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Chapter

The Use of Metacognitive Strategies in EFL Academic Writing

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Abstract

Metacognitive is one of the subcategories of learning strategies that consist of planning, monitoring and evaluating. In academic writing, students may have different attitudes towards the use of strategy they might use positive or negative attitudes, namely cognitive, affective and behavioural strategies, depending on personal preferences. This study aims at determining students’ attitudes towards metacognitive strategies based on the three dimensions of attitude. The study identifies how students implement metacognitive strategies at the planning, monitoring and evaluating stages of academic writing. The participants of the study were 26 students in IV-B Academic Writing at the English Education Department of the University of Mataram, Indonesia. Questionnaires and interviews were used as data collection instruments, and all students answered the questionnaire. Six students were interviewed as a sample to verify information from the questionnaire. The study shows that the students have a positive attitude in using metacognitive strategies. The study also indicates that the students, at a cognitive level, are aware of the importance of metacognitive strategies in writing the academic papers. The study confirms that students use metacognitive strategies as the background knowledge of ideas before writing down developing the idea, drafting and evaluating the structure and quality of writing.

Keywords: metacognitive strategies, attitudes, learning strategies, academic writing, language learning

1. Introduction

Writing ability is an important skill for students in developing other skills and in completing other tasks in future professional life. In the process of writing, students need knowledge of the correct use of grammar, genres and vocabulary and the ability to self-regulate their own learning [1]. Since writing is a complex process, every student has different strategies to overcome their difficulties in writing, organise and evaluate their writing process in a structured manner [2]. In writing, students use learning strategies by managing and using a set of skills in the academic and non-academic settings, and they have to learn from previous or other sources of learning in order to complete tasks that they are facing more effectively and efficiently [3]. Oxford [4] classifies learning strategy into two categories, that is, direct and indirect strategies. A direct strategy is used within writing processes and student writers can make use of events from memory (i.e., memory strategy), or from previous knowledge (i.e., cognitive strategy), or other alternative ways.
where writing ideas cannot be developed from memory or previous knowledge (i.e., compensation strategies). Indirect strategies, on the other hand, are used rather secondarily to writing processes and student writers can support their writing with awareness on personal style of writing (i.e., metacognitive strategies), with personal attitudes towards a particular style of writing (i.e., affective strategies) and with information and assistance from fellow student writers (i.e., social strategies). This study focuses metacognitive strategies and students’ attitude towards strategies, and the students’ strategies in implementing metacognitive strategies when writing academically.

Metacognitive strategy is an action that gives learners a way to coordinate their learning process because it has gone beyond cognitive devices [4]. It means that the strategy that helps students use cognitive devices and proves to them how to conform to the learning process. Additionally, O’Malley and Chamot [5] classify metacognitive strategies into three subcategories, they are planning, monitoring and evaluation. According to them, with the application of metacognitive strategies, learners can develop their skills in terms of planning, monitoring and evaluating their ideas.

Some researchers have proven the success of the use of metacognitive in the writing process, for example, stated that metacognitive strategy on writing skills expands learners’ metacognitive awareness and makes them have a positive attitude towards writing [6, 7]. It also helps the learners to focus on the steps of writing and eliminates shortcomings in writing, the ability to achieve higher thinking capacity and more aptitude to concentrate on writing. But in fact, each student has a different opinion towards the use of strategies in their academic learning. Those opinions are said to be their attitude whether positive or negative. In this study, attitude is the tendency of students to act positively or negatively to the use of metacognitive strategies in academic writing in terms of three components of attitude.

Unlike the previous research, conducting this research is important to further explore and understand students’ attitude towards metacognitive strategies in terms of cognitive, affective and behavioural. No one discussed perspectives in the previous studies mentioned above, including the three components. And the second one, it is crucial to know how they use metacognitive strategies in academic writing classes, especially at the English Education Department University of Mataram. Students and lecturers can collaborate to raise awareness and see their response towards metacognitive strategies in the process of learning and what is their attitude towards it. This is in line with the metacognitive sense, which is a person’s knowledge of how he or she learns. Therefore, we need to know how they use metacognitive strategies at the stage of planning, monitoring and evaluating so that students and teachers together build students’ metacognitive awareness in order to know their attitudes whether positive or negative in terms of those three components. So that they can maintain it or fix it and make their learning practice to be successful in the future.

2. Literature review

As the chapter discusses attitude and metacognitive strategies, this section describes theories related to the research that serves as the foundation for this study.

2.1 Attitude

Attitude plays a crucial role in the learning process because it is an act of one’s predisposition that arises towards an object, whether positive or negative. Furthermore,
Mensah et al. [8] defined attitude as a kind of psychological tendency that develops as a result of an experience that affects a person’s perception of situations, objects, people and reactions to them either positively or negatively, favourably or unfavourably and neutral or ambivalent. They also stated attitude as a concept of focus on how an individual thinks, acts and behaves. Similarly, Latchana and Dagnew [9] claimed that attitude can be said as a key of concept to understand human behaviour and is defined as a mindset consisting of beliefs and feelings. In summary, attitude is an evaluative process about an object, a person, an event or phenomenon, whether it is positive or negative, reflecting on how we feel about things.

In order to know one’s attitude, we cannot only look at the general definition of attitude. For this reason, we need the structure of attitude, because we have to know the components that are in it. Wenden [10] believes that attitude is the learners’ tendency to act and consists of three components: cognitive, affective and behavioural. It also tends to encourage learners to adopt certain learning behaviours. So, it is important to know the attitude of students in terms of those three components. The three components are described as follows:

**Cognitive component**

Cognitive component is an individual’s evaluation consisting of beliefs, thoughts or knowledge towards an object, people, idea or event. It seems to affect the learning process because it relates to one’s thoughts or perceptions.

**Affective component**

The second is the affective component, related to an individual’s emotions or feelings towards an object, person or issue. An affective component affects one’s preferences such as like or dislike or how the object makes you feel.

**Behavioural component**

The last one is the behavioural component of how one’s predisposition in act. How individuals act towards an object depends on their attitude towards the cognitive component and affective component. The answer of this component is not only necessarily in the form of an action that can be evaluated directly, but also can be in the form of statements or sentences.

Learners’ attitude in the learning processes plays an important role in influencing learners in setting learning objectives, problem-solving skills, learning beliefs and forming internal or external motivations in all aspects of students’ academic performance [11]. Students’ learning attitude can be interpreted as a predisposition of students’ behaviour when they learn something. Furthermore, in her research, Khikmah stated that learners’ attitudes in learning are their own responsibility to the beliefs they have in the learning process and should be evaluated.

A positive attitude in the learning process is very important for students because if they do not have that attitude, they will not be good at carrying out the learning properly. It can be concluded that students’ achievement is influenced by their attitude towards the learning process that will drive them to metacognitive awareness because it refers to a person’s way of raising awareness about their thought processes in learning. Thus, it will lead us to explore the learners’ attitude towards applying metacognitive strategies in the writing process. Additionally, the relationship between students’ attitudes on the learning process has a significant impact on the achievement of learners.

### 2.2 Attitude and language learning strategies

Basically, learning strategy is an action that students use to overcome their problems in the learning process. In considering the importance of language learning
strategies for students, this study will evaluate students’ opinions on language learning strategies, namely metacognitive strategies. It is said as the attitude of students towards the strategies they use in the learning process. Oxford [4] claimed that a learning strategy consists of steps that students take to improve the quality of their own learning. In contrast, Richard and Platt [12] stated that learning strategies are thoughts and behaviours that learners use intentionally during the learning process and can assist them in understanding and remembering the new information they receive. In addition, Stern [13] said that learning strategies have different concepts depending on the learners’ assumptions. It can be concluded that language learning strategies are actions that students use for understanding new information they receive and use when having problems in doing assignments in language classes, whether consciously or unconsciously to achieve goals in the learning process.

Of the many types of learning strategies, this study focused on metacognitive strategies. The intended meaning of metacognitive itself by Oxford [4] is beyond, beside or with cognitive. Therefore, metacognitive strategies are an action that gives learners a way to coordinate their learning process because it has gone beyond cognitive devices. It is also an action that students take in using cognitive devices and proving to them how to conform to the learning process.

O’Malley and Chamot [5] pointed out that metacognitive strategies are ‘higher order executive skills’. Accordingly, metacognitive strategies are the strategies that students usually use when they are doing an independent study. So, metacognitive strategies are also called ‘Thinking about thinking’. Some researchers claimed this strategy consists of two elements: knowledge of cognition, also called awareness of how the individual can acquire knowledge, and know about themselves. The second one is regulation of understanding, which contributes to control the process of writing containing aspects such as planning and self-preparation, self-monitoring, self-evaluation and revision [14]. In addition, O’Malley and Chamot [5] stated metacognitive strategies in writing involve thinking about the writing process consisting of planning, monitoring and self-evaluating of what has been written.

In summary, metacognitive is a set process for revealing how a cognition must be controlled and monitored. These strategies play an important role in learning because metacognitive learning strategies are strategies developed and build upon cognitive devices or sets of skills. These skills will then provide awareness or create awareness of the importance of a control in conditions to plan, monitor and evaluate the learning process. The use of metacognitive strategies not only improves the quality and ability of students, but also makes the results of the writing become more structured.

In this research, the researcher uses the metacognitive classification proposed by O’Malley and Chamot [5] to plan, monitor and evaluate. Thus, metacognitive writing strategies are as follows:

**Planning**

Planning is a good beginning process in conducting the learning process. Before students start to write, it is important for them to plan an outline about what they would be writing. The planning allows students to focus on the goals and ideas they will write about. This process is done when the students have not started writing because they must have some of their writing compositions. However, in some cases, there are also students who are just planning their goals in the middle of their writing. Thus, by making a good plan, it will be easier for the students to determine the direction of their writing and make their writing more structured.
Monitoring

Monitoring could be described as the process of controlling and taking appropriate steps in order to achieve a good piece of writing. It is also a response to the challenges of understanding ambiguity in the new language that serves. Then, another important part of monitoring the writing process is controlling every part we are writing. Students also should check to see if what they write matches the topic being discussed.

Evaluating

Another critical factor to consider in metacognitive strategies is evaluation. This happens when the writing process has been completed. Evaluation will be more successful when it is done in pairs or called peer assessment. Peer assessment conducted by two students exchanges the results of their writing. After looking carefully, they can then discuss the improvements that will be made. The students need to develop the strategy and consider what to check, such as the content of the writing and the structure of the language that is used. Evaluation can allow the learners to realise their strengths and shortcomings in their process of writing. By understanding both, learners can develop their learning strategies to make their writing better in the future.

2.3 Attitude towards metacognitive strategies

After discussing the concepts above, this section will discuss the attitude of students towards metacognitive strategies. Attitude towards metacognitive strategies is how students view the use of such strategy strategies in academic writing. Kulprasit [15] said learning strategies play a crucial role in processing and organising new knowledge related to the knowledge they already have in cognitive devices. Cognitive aspects cannot work alone because they need to be controlled and regulated by metacognitive strategies. Therefore, the learners should be aware of their own thinking abilities and capable of organising them.

Metacognitive strategies related to the knowledge they have are about how they think in the process of learning. It is a sequential process that individuals use to control his/her cognitive activity and ensure that cognitive goals have been achieved. This process helps students in regulating and supervising the learning process. Metacognitive strategies usually follow cognitive activities. They often occur when cognition is experiencing an obstacle in learning. In conclusion, cognitive strategies are the strategies that students used to resolve the shortcomings, while metacognitive are used in order to control the sets of planning, monitoring and evaluating their learning activity.

Moreover, Langan [16] stated that the attitude towards writing is an important factor in writing well. This attitude should be built based on the idea that writing is a skill that can be learned. Every student may have a different opinion towards the strategy they take in the writing process. It means that it is necessary to further see one's response towards the application of metacognitive strategies in academic writing in terms of cognitive, affective and behavioural. It is also important to use metacognitive strategies in the writing process because it is related to what students know about themselves as learners and how they control their behaviour.

In the general concept of attitude mentioned above, three components measure students’ attitude towards an object. Then, the student’s attitude towards metacognitive is measured from the three components in terms of cognitive, affective and behaviour. Cognitive attitude in metacognitive strategies is students’ beliefs, thoughts or knowledge about those strategies in academic writing. For example, I believe that metacognitive strategies make my writing product more structured. While affective attitudes are students’ emotions or feeling towards metacognitive strategies. For
example, I feel more confident in using metacognitive strategies. And the last one, behavioural component towards metacognitive strategies is the students’ tendency to behave towards the metacognitive itself. For example, metacognitive strategies help me to enhance my learning experience.

3. Methods

This research conducts the descriptive qualitative approach. The qualitative approach focuses on analysis and interpretation. This research aims to explore the students’ attitudes towards the use of metacognitive strategies in their academic writing and how students implement the metacognitive strategies. The data were collected by distributing the questionnaire to all students in the IV-B academic writing class consisting of 26 students. There are two kinds of questionnaires in this study. The first questionnaire is about students’ attitude towards metacognitive strategies in terms of cognitive, affective and behavioural. The second questionnaire is the Metacognitive Strategies Questionnaire. The researcher also took 6 students to be interviewed to support the questionnaire results. The researcher then analysed the data through the following steps: identification, classification, description and explanation.

4. Findings and discussion

4.1 Students’ attitude towards metacognitive strategies

In the first questionnaire, to determine the attitude and answer the first question based on the theory in this research, researchers first counted the mean value of each respondent to find out whether they have a positive attitude, neutral attitude or negative attitude towards the use of metacognitive strategies in academic writing. To find out the mean value of each respondent, researchers use the formula:

\[ X = \frac{\sum X_i}{n} \]

where,

\[ X \] = average (mean)

\[ \sum X_i \] = number of values per item

\[ n \] = number of items

After each respondent’s mean score is obtained, the results of the questionnaire are then interpreted using criteria for interpretation of the rating scale adapted from Kulprasit [15] as in the following Table 1.

The results of the Attitude Questionnaire are given in Figure 1. Based on the bar chart in Figure 1, most students have a positive attitude towards using metacognitive strategies in academic writing in terms of three components of attitude. Of the three components, one component is most dominant produced by participants, namely cognitive components. Cognitive components of attitude are students’ knowledge or belief towards the use of such strategies because they realised the importance of using metacognitive strategies. According to Eagly and Chaiken [17], the cognitive component measures how people think and believe in certain things. Most of the students believe that well-organised writing will produce good writing and improve the quality of writing results.
The findings in this study are similar to the findings made by Al-Jarrah et al. [18] and Talafhah et al. [19] in which they also showed that the majority of students at Ibrid Jordan secondary school recognise the usefulness of metacognitive strategies in improving their writing performance. According to Wenden [10], cognitive component is an individual’s evaluation consisting of beliefs, thoughts or knowledge that affect the learning process.

From the results found in this study, it can be concluded that students’ attitude towards the use of metacognitive strategies has a strong cognitive attitude but affective and behavioural attitudes are not much different from cognitive results. In conclusion, most students have a positive attitude towards metacognitive strategies in terms of cognitive, affective and behavioural because all of the three components have good scores on the results of students’ evaluation towards the strategy used when writing. Although there are seven students who still cannot determine their attitude as they have a neutral result but no one student has negative attitude. Since affective and behavioural components have not been able to balance the results of cognitive component, the collaboration between teachers and students is required to create students’ confidence in writing using such strategy equally.

4.2 Metacognitive strategies

Based on Table 2 below, there are two ways that have the same score that students do in the planning stage. There are 19 students or about 73% of the sample visualising what they are going to write, and when they do not have any idea, they just write...
whatever they have in their mind. This is a statement contained in the question number 2 that says 'Before I start to write, I find myself visualizing what I am going to write'. It means that most of the students in this research visualise their planning according to the topic to be written before starting to write. They imagine and think about what their writing will look like from the beginning to the end of writing.

In the monitoring stage, the results found that most of the students use their background knowledge to create the content of their writing (Table 3). The background knowledge they bring in writing activities comes from the experience and learning they go through during the teaching and learning process or from the previous writing process. The results in this stage are in line with the planning stage where they only utilise their knowledge to produce a writing according to the topic they have created by themselves or determined by their lecturers. In the results of the interview, there are some of the students who say that monitoring is the hardest thing to do because there are some things that really need to be considered. Students also confirmed that when facing problems or having limited knowledge, they looked for more resources to get better understanding about the ideas.

In the final evaluation process, most of the students usually look and think back on how they are writing to see the structure of their writing and what they might need to do more to improve their writing (Table 4). After taking a look of their writing

<table>
<thead>
<tr>
<th>No</th>
<th>Question items</th>
<th>Level of agreement</th>
<th>Total positive high score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>Question 1</td>
<td>12 (46.2%)</td>
<td>6 (23.1%)</td>
</tr>
<tr>
<td>2</td>
<td>Question 2</td>
<td>10 (38.5%)</td>
<td>9 (34.6%)</td>
</tr>
<tr>
<td>3</td>
<td>Question 3</td>
<td>12 (46.2%)</td>
<td>7 (26.9%)</td>
</tr>
<tr>
<td>4</td>
<td>Question 4</td>
<td>12 (46.2%)</td>
<td>6 (23.3%)</td>
</tr>
<tr>
<td>5</td>
<td>Question 5</td>
<td>8 (30.8%)</td>
<td>2 (7.7%)</td>
</tr>
</tbody>
</table>

Table 3.
Monitoring.

<table>
<thead>
<tr>
<th>No</th>
<th>Question items</th>
<th>Level of agreement</th>
<th>Total positive high score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>6</td>
<td>Question 6</td>
<td>21 (80.8%)</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>7</td>
<td>Question 7</td>
<td>15 (57.7%)</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>8</td>
<td>Question 8</td>
<td>14 (53.8%)</td>
<td>5 (19.2%)</td>
</tr>
<tr>
<td>9</td>
<td>Question 9</td>
<td>7 (26.9%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>10</td>
<td>Question 10</td>
<td>20 (76.9%)</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>11</td>
<td>Question 11</td>
<td>16 (61.5%)</td>
<td>5 (19.2%)</td>
</tr>
<tr>
<td>12</td>
<td>Question 12</td>
<td>10 (38.5%)</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td>13</td>
<td>Question 13</td>
<td>12 (46.2%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>14</td>
<td>Question 14</td>
<td>12 (46.2%)</td>
<td>5 (19.2%)</td>
</tr>
<tr>
<td>15</td>
<td>Question 15</td>
<td>13 (50%)</td>
<td>3 (11.5%)</td>
</tr>
</tbody>
</table>

Table 4.
Planning.
results, the students also edit both the content and language of their writing. The students need to develop the strategy and consider what to check, such as the content of the writing and the structure of the language that is used. They usually correct such errors as spelling, keywords, and sentence construction, to make sure that the sentences are connected to each other and use appropriate language to make the readers easily understand. By following these ways, the students think that it helps to improve the quality of their writing. As supported by Cer (2015), the students developed the strategies based on their skills and knew when and why they should use the information they needed to help them in writing.

In conclusion, those are the most common ways that students in the English Education Department at the University of Mataram use metacognitive strategies in academic writing classes. Although they do not know yet about the strategies they use in writing, and almost all students reveal that they have used the strategy and are aware of the stages they do, such as planning, monitoring and evaluating. Additionally, when using metacognitive strategies, students can make planning first and then decide which approaches can be used in writing and compiling their work, monitoring the writing process in order to make the writing more effective and easy to understand, and evaluating the writing results in order to check some errors and avoid the same errors in the future, Richard and Schmidt (2002). So, the more the students practice writing and evaluate themselves as autonomy learners, the more the students improve their writing skills.

5. Conclusion

This study aimed to identify the most dominant attitude of learners towards the use of metacognitive strategies in academic writing. The most dominant way is that the students use metacognitive strategies in planning, monitoring and evaluating. Based on the findings and discussion related to the first research question, most students have a positive attitude towards the use of metacognitive strategies in academic writing in terms of cognitive because they realised the importance of using metacognitive strategies in their educational academic writing process.

Then, the most dominant metacognitive strategy that students do in the planning stage is to visualise their planning according to the topic to be written. The students also only write whatever they have in their minds. In the monitoring stage, most students preferred to use their background knowledge to create the content of their writing. Meanwhile, in evaluation process, students usually look and think back on
how they are writing to see the structure of their writing and what they might need to do more to improve their writing. The students also edit both the content and language of their writing.

A. Appendices

Appendix 1. Attitude Questionnaire

1. I believe that metacognitive strategies make my writing product more structured.

2. Metacognitive strategies is important because it can increase the quality of my academic writing.

3. Metacognitive strategies make me able to expand my knowledge.

4. Being good in academic writing using metacognitive strategies help me to write well in the other subjects.

5. I believe that the more I practice using metacognitive strategies, the more I improve my writing skill.

6. I feel that metacognitive strategies make me able to create new thoughts.

7. Metacognitive strategies make me feel confident in writing.

8. I feel enthusiast to write when using metacognitive strategies.

9. I feel enjoy to express my ideas when using metacognitive strategies.

10. I do not get anxious when I have to make an academic writing assignments.

11. I like to practice my writing using metacognitive strategies.

12. Metacognitive strategies help me to have good evaluation on my own writing.

13. I always make a good plan, monitor my writing process, and make an evaluation of my writing.

14. Metacognitive strategies help me to improve the quality of my writing.

15. Metacognitive strategies help me to enhance my learning experience.

Appendix 2. Metacognitive Strategies Questionnaire

1. Before I start to write, I make an outline including a list of the key words of views that I want to include in my writing.

2. Before I start to write, I find myself visualising what I am going to write.

3. When I do not have any idea, I just write whatever I have in my mind.

4. I plan the necessary components in introduction, body, and conclusion of my writing.

5. I thought about how much time I should spend on my writing.

6. I use my background knowledge to create the content of my writing.

7. I automatically concentrate on both the content and the language that I use in my writing.

8. While writing, I identify the mistakes I have made.

9. I can effectively manage the time allocated in writing to ensure the completion of the writing task.

10. I pause while writing and ask myself if the information in the content of my writing is clear.

11. I tried to focus my attention on choosing appropriate words and phrases.

12. When I get stuck, I can find ways to solve the problem.

13. I know how to develop an appropriate introduction, body and conclusion of my writing.

14. I stop while writing and ask myself how well I am doing.

15. While writing, I ask myself if the content matches the outline I have already develop.

16. I reread my essay and made sure that I had covered the content fully before I submitted to my teacher.

17. After I finish writing, I know how well I have done.

18. After I finish writing, I edit both the content and language of my writing result.

19. I look and think back on how I write and about what I might do differently to improve my writing next time.

20. When I cannot write complicated sentences, I develop other simples one.

Adapted from: Farahian (2015).
References


