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ELT students' metacognitive writing strategies

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debug strategies
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ABSTRACT Academic Writing is one of the writing courses that are required for students majoring in an English education program, where students can have firsthand experience in making use of the language that they have learned in order to compose an academic text. The difficulty of making these academic texts using a second or foreign language requires effective use of metacognitive writing strategies. However, students' use of these strategies did not all produce the expected positive result. This study aimed to find out the kind of metacognitive writing strategies that Academic Writing students use and how these strategies affected their writing. The participants of this study were nineteen Academic Writing students at a university in Central Java. The data were collected qualitatively by using mixed questionnaires and semi-structured interviews to get in-depth information from the participants. The findings found that the participants made use of all the strategies at different rates. Each participant produced different writing outcomes due to the differences in metacognitive awareness and personal preferences in writing. The findings in this study also reflected the positive outcome from making use of metacognitive writing strategies on overcoming the participants' shortcomings in writing. Other findings, such as participants' perceptions on metacognitive writing strategies and how they preferred to learn metacognitive writing strategies based on their experiences would also be found in this study.

1. INTRODUCTION

Learning a foreign language can be strenuous and it requires a big portion of someone's time and effort to succeed. This process becomes especially demanding for language learners when it comes to writing, which demands constant attention to detail; whether if it is on their structure or content. Many writing students seem to struggle in regulating the cognitive skills needed to process these details. It comes to no surprise that this struggle resulted in a demand for a method to enhance meta-cognition capabilities. Therefore, this is a clear indication of the need to further investigate the kinds of meta-cognitive learning strategies and the effects they could have on second language academic writing.

Given the effectiveness of meta-cognitive learning strategies, this study aimed to find out the kinds of metacognitive strategies used by language learners in the ELEP of the Faculty of Language and Arts UKSW. This study mainly focused on finding out the trend of using meta-cognitive learning strategies and understanding their effects on students' academic writing essays.

Based on the purpose of the study, the following research questions were asked:

1. What kind of meta-cognitive learning strategies are used by ELEP students of the Faculty of Language and Arts UKSW?
2. In the students' perceptions, how do their meta-cognitive learning strategies benefit their writing essays?

The findings and discussions presented in this study would hopefully benefit the language learning society, considering the effect that meta-cognitive learning strategies seem to have in developing autonomous learners. Through this study's hopes of revealing meta-cognitive learning strategies prominently used by students, writing teachers would be able to construct an effective method to teach students in utilizing metacognitive strategies optimally.

2. LITERATURE REVIEW

This chapter included a review of literature related to meta-cognitive learning strategies on Academic Writing students' writing. It included a brief history of second language learning and writing, Academic Writing in the EFL context, a brief explanation of the cognitive process involved in second language writing, Language Learning Strategies (LLS), Metacognitive Strategies, and effects of Metacognitive Strategies in writing. Each of these parts is essential in order to understand the significance of Metacognitive Strategies in Academic Writing.

2.1 Second Language Writing

Writing in the second language can be quite an intricate process that many language learners seem to struggle with. Since the original contrastive study on second language writing presented second language learning's cultural variation as more than just on a sentence level (Kaplan, 2006), many studies on the significant differences between L1 and L2 writing had been done. Second language learners' difficulty in L2 writing seems to be profoundly related to these differences. A study done on the effects of differences between L1 and L2 seems to suggest that this is true, as L2 learners are usually held back by their age; missing their critical period to learn and develop languages, affective factors; such as the lack of motivation and having a large amount of language learning anxiety, almost entirely different contexts, and different input and error corrections compared to when they are learning their L1 (Nemati & Taghizadeh, 2013). This process becomes a lot more convoluted as the writing task rises in difficulty and eventually reaches the academic level.

2.2 Academic Writing in EFL Context

Academic writing is a form of writing that is structured for a more informed audience; tackling existing issues, arguments, and controversies in a certain area. Many second language learners struggle with this form of writing, as it requires them to think, form hypotheses, and collect data critically; without the bias of their own ideals or inherent cultural differences.

Second language learners' struggles with this form of writing seem to mainly come from the contrastive ideas of thinking critically between their L1 and the idea of critical thinking of their target language. A previous study on EFL writers seem to reflect this, where it shows that Japanese Confucian education ideals affected the ideas that learners put into their writing; often considered as "uncritical" in Western standards (McKinley, 2013).

Alongside their different ideas and cultures, second language learners also have to overcome the hurdle of learning a whole other language. Second or foreign language learners, in particular, require a more significant amount of language aptitude compared to native language learners when it comes to Academic Writing; as they would not only need to learn the norms, values, and expectations required in an academic writing essay, but also the language itself (Van de Poel & Gasiorek, 2012).

2.3 Cognitive Process Involved in L2 Writing

Writing is a complex process that involves many ideas, approaches, planning, and other variables to consider; sometimes subconsciously. In order to put the writing process into an identifiable scope, a theory and model of the cognitive processes in writing was introduced to build a foundation in which further, detailed study of the thinking process in writing can be conducted. Through this model, three major processes in writing are identified: planning; where the writer formulates their ideas, translating; where the writer transforms their ideas into actual writing, and reviewing; where the writer evaluates their own writing and revises accordingly (Flower & Hayes, 1981).

As complex as writing is, second language learners can benefit greatly from the application of the cognitive process model in their learning experience. A study related to this has shown that, while reinforcing students' cognitive process affected students' accuracy negatively, L2 writers were able to experience higher fluency and complexity in their writing (Goctu, 2017). It is worth noting that the negative effects on students' accuracy may have been caused by the nature of the assignment, which included a time limit. This study suggests that individual differences also played an essential part in the application of cognitive processes. This is a great indication of the need for a supporting action to ensure the success of cognitive processes, which lead us to Language Learning Strategies.

2.4 Language Learning Strategies

Language Learning Strategies (LLS) are supporting actions or processes that learners employ in order to learn or make use of languages more effectively. If applied effectively, LLS can help language learners in making full use of their time and efforts to achieve the most optimum language enhancement. The employment of LLS has an essential contribution in assisting English as a Foreign Language (EFL) students in managing their language learning process and has consistently been connected to linguistic achievements (Lem, 2019). There are three classifications for LLS, they are metacognitive strategies, cognitive strategies, and social/affective strategies. The present study will be focusing on metacognitive strategies.

2.5 Metacognitive Strategies

Meta-cognition, usually dubbed as thinking about one's own thinking, has recently been recognized for its role in developing autonomous learners; capable of independent planning, monitoring, and evaluating their own learning. The awareness of meta-cognition allows learners to acknowledge where our accomplishments reside, where additional hard work is necessary, and the process of how learners can achieve their goals (Chaterdon, 2019). Metacognition allows learners to shape strategic decisions by improving their comprehension of significant aspects of the task (Negretti & Kuteeva, 2011). With the finding and use of the Meta-Cognitive Awareness Inventory (MAI) by Schraw & Dennison (1994), evaluating whether or not someone is meta-cognitively aware and methods of developing this awareness became more accessible. Many scholars' attempts to apply meta-cognition awareness development on learning eventually coined the term metacognitive strategies.

Metacognitive strategies are strategies to regulate one's own thinking, such as self-monitoring, simplifying known information, and being critical with gained information. Metacognitive strategies are defined as strategies that are applied to plan, monitor, control, and understand used cognitive strategies (Goctu, 2017). Within the MAI, metacognitive strategies were classified as planning; the strategy where learners set their goals and distribute relevant resources before learning, information management; where learners utilize their skills and strategies to efficiently process information, comprehension monitor; where learners assess their own learning and usage of strategies, debug strategies, where learners make use of strategies to correct any errors in comprehension and performance, and evaluation; where learners analyze their performance after learning (Schraw & Dennison, 1994). Effective use of metacognitive strategies will allow students to

plan their own learning, making their process of learning more efficient and independent.

2.6 Metacognitive Strategies in Writing

Learning how to write in a foreign language can be quite strenuous, especially for adult L2 learners. Given the demanding nature of writing, the application of metacognitive learning strategy is well-suited to improve their productivity. The development of metacognitive knowledge and strategy needs to be put into consideration, as they will support many learners' self-regulation and achieve higher writing success [11].

Despite meta-cognitive learning strategies' effectiveness in writing, many students do not have explicit knowledge of metacognitive learning strategies; application of these strategies tends to be intuitive or incomplete, and many writing teachers were not given explicit knowledge on how to teach metacognitive learning strategies (Goctu, 2017). This reflects a lack of awareness of the significance of metacognitive learning strategies. Related to this are the types of awareness when using strategies: declarative awareness; having knowledge of what and how the strategy works, procedural awareness; having the knowledge on how to actually apply the strategy, and conditional awareness; having the knowledge of when and why a strategy is effective in a certain context (Negretti & Kuteeva, 2011). This lack of awareness is further reflected in a study done where it was shown that, while students are able to identify the appropriate time to use a certain learning strategy, they are reluctant to apply their knowledge to complete a task (Tyfekçi & Dujaka, 2017). This reluctance is reflected in their weak response and desire to plan, set goals, and solve problems. However, previous studies have shown that overcoming this reluctance and increasing the amount of time metacognitive learning strategies can improve the learner's writing; such as a study where they found that learners' language proficiency seem to improve with repetitive use of meta-cognitive strategies (Salashour et al., 2013).

3. METHOD

3.1 Research Design

This study on Academic Writing students' perceptions of their use of metacognitive Strategies was qualitative and the data were collected from semi-structured interviews and a combination of close and open-ended questionnaires which were transcribed and then interpreted through a thematic analysis. A qualitative method was used due to the nature of this study that requires the students' personal views and perceptions of the topic. Therefore, a study that allows information gathering on how the subjects perceive the topic is needed.

3.2 The Context of Study

The study was conducted in an Academic Writing course class in ELEP of the Faculty of Language and Arts UKSW, Central Java, Salatiga. The students from this faculty were chosen as they were expected to have used meta-cognitive learning strategies more frequently than others, due to their writing classes being mandatory. This could be seen from some successful graduates from this faculty who were able to publish their research on renowned academic publishers such as Routledge. Moreover, students from this course were chosen due to the course's demand for compositions that emphasize careful precision and completeness; requiring the students to make great use of their metacognitive strategies to succeed.

3.3 Participants

This study collected data through convenience sampling due to how there was only one Academic Writing class open when the study was conducted. The participants consisted of 19 students who were taking the course. Among the students in the Academic Writing course, 5 students were selected based on their answers on the mixed questionnaires regarding their metacognitive writing strategy use and perceptions of these strategies. This amount of students was chosen in order to have enough time to get an in-depth answer from each of the participants. Along with their answers in the mixed questionnaires, high achieving students of the Academic Writing course were prioritized as they have the highest probability of utilizing metacognitive strategies effectively; intentionally or not.Data Collection Procedure

3.4 Data Collection Procedure

This study collected data through a set of mixed questionnaires (combination of the open-ended and close-ended questionnaire) and semi-structured interviews. The mixed questionnaire functioned as a method of choosing the participants for the semi-structured interview as well as providing considerations for the following semi-structured interview. The mixed questionnaires were adapted from the Metacognitive Awareness Inventory (MAI) mentioned in the literature review Schraw & Dennison (1994) in order to find out and classify the participants' metacognitive writing strategies. The semi-structured interview questions were adapted and restructured from a previous research Goctu (2017) and the interviewed participants' answers in the mixed questionnaires. The data were collected at different periods; the mixed questionnaires were spread at the end of the Academic Writing course, on March 5th, 2020 and the interviews were conducted according to the participants' availability.

3.5 Data Analysis

The class where the mixed questionnaires were spread was chosen based on its availability for the study. Questionnaires were then distributed and data was collected. Using the results of the questionnaires as a basis, participants for the semi-structured interview were chosen based on how their answers regarding their perceptions on metacognitive writing strategies use could be expanded upon. Results of the interview and mixed questionnaires were then transcribed and interpreted through a thematic analysis approach. First, the data were read through to get an overview of all the data. Next, sections within the collected data were coded based on how they are related to the research questions. Finally, themes were generated from these codes, reviewed, and placed within their related subtopics. These results and interpretations were then developed further and related to previous studies' findings. The study then concluded with a summary of the results and findings of the study as well as mentions of any possible gaps within the study.

4. RESULT & DISCUSSION

In this section, the findings of the mixed questionnaire and semi-structured interviews on UKSW Academic Writing students are discussed. These findings consisted of several themes that were drawn from the participants' answers. They are Students' Preferred Metacognitive Strategies; discussing which metacognitive writing strategies they frequently used, Students' Perceptions on Each Metacognitive Strategies; a deeper look into the reason why they preferred a certain writing strategy and Students' Perceptions on Using and Learning Metacognitive Strategies; discussing their experience in using or learning metacognitive writing strategies.

4.1 Students' Preferred Metacognitive Strategies

As previously mentioned in the review of literature, there are five metacognitive strategies. They are planning, information management, comprehension monitor, debug strategies, and evaluation. The results of the mixed questionnaire and semi-structured interviews found that each of the participants used at least two, three, or even five of these metacognitive writing strategies whenever they are writing.

The findings of this study showed that all writing strategies were used by the participants with different rates. It showed that participants used the metacognitive writing strategies of information management, debug strategies, and comprehension monitor more frequently compared to planning and evaluation. From the findings, it was shown that strategies that do not yield immediate significance in writing or have a clear indication on when to be used are not preferred. Planning and evaluation fall into this category, which can be seen from the participants' reasoning when disagreeing with actions relating to these particular strategies.

The participants argued that some actions within planning such as setting targets and scheduling specific time for writing are redundant as they would be writing around or near the deadline either way. This lack of planning is actually related to their disagreements with actions relating to evaluation. The participants expressed difficulty in using the writing strategy of evaluation because they lack the time to do so.

Aside from the difficulty from the lack of planning, they also expressed that it is not part of their work to check and evaluate the quality of their writing. This may mean that the participants have developed their metacognitive declarative and procedural awareness, but not their conditional awareness. As mentioned in the literature, this awareness is related to how learners use metacognitive strategies. This includes knowing what (declarative), knowing how (procedural), and knowing when (conditional) in using metacognitive writing strategies.

From the participants' answers in the mixed questionnaire, it is certain that they did not lack declarative and procedural awareness. They managed to describe what aspects of planning and evaluation that could support their writing and what they need to do to apply them. However, their conditional awareness was not as developed. Unlike other metacognitive writing strategies where results are shown almost immediately, results of implementing the strategy of planning and evaluation are shown in the form of better time and quality of writing which are shown at the end of the entire writing process. This period when planning and evaluation did not produce immediate results may make them think that the process is redundant and a waste of time. This finding is further supported by how all of the participants utilized the information management and debug strategies; the type of metacognitive strategies that produce immediate results upon their use. The mentioned data were summarized based on whether the participants agreed or disagreed with actions relating to a metacognitive writing strategy and can be seen from Figure 1. Complete details on whether they strongly agreed or disagreed with these actions can be seen in Figure 2. These findings are in line with a previous study, where they found that students were generally able to make use of their improving metacognitive declarative and procedural awareness to follow general patterns in writing, but those who developed their conditional awareness were able to select a key concept to frame their arguments and modify the general structures of academic texts (Negretti & Kuteeva, 2011).

Each of the participants in this study was asked to fill in their perceptions regarding certain actions relating to each of the five metacognitive writing strategies mentioned. This is to better understand the results of the quantitative aspects of the mixed questionnaire. The findings regarding students' perception of the mentioned five metacognitive strategies are discussed below.

4.2 Students' Perceptions on Metacognitive Strategies

The findings of this study found that students' perception of each metacognitive strategy and how they apply it to their writing varied significantly from one another. This made it quite difficult to generalize each and every individual trait and perception regarding the topic. Therefore, this sub-section will focus on how these different perceptions affect the participants' usage of the five metacognitive writing strategies; planning, information management, comprehension monitor, debug strategies, and evaluation, in general.

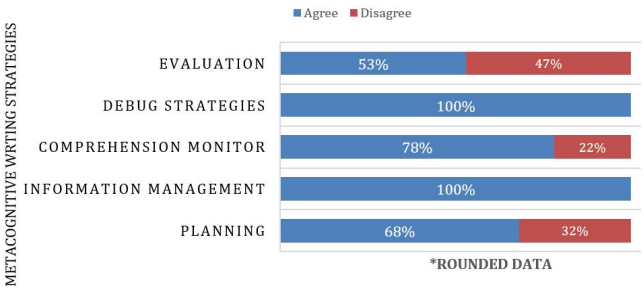
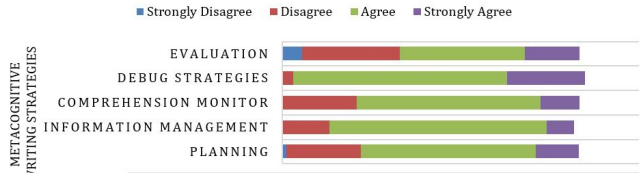


FIGURE 1. Students' Metacognitive Strategies (Summarized)



	Planning	Information Management	Comprehension Monitor	Debug Strategies	Evaluation
Strongly Disagree	1.30%	0%	0%	0%	6.60%
Disagree	25%	15.80%	25%	4%	32.90%
Agree	59%	73%	61.80%	72.00%	42%
Strongly Agree	14.40%	9.20%	13.20%	26.30%	18.40%

FIGURE 2. Students' Metacognitive Strategies (Complete)

4.2.1 Planning

As mentioned in the previous section and the literature, planning is the metacognitive writing strategy that allows writers to organize how and when they execute actions relating to the most efficient completion of their composition. Six of the nineteen participants expressed difficulty in making use of this metacognitive writing strategy, with all of the participants not being in full agreement with the actions mentioned. In the mixed questionnaire, they mentioned that they struggle whenever they have to finish their writing tasks before an assigned deadline. This mention of struggle was followed by reasoning such as how the deadline of their writing task coincides with other courses, the time between the beginning of the task to the deadline was too short, or that the Academic Writing course is inherently difficult, to begin with. The cause of this struggle might have been connected to their answers regarding other aspects of planning, such as setting a specific writing objective and thinking about information that relates to the topic before beginning to write. Seven out of 19 participants mentioned that they did not set a specific writing objective to meet whenever they write and that they preferred to be spontaneous with their writing. However, all of them agreed that planning is important when it comes to gathering information, reasoning that it would reduce the chances of having to rewrite and enable the discovery of good and accurate data. The other interviewed participants also talked about the effectiveness of planning in their writing. Only one of them mentioned that they struggled in meeting deadlines, but almost all of them said that they were reluctant to set a writing objective whenever they write.

Almost all of the participants mentioned that they did not set a target for a day and instead opted to set an objective for the overall writing based on the deadline instead. These results indicated that the participants focused solely on the writing product instead of the writing process. As they worked on the writing with the objective of finishing the writing before or near the deadline, the learning process of applying the metacognitive strategy of planning effectively became secondary. This may lead to any revision of their writing focusing primarily on a more apparent error, such as errors in grammar, structure, and vocabulary instead of the error of not being able to relay information concisely.

This is in line with the results of a previous study on metacognitive strategies application in writing, where it was found that the participants of the study only planned mentally for their writing and that they did not make use of the "setting goals" aspect of planning. This study showed the results of the lack of planning in writing in the form of spontaneous writing whenever an idea comes to mind and forgetting or being unaware of given writing tasks. However, this study also showed that participants who had metacognitive awareness were able to effectively plan and write simultaneously, allowing them to identify areas within their writing that needed revising and act to fix errors in their writing (Kodituwakku, 2013).

The results of mixed questionnaires and interviews also showed that participants were reluctant in making use of this metacognitive strategy despite knowing its benefits and how to apply it. A prime example of it is participant B, who stated that planning ensures compositions to stay on topic and proceed smoothly. Despite participant B mentioning the effectiveness of planning and how it benefited her in writing, she actually disagreed with actions relating to the metacognitive strategy of planning. She disagreed specifically with the act of setting goals and thinking about information that relates to the topic. This reluctance may be either due the process of planning being automated; as illustrated by participants who had metacognitive awareness in a previous study (Kodituwakku, 2013), or the problem of writers' personal traits and learning style colliding negatively to the process of applying a metacognitive writing strategy. Following the mindset of the probability that it was the latter, this result may reflect the difficulty of the participants who struggled in applying this strategy. This reluctance to apply the metacognitive writing strategy of planning is in line with the results of another previous study where they found that while learners are able to know when to use a certain metacognitive strategy, they are reluctant to use this knowledge to complete their tasks (Tyfekçi & Dujaka, 2017). The results of their study also showed that metacognitive strategies that regulate cognition such as planning and comprehension monitor are more prone to this reluctance. On the other hand, this previous study also showed that writers that were instilled with the idea and notion of metacognitive learning strategies were able to show better performance in applying these metacognitive learning strategies (Tyfekçi & Dujaka, 2017). Therefore, further stimulation of their use of metacognitive strategies over longer periods of time may enhance their use of this metacognitive writing strategy.

4.2.2 Information Management

Briefly mentioned in prior sections and explained in the literature, information management is a metacognitive writing strategy that regulates skills involving efficient information processing; such as organizing and developing data. All of the participants spoke positively and used this metacognitive writing strategy more frequently compared to the other five mentioned in this study. Based on their answers on the questionnaire, this metacognitive writing strategy supported their writing greatly in emphasizing the meaning that they were trying to relay to the readers, allowing the synthesis of information easier and improving their overall understanding of the material. Having a sense of control on the information flow in their writing also gave the participants a sense of reassurance of their composition.

However, despite the positive perceptions from the participants, this finding indicated their lack of conditional awareness. This might even indicate their overall lack of metacognitive awareness. As mentioned in the literature, metacognition is the capability to independently plan, monitor, and evaluate one's own learning. Metacognitive strategies, in turn, are strategies in which learners employ to self-regulate and become autonomous learners. The way the participants perceived their information management indicated that they were trying to overcome their shortcomings in terms of writing by having excess data in their composition. This can also be seen from their response to the action of categorizing data, where almost half of the participants disagreed; reasoning that it made data harder to understand and confusing.

This is also in line with the results of a prior study where they found that students who lacked metacognitive capabilities expand their writing from resourcefulness of data and finding errors within their writing (Tyfekçi & Du-

jaka, 2017). The results of the previous study and the findings of this study indicated that students who do not have sufficient metacognitive awareness will struggle in writing tasks where data resourcefulness and error-correcting are no longer sufficient to produce a satisfying composition; tasks where they need to develop their own arguments and modify their writing's content as a whole. Thus, this could be a great indicator to look further into learners' metacognitive awareness in the future.

4.2.3 Comprehension Monitor

As previously stated in the literature, comprehension monitor is a metacognitive writing strategy that enables the writer to recheck and assess their understanding as well as the development of what they are writing. Four out of the nineteen participants expressed difficulty in using this metacognitive writing strategy. Their answers on the mixed questionnaire reasoned that their difficulty originated from their reluctance to check their own understanding regarding the information that they have gathered, their focus on just gathering as much information as possible, and their reliance on their peers and teachers.

Despite their disagreements on most of the actions relating to the strategy of comprehension monitor, three out of these four participants did agree that reviewing gathered information is important; with only one participant who disagreed without giving any particular reason. They mentioned that they benefited from this action because relevancy to the topic is ensured from reviewing the information. This is in line with the answers of the rest of the participants who agreed to the actions relating to the comprehension monitor, who mentioned that the act of reviewing gathered information ensured that their ideas are relayed properly.

Those who agreed with the actions relating to the comprehension monitor strategy also stated that they benefit from this strategy because it reduced the chance of misunderstandings in their writing and made it easier to move on from any writing blocks that they had. The other interviewed participants shared similar sentiments regarding the effect of this metacognitive strategy on their writing, mainly on how it improved their writing structure from their heightened understanding of the material. However, despite the benefits mentioned by the interviewed participants, two of the interviewed participants struggled or were reluctant to apply this strategy. Their reluctance stemmed from not knowing when to use and how using this strategy felt redundant.

The results of the interviews and mixed questionnaires provided some clues into the participants' awareness and proficiency in the metacognitive writing strategies that they used. The participants seemed to be aware of their writing processes and the steps that they needed to take to improve their writing. Despite their lack of conditional awareness, having knowledge of metacognitive writing strategies and practice of applying said strategies might have supported their usage of metacognitive writing strategies. This can be seen from the participant's usage of the strategy of comprehension monitor, as most of the participants seemed to know the benefits of applying the strategy and utilize it to overcome their weakness (e.g writing blocks, lack of self-regulation, etc.). The findings of this study also indicate that some of the participants also experienced subconscious knowledge of when to use the strategy. This may indicate that repetitive use of metacognitive strategies is able to make the process of using the strategy automated as the writer's skills improve.

This is in line with the results of a related study, where it looked into the differences between the metacognitive awareness of skilled and less-skilled writers. This study found that skilled writers were more aware of how they did their writing task compared to less-skilled writers when it comes to procedural knowledge and proficiency in writing. Due to its characteristic as a "strategy", metacognitive strategies are capable of becoming automatized and become hard for skillful writers to consciously access. This could explain some participants' capability to make use of the strategy subconsciously and some participants' reluctance to employ it. The process of employing the strategy has become automatized and they know exactly when to employ it and apply this strategy without noticing (Farahian & Avarzamani, 2018).

In comparison, this same study found that less-skilled writers' declarative knowledge of metacognitive writing strategies was shallow and they lacked the procedural knowledge to employ their writing strategies (Farahian & Avarzamani, 2018). This may explain how some of the participants struggled or were reluctant to employ the comprehension monitor strategy. They may have simply lacked the essential declarative awareness to know the significance of employing this strategy or the procedural awareness to effectively use it. Therefore, this stands to show that a greater focus needs to be put into learners' actual employment of metacognitive writing strategies; as it would greatly improve writing quality when it becomes a process that activates subconsciously.

4.2.4 Debug Strategies

Explained and mentioned in both the literature and previous sections, debug strategies are a collective of strategies and actions that represents a metacognitive writing strategy that allows the remedy of errors in comprehension and writing performance. All of the participants agreed to the actions related to this metacognitive writing strategy and utilized this strategy as much as they would information management. Based on their answers on the mixed-questionnaires and interviews, they found this strategy beneficial as it reduces any chance of a mistake in their writing, helps them focus on their task and dispels any confusion or writing blocks that they might have regarding a topic. This can be seen from their answers when asked why they would ask for others' insight when they did not understand something while writing.

The participants also spoke positively of the benefits of employing debug strategies on data accuracy and reassurance in writing. When asked about reevaluating their writing progress whenever they are confused and rechecking unclear new information that they have gathered, they stated that they made use of debug strategies to recheck new information and ensure they are understandable.

This seemed to show that debug strategies were employed effectively by the participants, as they were able to overcome hurdles within their writing such as writing blocks and lack of motivation by employing it. Aside from its use to overcome the participants' difficulty in the writing process itself, debug strategies seemed to reduce the chance of errors in comprehension and in managing information as well. These findings seemed to also show that

debug strategies are an automated strategy that the participants utilized whenever they ran into a problem that they could not solve using other strategies or whenever they wanted to prevent errors from occurring.

Despite the positive feedback regarding the use of debug strategies, Participant B illustrated a context in which it could not be employed effectively. She explained that her experience in using debug strategies in a group was not effective, as she was not able to get effective feedback from certain groups. This indicated that, despite learners being able to utilize this metacognitive writing strategy effectively, it is scaled to how they and their peers are able to solve their problems. Learners who have and are surrounded by peers who have enough knowledge and problem-solving skills to come up with a way to overcome their writing hurdles will have little difficulty in making use of the metacognitive strategy of debug strategies. On the other hand, learners who lack these traits and are surrounded by peers who also struggled with the same issue will not be able to effectively utilize this strategy. Thus, effective usage of this metacognitive strategy requires a sufficient amount of knowledge of other writing strategies and capable peers.

The above results are reflected within a dissertation about teaching metacognitive writing strategies where it was found that debug strategies are difficult to teach, as they describe more cognitive processes instead of behavioral actions. As debug strategies are very similar to procedural knowledge; where one finds errors or difficulty in solving problems and therefore changes the learning strategy that they are using, the researcher opted to teach a variety of learning strategies instead of teaching about debug strategies. The participants were encouraged to use and switch through any of the learning strategies that were taught to overcome any writing hurdle. The researcher would purposely omit teaching debug strategies due to how abstract it is and instead inform the participants of the importance of procedural knowledge so that they could evaluate the effectiveness of strategies and how to apply different strategies when needed (Vallin, 2019).

The findings of this study showed that the participants have an inkling on when to change their learning strategies. However, these findings further emphasized that they lacked the conditional awareness of when to apply other metacognitive writing strategies that could support debug strategies. Therefore, further emphasis on improving learners' conditional awareness for each of the different metacognitive writing strategies need to be done.

4.2.5 Evaluation

As elaborated in the literature, evaluation is the metacognitive writing strategy that consists of actions relating to analyzing writing performance in order to know what to improve. Nine out of the nineteen participants expressed reluctance to apply this metacognitive writing strategy. Based on the answers from the mixed questionnaires, those who did apply the metacognitive writing strategy of evaluation benefited in the form of knowing which parts of their writing need improvement. These benefits, however, were strictly actions relating to the evaluation done with the help of other people, such as teachers or peers. Among the nineteen participants, only eight participants agree with the act of self-evaluation. Those who disagreed with self-evaluation mentioned that they lacked the confidence and skills to do so and they also argued that being evaluated by others is more effective and credible compared to self-evaluation that is more prone to bias.

The participants' responses above indicated that they experienced difficulty in maintaining and regulating the metacognitive writing strategy of evaluation when they are left on their own. This may be due to the participants' lack of confidence in their individual skills as well as their lack of metacognitive awareness to monitor their own learning. This lack of confidence and awareness might have caused them to have the preconceived notion that they were simply not good enough or were unqualified to attempt self-evaluation or make any sort of judgments on their writing based on their own merits. This could potentially cause them to hesitate and even downright refuse to make progress on their writing without the aid of a capable peer or supervising teacher.

These results are quite similar to the outcome of laboratory research on learner's retrieval and retention of information based on the usage of metacognitive strategies where it was found that, due to the learners' lack of awareness to the effect of testing in monitoring their own learning and their own predictions of how testing would not affect the outcome, learners tend to choose to not test themselves when regulating their own learning in the settings of real-world education. It was also found that these results have a consequence on learners' study behaviors in the real world from their survey where they found that only 11 out of 117 of their participants practiced retrieval of information and only 2 out of 117 of their participants practiced recalling information (Karpicke et al., 2012).

The findings of this study showed that the results of the research on the previous paragraph are relevant to the participants' difficulty and reluctance to make use of the metacognitive writing strategy of evaluation. Overcoming this difficulty and reluctance will require further emphasis on the importance of self-evaluation and understanding of each learner's own true writing capabilities. Therefore, a method of teaching that allows learners to learn how to evaluate themselves and test their own writing skills is a necessity.

4.3 Students' Perceptions on Using and Learning Metacognitive Strategies

Alongside the findings above, the interviewed participants were asked about their experience in using and learning metacognitive strategies. The results of this semi-structured interview found that each interviewed participant had different experiences in learning and using metacognitive writing strategies. This sub-section will discuss how these differences affected their process of learning and usage of metacognitive writing strategies.

4.3.1 Knowledge of Metacognitive Writing Strategies

Three out of the five of the interviewed participants stated that they did not learn about metacognitive writing strategies explicitly prior to the Academic Writing course. Regarding this, participant B exclaimed that she did not even know about metacognitive writing strategies prior to the interview. On the other hand, Participant E mentioned that she did learn about metacognitive writing strategies prior to the Academic Writing course. However, she did not

know that they are a part of metacognitive writing strategies.

Interviewed participants who mentioned that they did have knowledge of metacognitive writing strategies prior to the Academic Writing course both mentioned that they learned about it in courses that require them to write. Related to this, Participant C mentioned that they would receive reminders about using metacognitive writing strategies in their writing as well as its importance from their lecturer. Supporting Participant C's experience of being reminded about metacognitive writing strategies, Participant D stated that learning about metacognitive writing strategies is a given in any writing course; as it is closely related to the act of writing itself.

The results of the interview above reflected the state of the participants' metacognitive awareness. Although its trait as a strategy allows it to become automated despite the lack of explicit knowledge of what it is, this may have caused the participants' metacognitive awareness growth to be halted. The cause of this may have been how metacognitive writing strategies are taught implicitly. Due to the implicitness of metacognitive writing strategies learning, the participants may have not effectively made use of metacognitive writing strategies or even know about the existence of metacognitive writing strategies outside of the ones that they subconsciously made use of. The finding of this interview showed that an alternative to teaching metacognitive writing strategies needs to be found to produce capable writers who have metacognitive awareness as presented in a previous study (Kodituwakku, 2013). This alternative may actually be to teach metacognitive writing strategies explicitly, as will be discussed in the next section.

4.3.2 Implicit and Explicit Learning of Metacognitive Writing Strategies

Three out of the five interviewed participants responded positively to the idea of teaching metacognitive writing strategies explicitly, while the other two participants did not provide a clear answer. They mentioned that being taught about these strategies explicitly would benefit them in the form of longer retention of the knowledge on how the strategies work, more frequent use of the strategies, and improve the chance of students actually applying these metacognitive writing strategies in their compositions. The results of this interview shed some light on the participants' perspectives on what they expect from their metacognitive writing strategies learning experience. It indicates the need to look into a revision of how these strategies are taught. Therefore, an alternative to teaching a metacognitive writing strategy such as the one mentioned in this section is necessary.

5. CONCLUSION

A method of producing self-regulated writers; capable of regulating their cognitive skills effectively to make great compositions, has piqued the interest of many people. This study served the purpose of finding out the kinds of metacognitive strategies that students utilize in writing their essays as well as their perceptions on how these strategies benefited their compositions. Based on the results and analysis of the findings above, these conclusions can be drawn.

It was concluded that one of the reasons why the participants preferred metacognitive strategies that provided immediate results was because the participants lacked the conditional awareness to fully make use of all of the metacognitive writing strategies; despite having sufficient declarative and procedural awareness. This lack of conditional awareness then was found to have served as a catalyst for the participants' struggles in learning and making use of some of these strategies or reducing their effectiveness. The prominence of participants' lack of conditional awareness in this study could be seen from the participants' perception on information management as a tool to overcome their shortcomings by being resourceful in data and the need to improve upon this conditional awareness in order to support the use of debug strategies.

This study also showed that the acquisition of knowledge and repetitive usage of metacognitive writing strategies could enhance the effectiveness of how writers could use these strategies. In regards to this, the results of this study suggested that further stimulation of the use of metacognitive writing strategy is needed. This necessity is due to how this may lead to the strategy becoming automated as mentioned in the section about comprehension monitor, encourage writers who are reluctant to make use of certain metacognitive writing strategies as depicted in the section about planning, and disprove the negative notion stated in the evaluation due to lack of self-confidence and metacognitive awareness.

Based on the results of this study, the implementation of an alternative to teaching metacognitive writing strategies; such as teaching these strategies explicitly, is also suggested. The status quo presented by the participants showed that their explicit knowledge of these metacognitive writing strategies was still lacking. Implementation of alternatives such as explicit teaching of these strategies may lead to improved awareness and usage of metacognitive writing strategies, as future writers will have a concrete definition of what these strategies are.

The researcher of this study believes that the development of this study on a wider scale is possible and necessary. Methods other than questionnaires and interviews may prove to provide more concrete and detailed information on Academic Writing students' perceptions on metacognitive writing strategies and their usage of these strategies. It is the researcher's firm belief that this kind of study would result in the production of a better quality of writers and compositions. Future researchers of this topic are suggested to further explore the findings of this study in order to achieve this.

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