TYPES OF WRITING STRATEGIES USED BY EFL STUDENTS WITH HIGH ACHIEVEMENT IN WRITING UNDERGRADUATE THESIS

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Article Info	Abstract
	One of the most difficult skills in English is writing, especially for university students who have to master academic writing because they have final project in writing undergraduate thesis. The students face many difficulties in writing undergraduate thesis because they need to learn how to communicate the argument rationally and provide evidence in intellectual perspective to present the arguments in a logical order. In order to solve their writing problems, students can apply writing strategies. Therefore, this study is about writing strategies used by EFL students in undergraduate thesis writing process at English Education study program. This study's objectives are to find out the kinds of writing strategies, and the dominant writing strategy applied by EFL students in writing undergraduate thesis. This research employed descriptive qualitative procedure with case study design. The subjects of the study were eleven EFL students of 2019 class at UNIROW. The data were taken from the questionnaire and interview. Then, the data were analyzed qualitatively through data reduction by identifying, grouping and coding, data display, describing, interpreting, and conclusion drawing. The result showed that the students applied 8 strategies in before writing, 14 strategies in during writing, and 16 strategies in after writing. The dominant strategy applied was during writing with the average score of 3.68, which can be categorized as high frequency, followed by before writing (3.54), and after writing (3.23). In conclusion, writing strategies are essential in assisting students during writing undergraduate thesis to produce better academic writing.

INTRODUCTION

In this era, students face many written communications as a demand of academic scopes (Rizqiya et al, 2017). One of them is academic writing (Salsabila et al, 2023; Dari et al, 2022). Students need to give more attention for academic writing to cope with both communicative and academic requirements (Ajmal & Irfan, 2020; Ismiati & Pebriantika, 2020). Academic writing is considered as complex skill (Iqlima et al, 2023) and difficult assignment for EFL/ESL (Mudra, 2023). Academic writing is also a demanding task towards EFL students (Derakhshan & Shirejini, 2020). It is because they must effectively express their intended message in order to reach a language's academic standards (Abas & Aziz, 2018; Arifin, 2020; Cheung, 2021). According to Abas & Aziz (2016), the students from English Education major in university level in Indonesia are required to produce tasks, projects, even theses in English as part of academic writing. Academic writing can be a medium for formal communication (Fajrina et al 2021). Unfortunately, many students lack abilities needed to develop successful writing communication (Virdyani, 2016).

One form of academic writing that should be completed by the higher education institutions students as final project is thesis (Wahyuni et al, 2019). It becomes one requirement for students to graduate from bachelor level (Panggabean, 2015). Thesis plays important role as writing activity of research (Turmudi, 2019). When writing thesis, students require organized

thinking, strong organizational skills, and unique language proficiency (Mahbubah et al, 2021; Syafryadin et al, 2023). Not only that, students also have to follow the format given by university because each university has different provisions for writing thesis.

However, writing undergraduate thesis is not easy. The students often face some problems during the process of writing thesis. Al Mubarak (2017) stated that writing thesis is hampered by grammatical errors, particularly those involving marks, the use of prepositions, weak sentences, unmatched structure, steadiness, and irregular verb usage. Another problem is the students frequently do not understand about the writing conventions, which leads them to plagiarize (Silfiani et al, 2018 ; Alsaedi & Alhumsi, 2024). What makes writing thesis more difficult is because it involves cognitive process which requires the capacity to use appropriate language repertoires (Kasiri & Fazilatfar, 2016). In addition, students have to write in English, therefore this will be one of the extra challenges for them (Nenotek et al, 2022).

Concerning to the difficulties of writing undergraduate thesis, each student needs to learn how to communicate the argument rationally and provide evidence in intellectual perspective to present the arguments in a logical order (Lestari, 2020). Azizah & Budiman (2018) stated the researcher should develop ideas from the perspective of experts. Rahayu & Moesarofah (2022) said that the assistance from the thesis advisor, family, and friends also help students to compose the thesis successfully. In other words, in order to solve the problems during writing undergraduate thesis, students should have a good writing strategy. The application of the right strategy can have an influence on the success of language learning for students (Panggabean & Triassanti, 2020).

According to Mastan et al (2017) and Zhang & Chieh (2025), strategy in writing guides students to create a good writing. Fajrina et al (2021) stated that higher English achiever students apply strategies in writing theses more than those with lower achiever. Writing strategy is essential in both academic context and professional area (Noviasari et al, 2023). Petric & Czarl (2003) categorized writing strategies into three stages. Those stages are before, during, and after writing. There are five strategies in before writing; time planning, mental planning, expert model's reference, and outlining. In during writing, there are ten strategies; introduction first, sentence verification, paragraph verification, outline revision, language transfer, sentence simplification, positive grammar and vocabulary, synonym, dictionary, and peer cooperation. As for the after writing, there are eight strategies; reading aloud, no revision, revision, drafting, instruction matching, respiting, collation, and self-rewarding.

Many studies focusing on the writing strategies, especially in academic writing context have been conducted, and the result showed that students employed the strategy of reading journals or reference article and asking for revision from the supervisor (Parwati & Sugesti, 2023). The students also employed self-regulated strategies in writing thesis (Hapsari, 2024) such as writing-management and self-evaluation. In addition, they also employed technology assistant in writing their undergraduate thesis (Hutabarat, 2022; Sa'diah et al, 2022; Ren & Zhu, 2023). With this, it can be understood that the students employed different kinds of writing strategies.

Although there is a discussion of strategies used by EFL students in writing their undergraduate thesis, and there are many literatures mentioned about the importance of writing strategies (Teng et al, 2022 ; Chen, 2022 ; Zhu et al, 2024; Hassen et al, 2024), so far no studies investigate about the strategies used by EFL students with high achievement in the whole process of their thesis writing. Given this gap, this study offers fresh take to fill this field. As for the theory used, the researchers chose the theory of writing strategies from Petric & Czarl because it is still little used in research on writing strategies. The reason the researchers chose Petric & Czarl theory is that this theory covers the entire writing process, from preparation, implementation, to revision. Thus, it can be concluded that the study about the writing strategies is still important to find various information about the writing strategies to solve the problem

during writing process. This study also scopes the dominant writing strategies used by high achiever students so that the findings can be used as future references for other researchers. To adress the objectives, the research question of this study are: 1) What kind of writing strategies used by EFL students in writing their undergraduate thesis? And 2) What are dominant writing strategies used by EFL students in writing their undergraduate thesis?

RESEARCH METHOD
Research Design
The researcher employed a descriptive qualitative method research strategy using the case study design in order to gather and evaluate the data. A case study design was chosen because this study focuses on a number of subjects and aims to provide more depth data on the use of writing strategies through two methods, namely questionnaire and interview. Descriptive research uses qualitative methodologies to offer a comprehensive profile of an event, condition, or circumstance (Creswell, 2014). The researcher utilized the qualitative strategy to gather numerical data from close-format questionnaires. The results of the questionnaires and interview were then examined qualitatively.

Research Participants
The participants in this study were students who had graduated from English Education Study Program at UNIROW in the 2022/2023 year. The researchers selected 11 students who got the highest score in undergraduate thesis subject in the 2019 English Education class, which was based on their GPA score on the subject. The researchers selected students with the undergraduate thesis score above 81 which was equivalent to GPA above 3.5, and categorized into A (very good) score. The researcher obtained the score and GPA from the documents provided by the academic advisor of the selected subject. The identities of the subjects were kept anonymous and confidential by using the code SA for student 1 until SK for student 11.

The consideration of choosing the graduated students with the highest score because they had completed the final project in the form of writing undergraduate thesis. Moreover, according to Fajrina, et al (2021); Hassen, et al (2024), students with higher English proficiency and achievement in writing applied more writing strategies than those with lower English proficiency. Thus, it can be said that this study would collect more depth data of writing strategies.

Research Instruments
The instruments used in this research are questionnaire and interview. The questionnaire of writing strategies was adopted from Petric & Czarl (2003) with some modifications. There are 38 items used to assess the writing strategies used by EFL students during undergraduate thesis writing. Those 38 items consist of 8 before writing strategy statements, 14 during writing strategy statements, and 16 after writing strategy statements. The researcher made slight modifications to the questionnaire to suit the research's purpose. This questionnaire has a strong internal consistency reliability, as indicated by its Cronbach's Alpha of 0.86. The kind of survey uses rating scales or, more commonly, the Likert Scale (1-5). Each question consists of five available options: Never or Almost Never Used (1), Generally Not Used (2), Sometimes Used (3), Usually Used (4), Always or Almost Always Used (5) (Fajrina et al, 2021).

The second instrument is interview. In order to confirm the questionnaire's result and gain more depth data, the researchers interviewed six students that have similar strategies in writing undergraduate thesis. The interview was guided by instrument of writing strategies questionnaire which were modified into open questions. The researcher also used smartphone to record and take documentation of the interview process. The interview was audio recorded and conducted in-person and virtually, according to the participant's preferences and comfort level.

Data Analysis

For the questionnaire data, this research employed the formula of average. The process began with scoring the data, calculating the scores, determining the score of the data, and displaying the data based on the frequency. The frequencies were based on the Likert Scale (1 to 5). The analysis then started with describing each average from each stage of writing strategies and determining the dominant stage of writing strategies utilized by EFL students.

As for the interview data, it followed Cresswell & Clark's (2018) procedure, all of which the data were analyzed qualitatively through transcribing audio recording, checking for accuracy, reducing the data by identifying, grouping and coding into emergent themes of each type of writing strategies, describing, interpreting, and conclusion drawing.

RESEARCH FINDINGS AND DISCUSSION
Research Findings
Types of Writing Strategies Used by EFL Students in Writing Undergraduate Thesis

This section focuses on explaining the result of the writing strategies questionnaire. The following is a presentation of the analysis of the collected data:

The types of writing strategies used by EFL students consist of before writing (planning), during writing (drafting), and after writing (revising).

Table 1
Overall writing strategies used in each stage

Stage	Mean	Level
Before Writing (Planning)	3.54	High
During Writing (Drafting)	3.68	High
After Writing (Revising)	3.23	Medium
Overall Writing	3.48	Medium

The table 1 above shows that all of the writing strategies were utilized by EFL students in this study in writing their undergraduate thesis, in line with the research conducted by Dari et al (2022). The during writing (drafting stage) is the most strategy used (M= 3.68). The second most strategy used is before writing (planning) with the mean result of 3.54. As for the least strategy used is after writing (revising) (M=3.23). Overall, the writing strategies are utilized by the participants at medium level as showed in the result of mean in the overall writing (M=3.48).

Table 2
Overall before writing strategies

No	Strategies	Frequency					M	Level
		N	G	S	U	A		
1.	Reread the structure/format of undergraduate thesis before writing	1	-	1	4	5	4.09	High
2.	Look at a model written by a native or more proficient writer	-	1	1	6	3	4.00	High
3.	Write an outline of my thesis	1	1	-	4	5	4.00	High
4.	Have a plan in mind but not on paper	-	1	1	8	1	3.81	High
5.	Note down words and short notes related to the topic	-	3	2	2	4	3.63	High
6.	Write notes or an outline in my native language	2	1	3	2	3	3.27	Medium
7.	Make timetable	2	1	4	2	2	3.09	Medium
8.	Start writing without having a plan	2	3	5	1	-	2.45	Low
	Mean						3.54	High

From the findings above, it could be concluded that there were 8 strategies in the before writing stage. In before writing stage, the students prepared themselves in organizing idea into

a written text (Bui & Van, 2018). 5 of the pre-writing stage were used with high frequency in this research. Those strategies were rereading the structure/format of undergraduate thesis before writing (planning), looking at a model written by a native or more proficient writer (expert's model reference), writing outline of the thesis (outlining), having a plan in mind but not on paper (mental planning), and noting down words and short notes related to the topic (outlining). The most strategy used in before writing was rereading the structure/format of undergraduate thesis before writing. This strategy could guide students in writing a thesis correctly, according to applicable guidelines. Meanwhile, there were 2 strategies used in medium scale, namely writing notes or an outline in native language (outlining) and making timetable (planning). As for the least strategy used by the students, there was a strategy of writing without having plan (no preparation or no plan).

Thus, from the result it could be summarized that EFL students with high achievement in this study tended to pay attention the task prerequisite. Not only the students tried to understand the format of the undergraduate thesis, they also tried to look for references from native writer. Moreover, they also prepared the outline of the undergraduate thesis. However, they needed to elaborate more the timetable making, so the students could finish the thesis writing on time.

Table 3
Overall during writing strategies

No	Strategies	Frequency					M	Level
		N	G	S	U	A		
1.	Reread what I have written to get ideas how to continue	-	1	-	2	8	4.54	High
2.	Find a similar English word that I know	-	1	2	2	6	4.18	High
3.	Simplify what I want to write if I don't know how to express my thoughts in English	-	-	3	4	4	4.09	High
4.	Write the thesis in sequence	1	-	2	2	6	4.09	High
5.	Write the words in my native language and later try to find an appropriate English word	-	-	4	3	4	4.00	High
6.	Go back to the outline and make changes in it	-	-	5	4	2	3.72	High
7.	Go for sure in grammar and vocabulary	-	1	3	5	2	3.72	High
8.	Write bits of the text in my native language and then translate them into English	-	-	6	3	2	3.63	High
9.	Use a bilingual dictionary	-	1	4	4	2	3.63	High
10.	Stop after a few sentences or a whole paragraph	1	1	2	5	2	3.54	High
11.	Stop writing and look up the dictionary	-	2	4	3	2	3.45	High
12.	Ask somebody to help out when I have problems	1	1	3	4	2	3.45	High
13.	Stop after each sentence to read again	1	2	4	2	2	3.18	Medium
14.	Use a monolingual dictionary	3	2	5	1	-	2.54	Medium
	Mean						3.68	High

Based on the findings above, it could be known that there were 14 strategies used in during writing stage. There were 12 strategies utilized with high frequency in this study. Those strategies were rereading to get ideas how to continue (sentence verification and paragraph verification), finding a similar English word (synonym), simplifying what the students wanted to write (sentence simplification), writing the thesis in sequence from introduction to conclusion (introduction first), writing the word in their native language and later trying to find an appropriate English word, going back to the outline and making changes in it (outline revision), going for sure in grammar and vocabulary (positive grammar and vocabulary), writing bits of

the text in native language and then translating them into English (language transfer), using a bilingual dictionary (dictionary), stopping after a few sentences or a whole paragraph (sentence verification and paragraph verification), stopping writing and looking up the dictionary (dictionary), and asking somebody to help out when the students had problems (peer cooperation). The strategy used the most in during writing strategy was rereading what the students have written to get ideas how to continue. This helped the students in organizing the idea and smoothening the process of writing. The students reread what they have written, then added other references to get an idea of how to continue the thesis.

As for the medium scale, there were 2 strategies, stopping after each sentence to reread (sentence verification) and using a monolingual strategy (dictionary). No student used this strategy with low frequency. In conclusion, the students tended to use the overall strategy in during writing stage.

The result above showed that EFL students in this study seemed to be familiar with during writing stages. It is consistent with Dari et al's (2022) research. EFL students in this study used the strategy of rereading to get ideas how to continue the most. It showed that the students were aware about the coherence of their writing result, and this strategy might help them in organizing clear paragraph so that it could produce a good thesis result. However, the students tended not to use the monolingual dictionary, as it was showed as the least strategy used by them in writing undergraduate thesis. It is in contrast with the study conducted by Kung (2015) & Yaman (2015) that EFL/ESL students had preference in using monolingual dictionary.

Table 4
Overall after writing strategies

No	Strategies	Frequency					M	Level
		N	G	S	U	A		
1.	Check my mistakes after I get back the thesis with feedback from the advisor	1	-	-	2	8	4.45	High
2.	Give myself a reward	1	-	1	2	7	4.27	High
3.	Check if my thesis matches the requirements	-	1	2	4	4	4.00	High
4.	Use dictionary when revising	-	2	3	4	2	3.54	High
5.	Make changes in vocabulary	-	-	6	4	1	3.54	High
6.	Focus on one thing at a time when revising or rechecking	-	2	4	2	3	3.54	High
7.	Make changes in the sentence structure	-	-	8	3	-	3.27	Medium
8.	Read what I have written when I have finished the whole thesis	2	-	5	2	2	3.18	Medium
9.	Leave the thesis aside for a couple of days and then I can see it in a new perspective	-	1	8	1	1	3.18	Medium
10.	Make changes in the content or ideas	2	1	5	3	-	2.81	Medium
11.	Show my thesis to somebody and ask for opinion	1	3	5	1	1	2.81	Medium
12.	Make changes in the structure of the thesis	2	1	7	1	-	2.63	Medium
13.	Drop my first draft and start writing again	3	2	3	2	1	2.63	Medium
14.	Compare my thesis with the thesis written by my friends on the same topic	2	2	2	4	1	2.63	Medium
15.	Read my thesis aloud	3	2	3	3	-	2.54	Medium
16.	Hand thesis without reading it	5	1	3	1	1	2.27	Low
	Mean						3.23	Medium

Based on the findings above, it could be known there were 16 strategies in after writing stage. It was in line with the study conducted by Dari et al (2022), who also found 16 strategies in this stage. 6 of the after writing strategy were utilized with high frequency. Those strategies

were checking the mistakes after the students get back the thesis with feedback from the advisor (collation), giving a self-reward for completing the thesis (self-rewarding), checking if the thesis matches the requirement (instruction matching), using dictionary when revising, making changes in vocabulary (revision), and focusing on one thing at a time when revising or rechecking (revision). The most after writing strategy used by EFL students was checking the mistakes after the students get back the thesis with feedback from the advisor. The students got feedback from the supervisor in the form of suggestions and directions on the presentation of ideas, literature review, theory, research results, and conclusions.

Meanwhile, there were 9 strategies utilized with medium frequency. The strategies were making changes in the sentence structure (revision), reading when they have finished the whole thesis, leaving the thesis aside for a couple of days and then the students can see it in a new perspective (respiting), showing the thesis to somebody and asking for opinion, making changes in the structure of the thesis (revision), dropping the first draft and starting to write again (drafting), comparing the thesis with the thesis written by friends, and reading thesis aloud (reading aloud). As for the least strategy utilized by the students was handing the thesis without reading it.

It could be summarized from the findings above, that the students used the strategy of after writing only in medium scale. It is in line with the study by Syahriani & Madya (2020) that the revising stages were the least frequency used by EFL students in writing their undergraduate thesis. Therefore, the students needed to elaborate this stage more to check the final result of their undergraduate thesis, and to avoid errors in their writing result.

The Dominant Writing Strategies Applied by EFL Students in Writing Undergraduate Thesis

The data of different frequency of writing strategies used were displayed in the table below:

Table 5
Writing strategies rank

No	Subject	BWS	DWS	AWS
1.	SA	4.13	3.50	3.25
2.	SB	3.13	3.50	3.31
3.	SC	3.75	4.07	3.06
4.	SD	4.13	3.57	3.38
5.	SE	4.38	4.50	3.75
6.	SF	2.25	2.35	2.25
7.	SG	3.75	3.71	3.19
8.	SH	2.75	3.29	2.81
9.	SI	3.00	3.93	3.31
10.	SJ	3.38	3.64	2.88
11.	SK	4.38	4.50	4.44
	Mean	3.54	3.68	3.23
Frequency category		High	High	Medium
Rank		2	1	3

From the table above, it could be interpreted that during writing strategies were the most strategies utilized by the students. The mean of the average score shows 3.68, which means the students usually use this strategy. According to the interview result, the during writing strategies could help the students to control the thesis process so that the students felt more confident when writing. Moreover, another student added that the strategies in during writing stage could help the student to ensure that the thesis written becomes more organized. In addition, the strategies can also be a reference during thesis writing.

The second most strategy used by the students was before writing strategies. This strategy's mean of the average score is 3.54. The students got many benefits by using this

strategy, such as having the right and structured strategy in thesis writing, making them easy to carry out research, and helping them in stress management, so that the thesis can be completed on time. The least strategy utilized by the students is after writing strategies. The mean of the average score of this strategy is 3.23. It means that the students used this strategy with medium frequency. According to the students, the after writing strategies are very helpful during the thesis finishing process. The process of checking and revising the thesis becomes easier, faster, and directed with this strategy.

Discussion

From the findings, the students with high achievement in the current study applied various writing strategies in writing undergraduate thesis. The researchers found that the students utilized three stages of writing strategies, namely before, during, and after writing. For preparation strategies (before writing), the students used time planning, mental planning, expert model's reference, and outlining. In addition, some students also did not prepare their writing or known as no plan or no preparation in before writing stage. The most strategy used by the students in this stage is rereading the structure/format of undergraduate thesis before writing it. Then, it is followed by the strategy of looking at a model written by a native or more proficient writer. As for the least strategy is starting to write without a plan. This is different with the previous studies by Dari et al (2022), that found the most pre-writing strategy used by students is making time table, followed by the strategy of reviewing the handouts before writing. Then, the least strategy used is writing outline in native language. It showed that the final year students in this study pay attention more on planning strategy, and they do not utilize no plan strategy, which means they prepare the writing activities well. As for the students in the previous study, as stated by Dari et al (2022), they pay attention more on time planning, and use small portion of outlining strategy. It can also be said that the students with high achievement and regular students have different strategy in pre-writing based on their need in writing. Beside that, this present study also differs with the study conducted by Ren & Zhu (2023), which stated that the strategy used the most by final year student in writing thesis is seniors' feedback and peer's help.

Then, for the during writing strategies, the students utilized introduction first, sentence verification, paragraph verification, outline revision, language transfer, sentence simplification, positive grammar and vocabulary, synonym, dictionary, and peer cooperation. The final year students with high achievement in this study utilized the strategy of rereading what the students have written to get ideas how to continue. Then, for the least strategy, they used a monolingual dictionary. It is in line with the study by Dari et al (2022) that found the most strategy used is also rereading the outline to get ideas how to continue, and the least strategy is also the same with the present study. It showed that both EFL students in the previous and the present study tend to use the same style of during writing strategies, as they both were familiar with this stage of writing strategies.

As for finishing strategies, the students used reading aloud, no revision, revision, drafting, instruction matching, respiting, collation, and self-rewarding. The strategies applied are in line with the writing strategies stated by Petric & Czarl (2003)'s theory. Petric & Czarl (2003) categorized the writing strategies into three points; before writing, during writing, and after writing. The most strategy used by EFL students in this stage is checking mistakes after getting feedback from the supervisor. The feedback from the supervisor is also reported in other study on academic writing context (Zhu et al, 2024). As for the least strategy is handing the thesis without reading it. It is similar with the study by Dari et al (2022), but it differs with the study by Hutabarat (2022) which found that the strategy used the most by students in revising stage was technology assistant.

Overall, these results are consistent with Fajrina et al (2021) and Hassen et al (2024) that high achiever students in writing tended to use all strategies, ranging from planning to revising.

The present study found more writing strategies used by EFL students in writing undergraduate thesis. The present study found three stages of writing, that are before writing, during writing, and after writing with the total of 38 strategies, consistent with the study conducted by Dari et al (2022). In contrast, the findings from Parwati & Sugesti (2023), Hutabarat (2022), and Sa'diyah et al (2022) found the strategies used by the students are before and after writing strategies. As for the findings from Diasti & Mbato (2020), the study found that the students used mental strategies in writing, while the present study found that the students used technical writing strategies. Another study from Ren & Zhu (2023) found that the students used activity strategies in writing undergraduate thesis. It showed that there are similarities and differences of types of writing strategies applied by EFL students in the present study and the previous ones.

Moreover, the findings also show each type of the writing strategies is utilized with different frequency. The before writing strategies are utilized with high frequency (M= 3.54). As for the during writing strategies are utilized with high frequency (M= 3.68). Meanwhile, the after writing strategies are applied with medium frequency (M= 3.23). This data is also consistent with Dari et al (2022) and Syahriani & Madya's (2020) study which found that EFL students were familiar with the pre-writing and while writing stage, and they were not familiar enough with the revising stage. Thus, it can be said that EFL students need to elaborate the revising stage more in order to produce better result of their undergraduate thesis. However, EFL students in both studies tended to utilize all stages of writing strategies in their academic writing activity.

The findings of this study reveal that high-achieving students consistently employed all categories of writing strategies with notably high frequency. This was evident from the fact that two out of the three primary strategies—before writing (planning), during writing (drafting), and after writing (revising)—were utilized extensively. This pattern aligns with the studies by Fajrina et al. (2021) and Hassen et al. (2024), who emphasized that proficient student writers tend to engage deeply with multiple stages of the writing process. The students in this study reported that the "during writing" or drafting strategy was the most frequently used, as it provided substantial assistance in structuring and developing their thesis content. This finding mirrors those of Dari et al. (2022), who also noted a preference for drafting strategies over planning and revising. Interestingly, earlier studies, such as those by Parwati & Sugesti (2023), Hutabarat (2022), and Sa'diyah et al. (2022), highlighted a different trend: they found that students primarily relied on planning strategies, followed by revising, without identifying the use of drafting strategies in their data. Furthermore, Diasti and Mbato (2020) identified motivation-regulation strategies—specifically self-consequating—as the dominant approach among thesis writers. Ren and Zhu (2023), on the other hand, found that rule-based activity strategies were most prevalent. These varying findings suggest that writing strategy preferences may depend on individual learner profiles, research contexts, or levels of writing proficiency.

The implications of these results are significant for both syllabus design and curriculum development in academic writing instruction. The recognition that high-achieving students benefit from a balanced application of writing strategies—especially during the drafting phase—suggests the need for writing courses to emphasize process-based instruction that supports all three phases of writing. Integrating strategy training explicitly into the writing curriculum can help students develop greater awareness of their writing behaviors and improve their outcomes. This study provides evidence that writing instruction should not only focus on final products but also incorporate scaffolding techniques to guide students through the recursive nature of writing. Following the recommendation of Hassen et al. (2024), teachers can support students by embedding reflective strategy use into their writing pedagogy. Additionally, the incorporation of strategy instruction into teacher training can empower educators to facilitate student engagement in self-regulated writing practices. As academic

writing becomes increasingly complex, providing structured support throughout the writing process becomes crucial in helping students manage cognitive load and sustain motivation.

Nevertheless, while the study offers valuable insights, there are limitations that warrant further exploration. The participant pool was limited in scope, focusing on a select group of high-achieving students, which may not represent the broader population of English as a Foreign Language (EFL) learners. For this research to inform wider curriculum implementation, future studies should involve a more diverse student population, encompassing various levels of proficiency and academic backgrounds. Expanding the sample size and incorporating longitudinal data could also provide a more comprehensive understanding of how students' strategy use evolves over time. Moreover, the study opens avenues for the development of targeted instructional materials that teach specific writing strategies aligned with students' needs. Teachers could design classroom activities that simulate real writing conditions, allowing students to practice planning, drafting, and revising in a supported environment. By embedding strategy use in both formative assessments and writing assignments, educators can help EFL students internalize effective writing habits, ultimately enhancing their academic writing performance across disciplines.

CONCLUSION

The findings of the study can be concluded that the writing strategies utilized by EFL students are planning, drafting, and revising. In addition, it can also be concluded that the strategies of before, during, and after stage were used by the students with different frequency. The strategy used the most by EFL students in writing undergraduate thesis is during writing (drafting) with high frequency. The most strategy used by the students in during writing is rereading to get ideas how to continue. As for the second most strategy used by EFL students in writing undergraduate thesis is before writing (planning) with high usage. The strategy used the most in before writing is rereading the structure/format of undergraduate thesis before starting to write. The least strategy used by EFL students is after writing (revising) with medium frequency. The strategy used the most in after writing is checking the mistakes after getting back the thesis with feedback from the advisor.

This study is expected to help EFL students who are in their final year to make it easier for them to write and produce a good result of undergraduate thesis. In addition, the results of this research can also be used by lecturers to prepare writing instruction for academic writing learning, especially those that focus on the preparation of undergraduate thesis by including writing strategies topic. In addition, the lecturers can focus more on the stage of while writing and before writing which is the stage that is most implemented by EFL students with high achievement.

However, it should also be mentioned that the primary limitation of this study was the number of the research subject that is too small and only focus on high achiever students, so the result of the research cannot be generalized to a larger population. Besides, the present study only uses the thesis students' score to determine whether they are high achiever students, so the further researchers should use another method and instrument to analyze the entire process of writing an undergraduate thesis to determine the research subjects' proficiency. Thus, future studies with a wider number of research subjects and broader proficiency, also different methods and instruments are still needed.

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