphrasing after the writing was completed. This approach allowed P2 to integrate and benefit from the distinct functionalities of each AI tool during the research paper writing process.

“While completing my research paper, I used Chat GPT, Perplexity, and Quillbot as auxiliary tools. I used Chat GPT to generate ideas for the research I had conducted and to add paragraphs that were lacking in my writing. Perplexity was used to find journals and articles that could serve as references for my research, while I used Quillbot to paraphrase my written work.”

P3 employed the same three AI tools as P2: Chat GPT, Perplexity, and QuillBot. P3 discovered these tools on the X platform and used them for the same functions as P2. However, P3 frequently combined Chat GPT and QuillBot and used an additional feature of Chat GPT not mentioned by the other participants: generating a research paper outline. Before writing the content of each paragraph, P3 asked Chat GPT to create a list of points to include in the research paper's topic, allowing for more structured writing. After drafting each paragraph, P3 refined the text using QuillBot.

“I frequently use ChatGPT, Perplexity, and Quillbot. I use Perplexity extensively when searching for the journals I need to complete my writing. ChatGPT is often utilized after I've finished writing several paragraphs to ensure that I've connected them well. Quillbot comes in handy for paraphrasing sentences.”

c. Translation

In this subsection, the researcher will explore the first research question by identifying which AI tools the students selected from the given options. Participants also detail when they started using these AI tools, along with their reasons and considerations for their choices. The specific activities they engage in with these tools are also explored here.

For translation activities, P1 selected DeepL. P1 first learned about DeepL from a lecturer. The primary factor influencing P1's choice was the accuracy of its translations. P1 also mentioned that DeepL offers a higher level of vocabulary selection, making it suitable for advanced language learning.

"I use DeepL, I first learned about it from my lecturer. My considerations when choosing a translation tool are its accuracy and the selection of vocabulary at a higher level, suitable for learning."

P2 uses more than one AI tool for translation activities, similar to their approach with other academic assignments. P2 chose Google Translate and ChatGPT, focusing on the accuracy of the translations provided by these tools as the main consideration. This approach mirrors P2's strategy for other academic assignments, leveraging multiple tools for optimal results.

“I use Google Translate and Chat GPT to assist in text translation. I choose them based on the translation results and the accuracy provided by these tools.”

Initially, P3 had long used Google Translate for translation tasks but recently started using DeepL. P3 discovered these AI translation tools through social media accounts that frequently discuss English language topics on platforms like X. Like the other participants, P3 did not conduct a trial run before adopting these AI tools for translation., relying instead on examples seen on social media.

“In the beginning, I used Google Translate a lot, but in several recent stages of working on research papers, I've been using DeepL more frequently. I learned about it from Base X, like @englishfess / @collegemenfess.”

2. Students' method in embedding AI tools for academic assignments

To address the second research question regarding students' experiences with AI tools, the researcher will elaborate in two subsections. The first subsection provides insights into the steps students take when using AI tools for academic assignments. The steps are presented sequentially. The second subsection provides information on how participants address issues encountered while using these tools.

a. The approaches by which English Language Education students utilize AI tools for academic assignments

This subsection provides insights into the steps students take when using AI tools for writing assignments. The steps are presented sequentially. This subsection also provides insight into how each participant utilizes one or more AI tools and combines them to complete each activity for which they need assistance.

1) Writing Assignment

Using only one type of AI tools. P1 follows a meticulous and structured approach when using Grammarly for academic assignments. This systematic process ensures thoroughness and maximizes the tool's utility in enhancing the quality of writing. Here are the detailed steps P1 adheres to:

- 1) **Independent Writing:** "First, I write my assignment independently until completion." P1 emphasizes the importance of crafting the initial draft without any external assistance. This step involves brainstorming, outlining, and composing the entire piece, ensuring that the core ideas and arguments are original and well-articulated. By completing the writing independently, P1 maintains academic integrity and personal voice, which is crucial in academic work.

- 2) **Grammar Check:** "Second, I open the Grammarly website to check the grammar in my text." Once the independent writing is complete, P1 transitions to the next phase by utilizing Grammarly. This involves logging into the Grammarly platform, a user-friendly tool designed to identify and suggest corrections for grammatical errors. P1 relies on this tool to scrutinize the text for any grammatical mistakes that might have been overlooked during the initial writing phase.
- 3) **Text Copying:** "Third, I copy my independently written text into the Grammarly website." P1 then takes the entire text and pastes it into the Grammarly interface. This step is crucial as it allows Grammarly to analyze the text in its entirety. Copying the text verbatim ensures that the tool can provide a comprehensive review of the document.
- 4) **Error Identification:** "Fourth, Grammarly highlights grammatical errors and correctness, provides an error percentage, and offers correction suggestions." Grammarly's advanced algorithms kick in, highlighting various types of errors such as spelling mistakes, punctuation issues, and syntax errors. The tool also provides an error percentage, giving P1 a clear indication of the overall grammatical

accuracy of the document. Additionally, Grammarly offers detailed correction suggestions, which are instrumental in understanding and rectifying mistakes.

5) **Correction Implementation:** "Fifth, I correct each identified error in my writing and then incorporate the corrections into my assignment." The final step involves P1 meticulously going through each highlighted error and implementing the suggested corrections. This process not only improves the grammatical quality of the document but also enhances P1's understanding of common mistakes, contributing to better writing skills over time. Once all corrections are made, P1 incorporates these changes into the final version of the assignment, ensuring a polished and error-free submission.

P2 adopts a dual-tool strategy, utilizing both Chat GPT and Grammarly for academic assignments. This combined approach leverages the strengths of both AI tools to enhance the writing process. Here's a detailed breakdown of P2's methodology:

1) **Idea Generation:** "First, I use Chat GPT to generate ideas for my writing." P2 begins by employing Chat GPT to brainstorm and generate ideas. This AI tool is particularly

useful for overcoming writer's block and exploring various angles on a given topic. Chat GPT can provide a wealth of ideas and suggestions, which P2 can then refine and incorporate into the writing process.

- 2) **Independent Writing:** "Second, I independently write the content." After gathering ideas, P2 moves on to independently writing the content. This step ensures that the primary arguments and narrative are crafted without direct AI intervention, maintaining the authenticity and originality of the work.
- 3) **Paragraph Refinement:** "Third, I use Chat GPT to refine any incomplete paragraphs in my writing." During the writing process, P2 may encounter sections that are challenging to complete. In such cases, Chat GPT is used to refine and complete these paragraphs. This involves inputting the incomplete text into Chat GPT, which then provides suggestions and enhancements to improve clarity, coherence, and overall quality.
- 4) **Grammar Correction:** "Finally, I use Grammarly to correct grammatical errors." The final step in P2's approach is to

employ Grammarly for a thorough grammar check. This involves copying the refined text into Grammarly, which then identifies and suggests corrections for any grammatical issues. By addressing these errors, P2 ensures that the final document is both polished and professional.

Unlike P1 and P2, P3 does not follow a rigid set of steps but rather has a preferred sequence for using AI tools in the writing process. This flexible approach allows P3 to adapt the use of tools based on specific needs and circumstances.

For idea generation, P3 relies on Chat GPT. This AI tool helps in brainstorming and exploring various perspectives on the topic at hand. Once the ideas are generated, P3 proceeds to write the content in Indonesian, their native language. This approach ensures that the initial draft is fluid and natural, leveraging P3's comfort and proficiency in Indonesian.

After the content is written in Indonesian, P3 translates it into English. This step is crucial as it ensures that the ideas and arguments are accurately conveyed in the final language of the assignment. Translation can sometimes lead to minor inconsistencies or errors, which is where the final step comes into play.

At the end of the writing process, P3 uses Grammarly to check the grammar. This involves pasting the translated text into Grammarly, which then highlights any grammatical issues and provides correction suggestions. By addressing these errors, P3 ensures that the final document is not only well-translated but also grammatically correct and polished.

In summary, each participant employs a unique approach to using AI tools for academic assignments. P1 follows a structured, single-tool process with Grammarly, P2 combines Chat GPT and Grammarly for idea generation and grammar correction, while P3 adopts a flexible approach, leveraging Chat GPT for ideas, native language writing, translation, and Grammarly for final grammar checks. These varied strategies highlight the diverse ways in which students can effectively integrate AI tools into their academic workflows.

2) Research Paper

P1 carefully customized the features of Chat GPT to meet the specific needs of their research paper, particularly in the task of paraphrasing content. By providing clear instructions to Chat GPT, P1 ensured that the tool would generate paraphrases that maintained the

original meaning of the source material. Here is a detailed breakdown of the steps P1 followed:

- 1) **Citation:** *“I begin by citing excerpts from journals or books relevant to my research.”* P1 starts the process by identifying and citing key excerpts from scholarly sources that are pertinent to their research topic. This step is crucial as it lays the foundation for the incorporation of authoritative voices into the thesis. By carefully selecting these excerpts, P1 ensures that the research is grounded in established knowledge and credible sources.
- 2) **Integration:** *“These excerpts are then incorporated into my thesis.”* After citing the necessary excerpts, P1 integrates them into the thesis. This involves strategically placing the cited material within the context of their argument, ensuring that it supports and enhances the overall narrative. The integration process is critical as it weaves the external sources seamlessly into the research, maintaining a coherent flow of ideas.
- 3) **Paraphrasing:** *“I use Chat GPT to paraphrase the excerpt by copying it into the tool and providing a prompt in Indonesian, such as: ‘Please provide a paraphrase of the*

above text’.” To avoid plagiarism and ensure originality, P1 uses Chat GPT for paraphrasing the cited excerpts. By inputting the original text into Chat GPT and providing a clear paraphrasing prompt in Indonesian, P1 ensures that the resulting text is unique while retaining the original meaning. This step leverages the linguistic capabilities of Chat GPT to produce accurate and contextually appropriate paraphrases.

- 4) **Analysis:** *“I analyze the paraphrase to ensure it does not alter the original meaning.”* After receiving the paraphrased text from Chat GPT, P1 meticulously analyzes it to confirm that the essence and meaning of the original excerpt remain intact. This critical review step is essential to maintain academic integrity and the accuracy of the research content. By comparing the paraphrase with the original text, P1 ensures that there are no unintended changes in meaning or context.
- 5) **Finalization:** *“Once satisfied, I copy the paraphrased text back into my thesis.”* The final step involves incorporating the verified paraphrased text into the thesis. Once P1 is confident that the paraphrase is accurate and faithful to the original, they copy it into the appropriate section of the thesis. This integration marks the completion of the

paraphrasing process, resulting in a well-rounded and thoroughly supported research document.

In addition to using QuillBot for paraphrasing, P2 also utilized Chat GPT for similar activities. P2 adopts a comprehensive approach by using both Chat GPT and QuillBot for paraphrasing activities in their research paper. This two-step process ensures a high level of accuracy and coherence in the final text. Here are the sequential steps P2 follows:

- 1) **Topic Determination:** *“I determine the main topic of my research.”* P2 begins by clearly defining the main topic of the research. This initial step sets the direction for all subsequent activities and ensures that the research remains focused and relevant. By having a well-defined topic, P2 can effectively utilize AI tools to gather and refine relevant information.
- 2) **Idea Generation:** *“I use Chat GPT to search for ideas by entering keywords related to my research topic, using the results as an initial guide.”* With the topic established, P2 employs Chat GPT to generate ideas by inputting relevant keywords. This step helps in brainstorming and exploring various perspectives on the topic, providing a solid foundation for the research paper. The generated ideas serve

as a preliminary guide for further exploration and refinement.

- 3) **Resource Gathering:** *“I use Perplexity to find relevant journals and articles for my research.”* To build a robust literature base, P2 utilizes Perplexity to locate pertinent journals and articles. This tool aids in identifying authoritative sources that can substantiate the research. Gathering a diverse array of resources ensures that P2’s paper is well-supported by credible and relevant academic material.
- 4) **Writing and Paraphrasing:** *“I write my paper and use QuillBot to paraphrase and summarize the content, ensuring coherence and clarity.”* The final phase involves writing the research paper and using QuillBot for paraphrasing and summarizing. By first writing the initial draft, P2 ensures that the primary content is original. QuillBot is then used to refine this content, paraphrasing sections to enhance readability and coherence. This dual-tool approach ensures that the final document is both clear and polished, with accurate paraphrases that maintain the original intent.

P3's approach to using AI tools for their research paper is characterized by flexibility and adaptability. Rather than relying heavily on AI-generated responses, P3 uses these tools as aids to enhance their work, ensuring that the final output retains their personal writing style. Here's an in-depth look at P3's methodology:

P3 starts using AI tools directly without engaging in prior testing. This straightforward approach allows P3 to quickly integrate AI assistance into their workflow. By diving straight into the use of these tools, P3 can immediately assess their effectiveness and make necessary adjustments on the fly.

"I adjust those AI tools only as aids to make it easier for me to work on the research paper. I don't just copy and paste directly; instead, I still write in my own style."

Throughout the research process, P3 selectively incorporates AI-generated content to streamline certain tasks. This might include idea generation, paraphrasing, or grammar checking. However, P3 remains actively involved in the writing process, using AI tools to complement rather than dictate the content. This balanced use ensures that the research paper benefits from the strengths of AI while maintaining human oversight and creativity.

In summary, P1, P2, and P3 each have distinct approaches to using AI tools for their research papers. P1 follows a structured process with Chat GPT for paraphrasing, P2 combines Chat GPT and QuillBot for a thorough paraphrasing strategy, and P3 uses AI tools as flexible aids, ensuring that their unique writing style is preserved. These varied methodologies highlight the diverse ways students can integrate AI tools to enhance their academic work.

3) Translation

P1 relies on DeepL for translating their academic texts, adhering to a systematic process to ensure accuracy and consistency in the final translation. The following detailed steps outline P1's method, emphasizing the direct quotations provided by P1 to illustrate their approach:

- 1) *“First, I write the text in Indonesian.”* P1 begins by composing the text in their native language, Indonesian. This initial step allows P1 to express their ideas clearly and naturally, ensuring that the core concepts and arguments are well-developed before translation.
- 2) *“Second, I open the DeepL website to translate what I have written.”* After completing the text in Indonesian, P1 proceeds to the DeepL translation website. DeepL is known

for its high-quality translations and user-friendly interface, making it an ideal choice for this task.

- 3) *“Third, I copy the text and paste it into DeepL.”* P1 then copies the entire text and pastes it into the designated translation box on the DeepL website. This step ensures that the entire document is ready for translation, maintaining the continuity and coherence of the original text.
- 4) *“Fourth, I review the translation results.”* Once DeepL generates the translated text, P1 carefully reviews the output. This review is crucial for identifying any discrepancies or errors that may have occurred during the translation process. P1 checks for fidelity to the original meaning and ensures that the translation accurately reflects the nuances of the original Indonesian text.
- 5) *“Fifth, after reviewing, I copy the translation into my assignment.”* After thoroughly reviewing and making any necessary adjustments, P1 copies the translated text into their assignment. This final step integrates the translated content seamlessly into the research paper, ensuring that it is ready for submission.

P1 prefers to translate long texts all at once using DeepL. P1 avoid translating word by word or sentence by sentence, as this can lead

to translations that deviate from the original concept. By handling the entire text in one go, P1 maintains the integrity and flow of the original content.

P2 employs a dual AI tool strategy, combining the strengths of Google Translate and ChatGPT to achieve accurate translations. This approach involves writing the text in Indonesian first and then using both translation tools to compare and select the best version. Here is a detailed breakdown of P2's method:

- 1) P2 starts by writing the text in Indonesian. This allows them to articulate their ideas clearly and naturally before translating them into another language.
- 2) P2 uses both Google Translate and ChatGPT for translating the text. By entering the text into both tools, P2 obtains two different translations, which they can then compare for accuracy and quality.
- 3) After receiving translations from both Google Translate and ChatGPT, P2 compares the two versions. This comparison helps P2 select the translation that best captures the original meaning and nuances of the text. P2's method ensures that they choose the most accurate and contextually appropriate translation.

"I use Google Translate for translating vocabulary or short sentences, and I use ChatGPT for translating long paragraphs."

P2 selects the translation tool based on the length of the text. For vocabulary or short sentences, P2 prefers Google Translate due to its quick and efficient handling of smaller text units. For longer paragraphs, P2 opts for ChatGPT, which can provide more nuanced and context-aware translations.

P3 follows a methodical approach to translation by thoroughly reviewing the translated text after using tools like Google Translate or DeepL. This review process ensures that the final text is accurate and fits the intended context of the research paper. P3 begins by using either Google Translate or DeepL to translate their text. These tools provide initial translations that P3 can then refine.

"I still manually check the translation results and reintegrate them with the context I intend for the research paper."

P3 carefully reviews the translated text to ensure that it accurately conveys the original meaning. This involves checking for any errors, inconsistencies, or awkward phrasings that might have been introduced during the automated translation process. P3 then adjusts the translation to fit their writing style and the specific requirements of their research paper. During the review, P3 ensures that the translation is

contextually accurate. This step is crucial for maintaining the integrity of the research and ensuring that the translated text aligns with the intended message and academic standards. P3 uses translation tools for both short and long texts, ensuring that each translation is thoroughly reviewed and adjusted to meet their standards.

b. Challenges encountered by students and their strategies for overcoming them when utilizing AI tools

This subsection aims to examine the challenges faced by participants when interacting with AI tools in the context of academic assignments. The questions are designed to delve deeply into specific aspects that may pose challenges, such as the reliability of AI-generated results, the accuracy of references, and the coherence of AI-generated responses, as well as participants' strategies for addressing these issues.

1) Writing Assignment

This part aims to examine the challenges faced by participants when interacting with AI tools in the context of writing assignment. The questions are tailored to gain a deeper understanding of specific challenges as well as participants' strategies for addressing these issues.

P1 encountered issues such as network or server disruptions that prevented the display of Grammarly's results. P1 addressed this by

refreshing the internet connection. P1 found the outcomes from Grammarly to be satisfactory and in line with their expectations.

"Sometimes there are errors where the results of the examination do not appear due to server or network issues. The solution I use is to access it when the network condition is good."

P2 faced issues with the AI tools' responses not matching their expectations. To resolve this, P2 would repeat the command to Chat GPT until achieving the desired result. If unsuccessful, P2 adapted the response from Chat GPT and integrated it with their own version of writing.

"If I find shortcomings in the results provided by Chat GPT, I will refresh the results until they meet my expectations. If there are still some points that I find lacking, I will combine the results I receive from Chat GPT with my own writing."

P3 often overlooked minor shortcomings in the AI tools. A significant challenge was accessing premium features in Grammarly. To manage subscription costs, P3 opted for a shared account strategy.

"Since I only use AI to assist in writing, I tend to overlook any shortcomings that arise while using the tools. However, there are advantages to AI that unfortunately can only be accessed with a premium account, I overcome this by sharing a premium account, making it more affordable for me to use."

2) Research Paper

This part aims to examine the challenges faced by participants when interacting with AI tools in the context of constructing research paper. The questions are designed to delve deeply into specific aspects that may pose challenges, such as the reliability of AI-generated results, the accuracy of references, and the coherence of AI-generated responses.

P1 evaluates the quality of paraphrases produced by Chat GPT by assessing the extent to which the paraphrased text retains the original meaning. According to P1, Chat GPT provides comprehensible paraphrases that preserve the original intent.

“I assess the accuracy of the paraphrased sentence’s meaning. If the meaning is correct, then it is very good.”

Since P1 does not use AI tools to find references, they did not comment on the accuracy of references. For issues like incoherent or irrelevant responses, P1 employs a method previously described: if the response is unsatisfactory, they rephrase the command and try again.

“Following the steps I mentioned earlier, when I am not satisfied with the response, I repeat the command with different wording, for example: ‘give me a paraphrase without changing the original meaning’.”

P2 discusses their assessment of AI tools' output quality and strategies for addressing issues when using Chat GPT, Perplexity, and QuillBot. P2 finds that the quality and accuracy of sources provided by AI tools sometimes do not meet the needs for their research paper, with sources occasionally being irrelevant or not reflective of real-world information. To address this, P2 selectively incorporates AI-generated content and then correlates it with their own writing.

“I assess the accuracy of the resources provided by AI tools based on the results they show. However, sometimes the results they provide do not match what exists in real life, in my opinion. I correlate any inconsistent results from those AI tools and then integrate them with my own writing.”

P3 evaluates the quality of AI-generated results based on their effectiveness in executing given commands. When using Perplexity, P3 experiences no significant issues, as Perplexity performs well in searching for references. For instance, when P3 needed help finding interview guidelines from previous journals, Perplexity provided accurate and timely results.

Regarding the accuracy of references, P3 finds them sufficiently accurate but still verifies by reading the original journal articles to ensure a clear understanding of the quotations provided by AI tools. P3 acknowledges occasional irrelevant responses from AI tools but

considers this a normal limitation of tools that are still under continuous development by experts.

“I find the reliability of the results provided to be very helpful in my research process, such as using Perplexity to quickly find interview guideline sources from journals. In my opinion, the sources are quite accurate, but I still need to open the citation/reference file to better understand the meaning of the quotation.”

3) Translation

The primary aim of this part is to explore the difficulties encountered by participants when utilizing AI tools in translation. The questions are tailored to gain a deeper understanding of specific challenges, such as the quality and accuracy of translations, as well as participants' strategies for addressing these issues.

According to P1, the translations produced by DeepL have been satisfactory due to its diverse vocabulary usage and the availability of multiple translation style options. P1 rarely encounters translations that do not meet their expectations. However, when such instances arise, P1's strategy for overcoming the issue is to switch translation styles until a suitable one is found.

“I overcome that problem by adjusting the translation style using the features provided by DeepL.”

P2 finds Google Translate less suitable for translating lengthy texts, while Chat GPT demonstrates good accuracy in this regard. When translating academic texts, P2 encounters no issues with Chat GPT, as it provides organized and meaning-appropriate translations. In contrast, Google Translate often requires revisions post-translation, unlike Chat GPT, which yields immediately usable translations without the need for corrections.

P2's strategy for addressing inaccuracies in translations involves independently adjusting their translations based on their capabilities. Notably, P2 encounters more issues when using Google Translate compared to Chat GPT.

“Google Translate is less accurate when used to translate long texts, whereas Chat GPT is accurate in translating long texts.”

According to P3's response, after comparing two translation tools, P3 prefers the translations provided by DeepL over Google Translate due to their readability and superior accuracy in meaning and vocabulary selection. When faced with inaccurate or inappropriate translations, P3 rectifies them independently.

“In my opinion, the translation results from DeepL are more comfortable to read compared to those from Google Translate.”

B. Discussion

The researcher has conducted qualitative methods research using the narrative inquiry method to collect relevant data. This research specifically focuses on the embedment of AI in completing academic assignment among English Language Education students. In the discussion section, the researcher details the findings obtained from the data collection and analysis process. The main purpose of this discussion is to provide answers to the general and specific research questions that have been formulated in the context of this study.

Some important themes and categories that emerged from the data collection and analysis were used as core concepts in linking the findings of this study with theories and previous research on the embedment of AI in completing academic assignment among English Language Education students

The following description will discuss each research finding that has been examined by the researcher:

1. Types of AI tools used by English Language Education Students

a. Writing Assignment

Participants demonstrated varying preferences and approaches towards AI tool usage, with P1 opting for Grammarly primarily for its

effectiveness in ensuring grammatical accuracy, while P2 and P3 chose Chat GPT and Grammarly based on their ease of use and suitability for writing tasks. Despite differences in tool selection, participants commonly relied on peer recommendations and social media for tool discovery, highlighting the influence of social context. The findings underscore the importance of considering individual needs and preferences when integrating AI tools into academic writing processes, with each participant leveraging these tools to enhance their writing skills and overcome challenges. As explained by Escalante et al. (2023), the clarity, specificity, and detailed error analysis provided by AI-generated feedback were highly valued, proving beneficial for improving academic writing.

b. Research Paper

This subsection provides valuable insights into the selection and utilization of AI tools by English Language Education students for their research papers. Participants' choices and the activities conducted with these tools demonstrate a spectrum of approaches to integrating technology into the writing process. While P1 relied solely on Chat GPT for paraphrasing, P2 employed multiple AI tools for various functions, leveraging their distinct functionalities to enhance different aspects of the research paper writing process. Notably, P3's innovative use of Chat GPT for generating a research paper outline highlights the potential for

AI tools to facilitate structured and organized writing. These findings underscore the importance of considering individual preferences and task requirements when integrating AI tools into academic workflows, with implications for enhancing writing efficiency and quality in educational settings. As Zhai (2022) suggests that AI based tool like Chat GPT is able to help researchers write a paper that is coherent, (partially) accurate, informative, and systematic.

c. Translation

The findings indicate that English Language Education students utilize a variety of AI tools for translation activities based on specific needs and recommendations. P1 predominantly uses DeepL, chosen for its high accuracy and advanced vocabulary options, which enhances their language learning experience. P2, however, employs both Google Translate and ChatGPT to leverage the strengths of each tool, aiming for optimal translation accuracy by combining resources. P3, who initially relied solely on Google Translate, has recently incorporated DeepL into their toolkit, influenced by social media endorsements. None of the participants conducted trial runs before adopting these tools, instead relying on external recommendations and examples. These choices reflect a common strategy of selecting AI tools based on perceived accuracy and utility in language learning and translation

tasks. The participant's preference for AI tools and the factors influencing their selection align with the conclusions drawn by Vogt and Flindt (2023). They emphasize the significance of Neural Machine Translation (NMT) tools such as Google Translate and DeepL in foreign language education, facilitating activities like vocabulary acquisition and cultural comprehension.

2. Students' method in embedding AI tools for academic assignments

a. The approaches by which English Language Education students utilize AI tools for academic assignments

English Language Education students integrate various self-developed methods when utilizing AI. Interview data reveals that students employ one or more AI tools, collaboratively leveraging their functionalities to meet their specific needs. A comprehensive discussion of these findings is presented below, organized according to the academic tasks undertaken by the students.

1) Writing Assignment

Each participant employs a unique approach to using AI tools for writing assignments, highlighting the diverse challenges and strategies involved. P1's structured single-tool process with Grammarly focuses on thoroughness and personal voice. This ensures that the core ideas and arguments are original and well-articulated, maintaining academic integrity and personality. P2's dual-tool strategy with Chat

GPT and Grammarly addresses idea generation and grammar correction. P3's flexible approach leverages Chat GPT for ideas, native language writing, translation, and Grammarly for final grammar checks. This approach ensures that the ideas and arguments are accurately conveyed in English while maintaining grammatical correctness. These varied strategies demonstrate the effectiveness of integrating AI tools into academic workflows and the importance of adapting these tools to individual needs and contexts. As Aljuaid (2024) suggests that balancing technology with human feedback is crucial for effective AI integration, as it preserves the core elements of academic writing education and prepares students for a variety of writing challenges.

2) Research Paper

This subsection delves into the nuanced approaches employed by English Language Education students in utilizing AI tools for their research papers. Through sequential delineation, participants' processes are elucidated, demonstrating tailored adjustments to AI tool features to meet specific assignment needs. While P1 meticulously tailored Chat GPT's paraphrasing features to their research paper requirements, P2 adopted a comprehensive two-step paraphrasing process involving Chat GPT and QuillBot. Conversely, P3's adaptive approach involved utilizing AI tools as aids rather than dependencies, showcasing a pragmatic strategy in integrating technology into the writing process.

These findings underscore the importance of flexibility and adaptability in harnessing AI tools to enhance research paper writing, with implications for improving efficiency and quality in academic endeavors. Karimnia (2012) emphasizes the obstacles faced by individuals who are not native English speakers when composing research articles in English, highlighting the necessity for greater resources and support within the academic community for this particular demographic. Through the integration of diverse strategies, students can effectively address the challenges they may encounter.

3) Translation

The findings reveal that English Language Education students employ distinct approaches to utilizing AI tools for translation based on their individual preferences and task requirements. P1 relies exclusively on DeepL, following a systematic process from writing the original text in Indonesian to reviewing and incorporating the translated results, favoring bulk translation for maintaining conceptual integrity. P2 adopts a dual-tool strategy, leveraging Google Translate for shorter texts and ChatGPT for longer paragraphs, and compares outputs to select the best translation. P3 uses both Google Translate and DeepL, emphasizing thorough review and adjustment of translated texts to ensure stylistic consistency and accuracy. The varied approaches demonstrate the importance of flexibility and customization in

achieving effective translation outcomes. This indicates a trend towards personalized use of technology to enhance the accuracy and quality of academic work. The methods employed by the participant to utilize AI tools for translating extensive texts to achieve greater precision align with the findings discussed by Vogt and Flindt (2023). They note a substantial enhancement in the quality of automated translation through NMT tools, which translate complete sentences instead of fragments, resulting in more coherent translations.

b. Challenges encountered by students and their strategies for overcoming them when utilizing AI tools

English Language Education students encounter various challenges when using AI for their academic assignments. Interview data reveals that students face difficulties such as matching the writing with their own writing style, ensuring the accuracy of AI-generated content, and the authenticity of the sources provided by AI tools. To address these challenges, students employ strategies like improving the AI-generated content with their own effort, cross-referencing AI outputs with reliable sources, and finding the right prompt to command the AI tools. A comprehensive discussion of these findings is presented below, organized according to the specific challenges and strategies identified by the students.

1) Writing Assignment

Each participants faced unique challenges when using AI tools for academic writing assignments and developed tailored strategies to address these issues. P1 focused on resolving technical disruptions ensuring to eventually obtain the expected satisfactory outcomes, P2 adopted an iterative and adaptive approach to AI responses allowed P2 to effectively utilize Chat GPT's capabilities while maintaining control over the final content., and P3 implemented a cost-sharing strategy for accessing premium features enabling to maximize the utility of the AI tools within their financial constraints. These experiences highlight the diverse ways students can navigate the complexities of integrating AI tools into their academic workflows in the context of writing. These findings underscore the complex interplay between technology and student agency, emphasizing the importance of individual preferences in integrating AI tools into writing practices. As highlighted by Fyfe (2022), writing with AI may now necessitate skills in comprehending AI-generated content, assessing its authenticity, and addressing ethical challenges. The research also suggest that AI assistants are intended not to replace or impersonate humans but to act as a bridge connecting human ideas with AI-generated content. This hybrid approach, as employed by P2, effectively addresses the challenges encountered when using AI tools for academic writing.

2) Research Paper

This subsection offers an in-depth exploration of the challenges encountered by participants when utilizing AI tools in research paper. Through detailed accounts provided by participants, challenges such as the reliability of AI-generated results, the accuracy of references, and the coherence of AI-generated responses are elucidated. P1 emphasizes the importance of assessing the accuracy of paraphrases produced by Chat GPT and employs a methodical approach to address issues of incoherent responses. Similarly, P2 highlights discrepancies in the quality and accuracy of sources provided by AI tools and adopts a selective incorporation strategy to mitigate these challenges. In contrast, P3 evaluates the effectiveness of AI-generated results and acknowledges occasional irrelevant responses, attributing them to the ongoing development of AI tools. These findings underscore the complexities inherent in utilizing AI tools for writing tasks and underscore the need for critical evaluation and strategic adaptation to optimize their utility in academic contexts. As highlighted by Burger et al. (2023), although AI can enhance the speed and reliability of research work, it is essential to comprehend the architecture and limitations of current AI models to utilize them effectively.

3) Translation

English Language Education students encounter various challenges when utilizing AI tools for translation, such as inaccuracies and varying quality of translations. P1 finds DeepL effective due to its diverse vocabulary and multiple translation styles, addressing issues by switching styles as needed. P2, while finding Chat GPT suitable for lengthy academic texts, often needs to revise translations from Google Translate. P3 prefers DeepL over Google Translate for its readability and accuracy, independently correcting any inaccuracies. These strategies highlight the students' adaptability and the necessity of selecting the right tool for specific translation tasks. As emphasized by Arono and Nadrah (2019) regarding the challenges of translation among students, it's important for students to enhance their critical thinking and problem-solving capabilities, alongside their capacity to analyze and interpret texts.