

## Students' Metacognitive Weaknesses in Academic Writing: A Preliminary Research

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**Abstract**—This article aims to explain the weaknesses of metacognition that affect writing skills. Weaknesses of writing like content development, the organization of writing, compatibility of content with themes and audience awareness are assumed from the weaknesses of student metacognition. By using a qualitative approach, data is collected through questionnaires and interviews. Using the questionnaire found the level of student metacognitive awareness. A total of 22 male and female students were randomly selected. Responses given through self-report questionnaires showed that as many as 15 students had high metacognitive awareness and as many as 7 students had low metacognitive awareness. Furthermore, through interviews found metacognitive skills in academic writing. The results of the data analysis show that there are three weaknesses of student metacognitive, namely: students are too dependent on feedback from lecturers and highly dependent on lecturers and colleagues when writing, students cannot assess their own understanding of the information they receive for writing assignments, students are not aware benefit from the strategies used during writing. Students need to be trained to plan, monitor and evaluate writing activities so that they are skilled in arranging words, concepts, and terminology used in writing. In addition, through the writing they produce, it can be seen how the process of produces the meaning and thinking skills of students in writing.

**Keywords**—Metacognitive weaknesses, academic writing

### 1 Introduction

Metacognition is seen as a high-level thinking skill that functions to control one's cognition [1]. This metacognition refers to the level of thought that involves active control of the thought processes used in learning situations. During the learning process, students must maintain attention control and emotional regulation because attention has a reciprocal relationship with cognitive, whereas emotional has a reciprocal relationship with metacognitive [2]. Both Cognitive and metacognitive have a big

influence on the learning process. The learning process who starts from importing themes, question formation, learning participation, until giving the evaluation of feedback can help students improve high-level thinking skills and help students understand and master psychology in depth so that analytical ability, evaluation ability, and innovation ability are better [3].

To make this happen, learners need to plan ways to approach learning tasks, monitor understanding, and evaluate progress towards completing tasks that require metacognitive skills. With the presence of metacognitive strategies, such as planning, monitoring, and evaluation, students will be able to manage learning and improve academic achievement [4]. The use of effective learning strategies and maintenance of motivation are influenced by the metacognitive skills of each student, namely knowledge or beliefs about language learning. Metacognitive knowledge is objective and metacognitive beliefs are subjective [5]. Metacognitive beliefs are related to metacognitive knowledge, while metacognitive knowledge is synonymous with metacognitive awareness [6]. Metacognitive beliefs are formed because students are trained to always have metacognitive awareness, metacognitive awareness is formed because each individual has metacognitive knowledge. Metacognitive knowledge will be a metacognitive belief, if it has been tested with the actual executive strategy [7]. Individuals who have good metacognitive strategies will be more independent and more able to plan, monitor, and evaluate their learning processes so that they become independent learners [8].

Metacognitive knowledge is the most integral part of language learning, especially writing [9]. The training of metacognitive strategies given in an effort to develop students' metacognitive beliefs also has an impact on language learning processes and products [10], as well as writing. Students need to have good control in writing in order to have independence in completing academic writing assignments. Students must better understand that the important thing in writing is not only about what is written/the product, but also how to write/process it [11]. This process of writing requires a metacognitive role. The metacognitive role in writing can be known by investigating the three cognitive monitoring models, namely: declarative/personal, procedural/task, and conditional/strategy [12]. Metacognition is important because one can recognize the ability to recognize what he understands and does not understand the problem given and how to solve the problem in a systematic way [4]. Final-level students must have metacognitive beliefs to complete academic writing assignments, have independence and be critical of what is written, understand the process carried out, and have confidence in themselves that they will be able to complete their tasks independently.

Research on metacognition in the field of language skills has been carried out especially in relation to efforts to develop metacognitive skills. Metacognitive skills obtained by students with them are trained to use metacognitive strategies in the learning process, for example in learning writing skills, metacognitive strategies combined with scaffolding [11], the CALLA model (*Cognitive Approach Language Learning Academic*) [8], This CALLA model is applied in five stages, namely: preparation, presentation, training, evaluation, and expansion [13]. Besides CALLA, the scaffolding that can be used to develop students' cognitive skills in writing can be used in-

fographics (information graphics), namely visual images in the form of visual representations of information and data or knowledge. Visual images make it easier for students to explore their thinking skills in writing [14]. Therefore, the metacognitive strategy used in the learning process is proven to improve students' writing skills [15], [16]. During the strategy training, students ask themselves questions as an effort to monitor the development of their learning [1], [8]. With the application of metacognitive strategies in writing learning, the quality of students' writing content is more developed than before using metacognitive strategies [17].

These studies show that metacognitive strategies are used as tools or variables that can help improve student learning outcomes in writing. Research only highlights the impact of metacognitive strategies as a form of overall learning outcomes. However, weaknesses in terms of mastery of writing competence, for example, the purpose of making text, developing content, organizing, conforming to the theme, and compatibility with the audience are still found [18], [19]. Therefore, it is necessary to investigate metacognitive weaknesses in writing, especially in academic writing. The investigation begins with finding out the level of metacognitive awareness of students, then explains the metacognitive weaknesses of students in academic writing both in terms of knowledge and skills.

## **2 Method**

### **2.1 Participant**

Participants in this study were final-level students studying in the Indonesian Language and Literature Education Study Program, STKIP PGRI West Sumatra. Participants are male and female students who are writing final assignments in the form of a thesis. As many as 22 final year students were randomly selected to fill the metacognitive awareness questionnaire and interviewed to find out their metacognitive skills in academic writing.

### **2.2 Instrumentation**

The instrument used as a data collection tool in this study was a metacognitive awareness questionnaire and interview questions. The metacognitive awareness questionnaire was used to collect data on the level of metacognitive awareness of students, while the interview questions were used to collect data on metacognitive skills.

**Metacognitive Awareness Questionnaire:** Students make self-reports by filling out the metacognitive awareness questionnaire called The Metacognitive Awareness Inventory (MAI) [20]. The questionnaire was modified according to the need to measure metacognitive awareness of students in multiple-choice academic writing, namely right and wrong. The questionnaire consists of 52 items. The things asked are related to knowledge of cognition and regulation of cognition [1] in academic writing. The number of statements for metacognitive knowledge is 17 items with details: 8 items declarative knowledge, 4 items procedural knowledge, and 5 items conditional

knowledge. The number of statements for the metacognitive strategy is 35 items with details: planning 17 items, monitoring 12 items, and evaluating 6 items.

**Interview Questions:** Interviews in the form of aloud were conducted to find out the metacognitive skills of students in academic writing based on cognitive arrangements or metacognitive skills, namely: planning, monitoring, and evaluation. Interview questions are modified from the details of the cognition setting questions [21]. The number of questions is 12 items, namely: planning as many as 4 items, monitoring as many as 4 items, and evaluating as many as 4 items.

The details of the interview questions given to students are as follows. Planning: What is the nature of my assignment? What is my goal with this assignment? What information and strategies do I need? How much time and resources do I need? Monitoring: Do I have a clear understanding of what I am doing? Does this task make sense? Did I reach my goal? Do I need to make changes? Evaluation: Have I reached my goal? What works? What didn't work? Will I do something different next time?

### 3 Result

The response given by students through a questionnaire showed 15 people had high metacognitive awareness while 7 others had low metacognitive awareness. The following described the level of metacognitive awareness of students based on responses given through questionnaires.

#### 3.1 Metacognitive knowledge

Student responses to metacognitive knowledge include declarative knowledge, procedural knowledge, and conditional knowledge.

**Declarative knowledge:** The questionnaire items provided in Table 1 are knowledge about yourself and the factors that influence student performance in the academic writing process. Students understand their intellectual strengths and weaknesses in writing (Item 5: 90.0%). They understand the various types of important information that need to be studied according to the written concept (Item 10: 86.4%). Students learn more when they are interested in a particular topic, especially those related to the topic to be written (Item 46: 90.9%). When conducting discussions with the supervisor, students know things that need to be written according to the direction of the mentor (Item 16: 90.9%) because they remember all the information obtained during the discussion with the supervisor (Item 17: 81.8%). Students have control over how well they learn (Item 20: 77.3%). For information management (Item 12), only 63.6% of students were proficient while the other 36.4% were not proficient. Likewise in terms of assessing how well students understand something information (Item 32). Only 59.1% of students were able to assess themselves in terms of understanding information while 40.9% were unable to assess their understanding of the information received.

**Table 1.** Percentage of Student Responses on Declarative Knowledge in Academic Writing

|    | Item   | Right | Wrong |
|----|--|-------|-------|
| 5  | I understand my intellectual strengths and weaknesses.   | 90,9  | 9,09  |
| 10 | I know what type of information is most important to learn according to the concept of my final assignment.      | 86,4  | 13,6  |
| 12 | I can at managing the information needed.  | 63,6  | 36,4  |
| 16 | I know what is expected by the teacher for me to learn.  | 90,9  | 9,09  |
| 17 | I can at remembering the information I received and given during guidance.                                       | 81,8  | 18,2  |
| 20 | I have control over how well I study.  | 77,3  | 22,7  |
| 32 | I'm a good judge about how well I understand something.  | 59,1  | 40,9  |
| 46 | I learned more when I was interested in this topic, especially the topics that matched the title of my research. | 90,9  | 9,09  |

**Procedural Knowledge:** The items provided in Table 2 are knowledge about how to do things. In doing writing assignments, students try to use strategies that have been successful before (Item 3: 90.9%). Students also have specific goals for each strategy used during writing (Item 14: 81.8%) and they are aware of what strategies are used in writing (Item 27: 72.7). However, only 63.6% of students were aware of the benefits of using the strategies used (Item 33) while 36.4% were unaware of the benefits of using strategies.

**Table 2.** Percentage of Student Responses on Deep Procedural Knowledge in Academic Writing

|    | Item   | Right | Wrong |
|----|--|-------|-------|
| 3  | I tried using a strategy that had been successful beforehand to do my final project. | 90,9  | 9,01  |
| 14 | I have a specific purpose for each strategy that I use during writing.               | 81,8  | 18,2  |
| 27 | I am aware of what strategies I use when I study.                                    | 72,7  | 27,3  |
| 33 | I found myself when using useful learning strategies automatically.                  | 63,6  | 36,4  |

**Conditional Knowledge:** The items provided in Table 3 are knowledge of when and how to use declarative knowledge and procedural knowledge. In terms of declarative knowledge (Table 1), students have weaknesses in assessing how well information is received and in managing information, so that only 86.4% of students can learn best when they know something about the topic to be written (item 1) while Another 13.6% cannot study well. In addition, only 77.3% of students were able to motivate themselves to study (item 26), while another 22.7% did not. Likewise in using intellectual power to overcome weaknesses in writing (item 29). Only 81.8% of students can do that while the other 18.2% do not.

In terms of procedural knowledge (Table 2), only 63.6% of students were aware of the benefits of using the strategies used (Item 33) while 36.4% were unaware of the benefits of using strategies. Only 72.7% of students know whether or not the strategy is effective (Item 35) while the other 27.3% do not. Likewise in using learning strategies. Only 77.3% of students used different learning strategies (Item 18) while the other 22.7% did not.

**Table 3.** Percentage of Student Responses about Deep Conditional Knowledge in Academic Writing

|    | Item  | Right | Wrong |
|----|---|-------|-------|
| 15 | I learned best when I knew something about the topic, especially those that fit my final project concept. | 86,4  | 13,6  |
| 18 | I use different learning strategies depending on the situation.   | 77,3  | 22,7  |
| 26 | I can motivate myself to learn when I need to.  | 77,3  | 22,7  |
| 29 | I use my intellectual power to overcome my weaknesses in writing.   | 81,8  | 18,2  |
| 35 | I know when every strategy that I use will be effective or not.   | 72,7  | 27,3  |

### 3.2 Strategy/Metacognition Settings

Student responses to metacognitive strategies include planning, monitoring, and evaluation.

**Planning:** The items provided in Table 4 refer to the selection of the right strategy and allocation of resources that affect performance. In an effort to plan writing assignments, students spur while learning so that they have enough time to understand the concepts to be written (Item 4: 90.9%). Students think about things that need to be learned before starting writing (item 6: 90.9%), set specific goals before starting writing (Item 8: 81.8%), and set the time to reach the goal in writing (Item 45: 72, 7%).

Before starting writing, students read the instructions carefully (Item 42: 86.7%). They try to translate new information into their own words to make it easy to understand (Item 39: 90.9%). They tend to use text information structures to help them write (Item 41: 77.3%) and consciously focus on important information (Item 13: 86.4%). When understanding the concept, only 72.7% of students focused on the meaning and importance of each new information (Item 30) while the other 27.3% did not. Likewise, when reading the concept, only 54.5% of students slowed down reading concepts when finding important information (Item 9) while the other 45.5% did not. This is because they focus more on special meaning than the overall meaning of the concept (Item 48: 40.9%).

Before writing the concept, they ask themselves questions about the topic (item 22: 81.8%) and what they read is appropriate or not with the topic written (item 43: 77.3%). After that, they thought of several ways to solve the problem of writing and choosing the best (item 23: 81.8%). Previous steps to solve the problem are broken down more efficiently (item 47: 72.7%). However, to understand the concept there are those who make their own examples (Item 31: 63.6%), some do not (36.4%). Similarly, making pictures or diagrams to understand the concept (Item 37). Only 31.8% of students made drawings or diagrams to understand the concept, while the other 68.2% did not do that.

**Table 4.** Percentage of Student Responses in Planning Academic Writing

|    | Item  | Ya   | Tidak |
|----|---|------|-------|
| 4  | I spurred myself while learning to have enough time to understand the concept of my final assignment. | 90,9 | 9,01  |
| 6  | I think about what I really need to learn before starting writing.                                    | 90,9 | 9,01  |
| 8  | I set certain goals before I started writing.   | 81,8 | 18,2  |
| 9  | I slow down reading concepts when I find important information.                                       | 54,5 | 45,5  |
| 13 | I consciously focus my attention on important information.  | 86,4 | 13,6  |
| 22 | I asked myself questions about the topic before I started.  | 81,8 | 18,2  |
| 23 | I think of several ways to solve problems in writing and choosing the best.                           | 81,8 | 18,2  |
| 30 | I focus on the meaning and importance of every new information.                                       | 72,7 | 27,3  |
| 31 | I made my own example to make information more meaningful.  | 63,6 | 36,4  |
| 37 | I made pictures or diagrams to help me understand while learning.                                     | 31,8 | 68,2  |
| 39 | I tried to translate new information into my own words.   | 90,9 | 9,01  |
| 41 | I use the text organizational structure to help me learn.   | 77,3 | 22,7  |
| 42 | I read the instructions carefully before I started writing.   | 86,4 | 13,6  |
| 43 | I ask myself what I read is related to what I already know about my writing assignments.              | 77,3 | 22,7  |
| 45 | I manage my time to achieve my best goals.  | 72,7 | 27,3  |
| 47 | I try to solve the steps of learning to be smaller to be more efficient.                              | 72,7 | 27,3  |
| 48 | I focus on the overall meaning rather than the specific/specific meaning.                             | 40,9 | 59,1  |

**Monitoring:** The items provided as in Table 5 refer to the awareness of one's task understanding and performance. In doing academic writing assignments, students regularly ask themselves about the goals they have achieved in writing (Item 1: 95.5%) and how well they do when they are learning something new (Item 49: 77.3 %). They re-evaluate their assumptions when feeling confused (Item 44: 95.5%). When they started to confuse working on writing assignments (Item 52), only 86.4% of students stopped and reread the concept while the other 13.6% did not. In addition, only 22.7% of students stopped and returned to unclear information (Item 51), while 77.3% did not. Likewise in checking their understanding of the topic to be written (Item 34), only 63.6% of students were aware of their understanding, while 36.4% were not aware of it.

When doing writing assignments, they ask themselves whether they have considered all the choices when solving problems in writing (item 11: 77.3%). They consider several alternatives to solve problems before they do writing assignments (item 2: 95.5%). Students regularly review and understand each strategy used to assist them in writing (item 21: 72.7%). They also changed strategies when they failed to understand something (item 40: 86.4%). However, only some of them found themselves when analyzing the usefulness of the strategy they used in writing (item 28: 54.5%). In general, students always ask other people to help if there are things that are not understood (100%).

**Table 5.** Percentage of Student Responses in Monitoring Academic Writing

|    | Item   | Right | Wrong |
|----|--|-------|-------|
| 1  | I ask myself periodically if I fulfill my purpose in writing.                              | 95,5  | 4,5   |
| 2  | I considered several alternatives for problem-solving before I did the writing assignment. | 95,5  | 4,5   |
| 11 | I ask myself if I have considered all options when solving a problem in writing.           | 77,3  | 22,7  |
| 21 | I periodically review to help me understand every strategy I use during writing.           | 72,7  | 27,3  |
| 25 | I ask others to help when I don't understand something.                                    | 100   | 0     |
| 28 | I found myself analyzing the usefulness of the strategy that I used when I studied.        | 54,5  | 45,5  |
| 34 | I found myself when I began to stop regularly to check my understanding.                   | 63,6  | 36,4  |
| 40 | I changed the strategy when I failed to understand.  | 86,4  | 13,6  |
| 44 | I reevaluated my assumption when I was confused.   | 95,5  | 4,5   |
| 49 | I ask myself the question of how good I did when I was learning something new.             | 77,3  | 22,7  |
| 51 | I stopped and returned to unclear new information.   | 22,7  | 77,3  |
| 52 | I stopped and reread when I was confused about working on my final assignment.             | 86,4  | 13,6  |

**Evaluation:** The items provided in Table 6 refer to the assessment and efficiency of one's performance. To assess their performance in academic writing, students ask themselves questions after completing writing assignments. The question relates to how well they achieve their goals in writing (item 36: 90.9%) and how well they write (item 7: 72.7%). They also questioned whether there were other ways that they were easier to use in writing (item 19: 81.8%) and how much they learned to complete the writing assignment (item 50: 77.3%). Even 68.2% of students summarized what they did after completing their writing assignments and 31.8% did not.

**Table 6.** Percentage of Student Responses in Evaluating Academic Writing

|    | Item  | Right | Wrong |
|----|---|-------|-------|
| 7  | I know how well I did it after I finished my writing.                                     | 72,7  | 27,3  |
| 19 | I ask myself is there an easier way to do something after I finish writing assignments.   | 81,8  | 18,2  |
| 24 | I summarize what I did after I finished writing.  | 68,2  | 31,8  |
| 36 | I asked myself how well I achieved my goal after I finished writing.                      | 90,9  | 9,01  |
| 38 | I asked myself if I had considered all the options after I solved the problem in writing. | 77,3  | 22,7  |
| 50 | I asked myself whether I learned as much as I could after I finished writing assignments. | 77,3  | 22,7  |

The response given through the questionnaire shows that students who have metacognitive awareness are more likely to have confidence in success in the learning process, starting from planning, monitoring, and evaluation. Students who have high and low metacognitive awareness have differences in completing academic writing



assignments. Students who have high declarative knowledge will better understand themselves and know the factors that influence their success in academic writing. Students who have high procedural knowledge better understand the nature of the task and understand the demands of specific knowledge and skills in academic writing. Students who have high conditional knowledge better understand the various strategies that will be used in academic writing. Students who have low metacognitive awareness cannot do the task as well as students who have high metacognitive awareness.

Students who have high metacognitive awareness have good planning skills. To plan writing activities, they understand the nature and purpose of writing assignments, understand the information and strategies needed during the assignment, and know how much time and resources are needed during writing. Students formulate short-term goals and long goals for academic writing activities, as stated by Participant 13 below.

*I feel that I need to do this writing as a form of my final goal during my lecture. In addition, later this writing skill will become my provision when I am in the midst of society.*

To achieve this goal, some appropriate information and strategies are needed during the preparation of tasks, as stated by Participant 5 below.

*I write about the phenomenon of social problems in a novel. I need a lot of information about the topic. I need to formulate a title that fits the topic, determine the reason for choosing the topic, find the appropriate theory from various sources by comparing, identifying, analyzing, and concluding the data.*

The formulated strategy requires certain time and resources, as stated by Participant 16 below.

*I don't need much time to find resources because I can use the internet to find sources from books and journals. I spend time understanding my concepts on the topic. If I don't understand, I also ask my lecturers and friends. Most of my time, I use to read source books that are related to the problems I am working on.*

In contrast to students who have high metacognitive awareness who have careful planning before doing writing assignments, students who have low metacognitive awareness tend not to have careful planning before writing. They tend to have goals that are beyond the task of writing. They work on writing assignments because of demands from outside themselves, such as writing because of the demands of the final assignment, writing because they have to finish their education on time. They don't even have long term goals in writing. They tend to choose writing topics because they follow friends or choose topics that are similar to friends so they can see examples from friends. They need a long time to find the source of books and journals that are in accordance with the topic of writing and tend to complain when they have difficulty finding the source of writing. In the end, they only expect help from lecturers and peers if they experience difficulties, as stated by Participant 6 below.

*I wasted a lot of time just finding resources. Sometimes I borrow books from my friends. My friend who has the same topic as me does not always help me.*

Students who have high metacognitive awareness tend to do monitoring during work assignments. They monitor how well their understanding of the topic of writing, how reasonable they are writing, achievement of goals in writing, and how well the

strategy is used. Mastery of things that will be written needs to be a major concern in writing. In order for the writing to be produced to be understood, students need to monitor how well they understand the topic to be written, as stated by Participant 16 below.

*I understand the topic of writing that I chose because I have read a lot about the topic. The discussions with the lecturers that I did add to my understanding of the topic. I still have to think about the right strategy to present this topic to good writing.*

Students also need to monitor how reasonable the ways that have been taken so far in writing, as stated by Participant 16 below.

*I feel the way I have done so far is quite reasonable. I developed the topic of writing based on the results of reading many books that I made as reference sources. In addition, I also held discussions with lecturers and peers if I found obstacles in developing writing.*

In addition, students monitor the objectives achieved in writing, as stated by Participant 16 below.

*I have not reached my goal in writing because I still have many problems writing. I still can't answer the question about what I wrote.*

Students also monitor how well the influence of the strategies used so far in completing writing assignments, as stated by Participant 16 below.

*I feel that the strategies I have used so far still have not had a significant effect on my writing performance. The proof, I feel understood by the concepts that I wrote, but I was even confused answering questions from my lecturer. I feel I still have to re-read some sources according to the topic I wrote. Aside from reading, I also had to manage my time well, not to be lazy, and immediately improve my writing according to the advice of my lecturer.*

In contrast to students who have high metacognitive awareness who constantly monitor the development of writing, students who have low metacognitive awareness do not monitor the development of their writing. They don't really understand the topic written because they put forward a topic as long as it is accepted by the lecturer and they can immediately finish their education. They do not have long-term goals for what they write. They tend to be satisfied with the strategies used and do not have the desire to change the strategy used even though they are still having difficulties in developing the topic of writing and more expect assistance from lecturers, as stated by Participant 7 below.

*At first, I didn't understand my title, I asked for advice from my lecturer and friend. I still need guidance from my lecturer while I am working on writing assignments.*

Students who have high metacognitive awareness evaluate the implementation of writing assignments. They evaluate how many goals have been achieved in writing, what has been achieved, what has not been achieved, and what resolution needs to be done to correct weaknesses in writing. Evaluation is the final part of the learning process to measure the extent to which students understand the goals achieved in writing, as stated by Participant 16 below.

*I feel that I haven't achieved my goal in writing because I still don't understand much. I need to read more and diligently ask my lecturers and friends so that I will understand better. I need to improve the way I write, quote, and look for other reference books.*

Unlike students who have high metacognitive awareness who conduct learning evaluations to improve weaknesses and improve learning outcomes, students who

have low metacognitive awareness tend not to learn from mistakes. They are easily satisfied with the results obtained without making repairs even blaming the situation, as stated by Participant 11 below.

*I have not reached the goal of writing. Many things I have not achieved even though I have tried. I am always faced with situations and conditions that do not side with me.*

In general, this preliminary research was found several weaknesses of students in managing their own metacognition in writing especially in planning, monitoring, and evaluating performance. Both students who have high metacognitive awareness and low metacognitive awareness have weaknesses in evaluating performance especially those related to feedback. They rely heavily on the feedback given by the lecturers, often unaware of the benefits of the strategies used, and unable to assess their understanding of the writing assignment. In short, students still need to practice and improve monitoring and evaluation in the learning process, especially in writing.

## 4 Discussion

The response given by students through questionnaires showed that both students who had high or low metacognitive awareness were still not fully independent and had good self-control in completing academic writing assignments. Students who have high and low metacognition awareness, 100% claim to always ask for help from other people, especially lecturers and peers if they have difficulty completing writing tasks. 40% of students were unable to assess their understanding of the information received and 36% said they did not realize the benefits of the strategies used in writing.

Basically, everyone has metacognition since the age of 8-10 years, is automatic, and develops over time [22]. Metacognition does not depend on one's intelligence [23] but it becomes an important aspect of human intelligence [24]. Metacognition that continues to grow from time to time is something that is realized and some are not realized by each individual. Each individual has different ways to develop his cognition so that there are individuals who have a high level of metacognitive awareness and some have a low level of metacognitive awareness. Students who have high metacognitive awareness will be more aware of their own thinking processes than students who have low metacognitive awareness. The more students are aware of their thinking processes while learning, the more they can control things related to their goals, dispositions, interests, and attention in learning [4]. Metacognitive knowledge influences self-control and achievement of goals in academic writing. Students who have metacognitive awareness, control, and goals towards the learning process will be able to become independent learners [25]. This can be seen from the response given by students in the questionnaire. Students who have high metacognitive awareness have different self-understanding and control than students who have low metacognitive awareness. Students who have high metacognitive awareness better understand their needs and the factors that influence their success in writing. However, from the results of the questionnaire given both students who have high metacognitive awareness and low metacognitive awareness claimed to be very dependent on others if they

experience obstacles in the learning process, both lecturers and colleagues. This proves that students cannot completely escape the influence of the people around them in the learning process. Even so, the intended dependence does not mean that there is no effort to control the learning itself. Students who have high metacognitive awareness are very aware of their needs and realize the right strategies used in completing the task. Even though they have a dependency on lecturers and peers, they understand the shortcomings they have and try to improve them. In contrast to students who have low metacognitive awareness, it's easier to quickly be satisfied with the results achieved, rely on others too often, and give up easily. This is in accordance with the findings [26] that student who has low metacognitive not only passive but also depend on other people. They tend to ask for help from others to complete learning tasks. If they do not get help, they choose to quit rather than trying themselves to complete the task because they do not have the right strategy to build and internalize their own understanding.

Students with high metacognition awareness often take advantage of the positive experience they have to try better and minimize negative experiences. The negative experiences they experience cannot be separated from the tasks that are done. Their strengths in learning are encouragement from themselves and from outside themselves such as parents and peers. The role of the lecturer is to utilize student metacognitive explicitly to design activities and tasks to help students become proficient in self-regulation. However, most students are not aware of their own abilities. Even though this greatly affects the thinking process. Ability becomes one of the factors that support success in doing tasks, in addition to the efforts and strategies used. Students need to realize that success is achieved because of these three things, namely: ability, effort, and strategy are not other things such as luck and easy tasks [27]. Students who have high metacognitive awareness and who have low metacognitive awareness tend to be aware of what they need to do. However, each of them has difficulty in learning and they tend to ask lecturers and peers. This shows that students still need to improve their own metacognitive beliefs. Not only being aware of metacognitive skills but actually utilizing them in the learning process. Students still need to practice and be trained to develop metacognitive strategies in completing writing tasks. Basically, the use of effective metacognitive strategies is very dependent on the metacognitive knowledge or metacognitive beliefs of students [27]. In terms of goals, most students are able to understand the concept but are able to apply the concept in writing. They should realize that the more difficult the goals to be achieved, the better the performance they show [25]. Teachers need to instill the mastery of learning objectives for students. Students must understand that the goals to be achieved are related to mastery of learning tasks, not because of ego and want to increase self-esteem. Teachers need to instill mastery of learning objectives for students. Students must understand that the goals to be achieved are related to mastery of learning tasks, not because of ego and want to increase self-esteem [28]. Teachers must also be able to help increase confidence in students that success is obtained through diligent effort and problem-solving with the right strategy [27].

Students need to be taught metacognitive skills through metacognitive strategies. The strategy applied as an effort to change students' beliefs about language learning.

The strategy that can be used is to provide academic writing training to students. Training is conducted so that they are accustomed and skilled in planning, monitoring, and evaluating the learning process. Learners can monitor and evaluate their own learning process without having to rely entirely on feedback from the lecturer. To help students during the training process, educators can use the training module. Modules can be used as a means to increase students' awareness of learning skills and make students more active [29]. The most important part of metacognitive is monitoring and evaluation. Every student is trained to use a metacognitive strategy in completing tasks. Regardless of the level of intelligence possessed, students who have high metacognitive awareness have better performance than students who have low metacognitive awareness. Students who have high metacognitive awareness more often do monitoring and evaluation of their learning outcomes [30]. The evaluation process provided by the teacher must use evaluation instruments that become learning tools for students because each student's learning needs are different. Evaluation as a learning tool must reflect activities and learning outcomes so that learning fits the needs of students. The teacher provides opportunities for students to assess their learning processes and outcomes with the teacher designing an assessment that facilitates students to conduct self-assessments. By conducting self-assessments, students learn to provide constructive feedback and feedback on their own processes and performance of peers and peers. Self-assessment also shows that students are seen as subjects who are able to judge themselves and peers [31].

The teacher must provide training strategies so that students are able to monitor and evaluate their learning and do not depend on the feedback given by the teacher, especially with regard to evaluation [32]. Students must be taught to depend on student-centered feedback, namely feedback about assignments, processing tasks, self-regulation, and self. Feedback about assignments is done by giving a number of questions about the tasks being done, feedback about information processing is done by directing students to product making and information processing, feedback about self-regulation is done by directing students to self-evaluating skills, and feedback about yourself is done with students given advanced questions for the achievement of competence [33]. Teachers need to encourage students to reflect on how to carry out language assignments by finding the right strategy as a form of evaluation of the results of implementing a strategy. Teacher's comments are not only on the accuracy of the writing but also the strategies students use as a way to foster students' confidence in language learning [34]. The teacher must provide more opportunities for students to carry out learning activities and reflect on the activities that have been carried out [35]. Teachers always remind students to reflect on and improve their beliefs and knowledge about learning languages [29]. When students reflect on their learning strategies, they become more prepared to make conscious decisions about what they can do to improve their learning [36]. The teacher can also help students develop metacognitive knowledge through pedagogical interventions. The teacher can make students engage in process-based learning activities that can lead them to develop metacognitive knowledge in language learning. The teacher must understand the importance of metacognition in forming independent learners. The teacher can focus on

assessing language content, strategies used, and the learning process carried out by students during work assignments [37].

In other words, in writing learning, the teacher does not need to be very skilled in writing or assessing students' ideas, logic, and effectiveness, the teacher only has the role of helping students become active learners who are willing to explore facts, feelings, values, and ideas in their writing. Over time, students became accustomed to writing and began to have independence in understanding the purpose of making texts, developing content, organizing writing, conforming to themes, and starting to pay attention to the needs of the audience[34].In order for this to be achieved, as long as the writing training is given, the teacher is expected to be able to give a gradual assessment, rather than directly assessing the writing as a finished product, but writing that will develop over time [38].

In addition, in the evaluation and feedback process, teachers can take advantage of technological sophistication. Teachers can use automated scoring software and online feedback systems in assessments and do not require a long time in the scoring process. For example, in writing assessments, teachers can use the sentence feedback system Pigal.org (Jukuu) as a feedback system based on computer corpus and cloud computing [39]. To make it easier for teachers to provide assessments to student writings that cannot be read because of the frequency of using IT devices, teachers can use numeric and letter scanning software called SANCHO, which is software with scanning technology to facilitate the transfer of written text into digital form [40]. With this software, both teachers and students get ease in the learning process. The evaluation process is faster and students can re-plan their learning process as a form of improvement resolution to achieve better results.

## **5 Conclusion**

There are three metacognitive weaknesses of students found in writing learning, namely: students are too dependent on feedback from lecturers and are very dependent on lecturers and peers before, during, and after writing, students are unable to assess their own understanding of the information they receive for working on writing assignments, students do not realize the benefits of the strategies used in writing. These weaknesses require students to exercise active control over their thinking processes, especially in writing. Lecturers play a role in utilizing the metacognitive aspects found in students so that the learning process becomes better. The teacher reminds students of the important role of metacognition in monitoring each of their cognitive activities. Although students cannot fully escape from help and feedback from lecturers, they must also try to control their own learning in order to become independent learners. The role of lecturers to continue to provide training to students is very necessary. The teacher trains students to use student-centered feedback, such as feedback about assignments, task processing, self-regulation, and self. These four types of feedback can be used by students to carry out self and peer evaluations. Lecturers must implement strategies that can help students develop their metacognitive awareness. Students need to be trained to always plan, monitor and evaluate their own learning processes. Con-

tinuous training can have an influence on students' independence in completing academic tasks, especially writing. In the end, students will have independence in learning and have clear goals for learning, not just to increase self-esteem but for the sake of mastering the tasks assigned. Mastery of the assignments given in writing appears from the writing they produce. Through writing that results from the thought control process in writing, it can be seen the production process of the meaning and thinking skills of students in writing, especially in arranging words, concepts, and terminology in writing.

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