ANALYSIS OF METACOGNITIVE AWARENESS OF PROSPECTIVE BIOLOGY TEACHER STUDENTS THROUGH CREATIVE WRITING BULLET JOURNALING

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ABSTRACT

Class of 2020 students face practical lectures such as Real Work Lectures and Introduction to the School Field as well as preparation for the final Thesis assignment. These lectures are not specifically scheduled in the study program, but are related to the partners where the students practice. This is a challenge for students in managing time and independence in carrying out academic activities. The ability to manage time, plan activities and carry out evaluations are metacognitive aspects needed by students. Therefore, this research aims to analyze students' metacognitive awareness through creative bullet journaling writing. The research population was all students of the Class of 2020 biology education at Medan State University who were taking KKN & PLP courses. The sample consisted of 30 students taken randomly. The data collection technique is carried out by providing bullet journaling before the new semester begins. Then students are given time to fill in the journal for approximately 3 months. Data analysis was carried out descriptively quantitatively. The research results show that students have classical metacognitive awareness in the well-developed category. Based on declarative, procedural and conditional aspects of knowledge; monitoring and evaluating are in the well developed category, while for the planning aspect the category is starting to develop. Based on these findings, it is necessary to train students to. Write a journal regularly so that metacognitive awareness can be further improved until the category develops very well

INTRODUCTION

According to Sholihah, et al., (2021) metacognition is the ability to understand one's own way of thinking or cognitive process by involving the components of planning (functional planning), control (self-monitoring), and evaluation (self evaluation) in solving problems he faced Therefore, students of the class of 2020 who take practical courses must be able to organize planning, controlling and evaluating their academic activities so that they are ready to face problems related to time management and carrying out tasks on campus by lecturers and in the field where they study for Real Work (KKN) and Introduction to the Schooling Field (PLP2). If students are faced with busy schedules and lots of assignments, because it could be they are less effective in managing their time (Demak., *at all*, 2018).

One way to see the metacognitive awareness of Class of 2020 students can be done through writing study journals. A study journal designed in the form of bullet journaling (a form of creative diary writing). Bullet journaling in this research includes several sections such as introduction, semester plan, monthly plan, lecture schedule, task list, motivational sentences and notes.

The bullet journal method can help someone maintain clarity, direction and focus in everyday life. The Bullet Journal method consists of two parts, namely system and practice. First, the system is about teaching how to turn a personal notebook into a great organizational tool. Second practice, reviewing exercises in practicing writing how to live an intentional life in the form of a productive and purposeful life. (Ryder, C., 2018).

METHOD

The research design uses descriptive quantitative methods with the aim of analyzing students' metacognitive awareness through bullet journaling. The data in this research is metacognitive awareness. Kesadaran metakognitif mahasiswa diperoleh dari hasil kerja mahasiswa dalam menulis di buku jurnal (*bullet journaling*). The results of the student's work or writing were observed and assessed according to indicators of creativity and metacognitive awareness.

Metacognitive awareness in this research consists of 4 aspects: 1. Declaration, procedural, conditional knowledge; 2. Planning; 3. Monitoring and 4. Evaluation. Declaration, procedural and conditional knowledge can be seen in the bullet journaling section 'What did you do on the assignment?'. Planning aspects can be seen from the bullet journal in the 'Semester Plan' section. Monitoring aspects can be seen in the 'Activity List'. The evaluation aspect can be assessed by filling in the bullet journal in the 'Activity List, Task List, Notes' section. Data analysis for metacognitive awareness is carried out first by giving a score for each aspect according to the metacognitive awareness scoring rubric that has been created, secondly, aspects of metacognitive awareness are assessed using the formula:

$$Value = \frac{\sum Skor\ obtained}{Skor\ total} \times 100\%$$

Next, the values are categorized based on the following table.

Table 1. Guidelines for Categorizing Metacognitive Awareness Questionnaires adapted from Zasliah, (2018)

Range	Category
0-20	Very risky
21-40	Undevelop
41-60	Starting to develop
61-80	Good develop
81-100	Very good develop

RESULTS AND DISCUSSION

Student metacognitive results can be seen from 4 aspects, namely 1) declarative, procedural and conditional knowledge; 2) Plan aspect (planning); 3) monitoring aspect, and 4) evaluation aspect. Data obtained from each aspect can be seen in Table 2. Students' declarative, procedural and conditional knowledge can be seen from writing Bullet Journaling in the section 'What did you do on the assignment' which is a subsection of the 'Task List'. Through bullet journaling, students are directed to write down the name of the assignment, the preparations made to do the assignment, the activity plan carried out to do the assignment, the target for completing the

assignment and reflect on why they have to write this down. From the data obtained, students from the Class of 2020 in this aspect are in the well developed category.

The planning aspect is seen from the writing of the 'Semester Plan' section, Students write down what they plan to do, what targets they will do and what things they should avoid during the semester. In this aspect, students are in the Starting to Develop category.

Table 2. Recapitulation Results of Student Metacognitive Awareness

No.	Indikator Metakognitif	Number of Samples	Mean	Standard Deviation	Category
1	Declarative, Procedural, and Conditional Knowledge	30	73,33	39,54	Good develop
2	Planing	30	48,89	38,89	Starting to develop
3	Monitoring	30	80	34,57	Good develop
4	Evaluasi	30	66,67	36,09	Good develop
	Verage of Metacognitive			67,22	

The Monitoring aspect can be seen from writing the 'Activity List' section which is part of the 'Monthly Plan'. The activities written include reading books, journals, discussions with friends/lecturers/teachers, visiting the library and doing college assignments. In this aspect, students are in the well developed category.

The Evaluation aspect is also seen in the Reflection section of the Activity List in the Monthly Plan. In this section, students write down the impact of the activity carried out, what is needed to carry out the activity, factors that support the implementation of the activity, and factors that inhibit the completion of the activity. Students received a good development category in this evaluation aspect.

Based on the data in Table 2, it can also be seen that students' metacognitive awareness for knowledge aspects (declarative, procedural and conditional), plan aspects and monitoring aspects are in the 'well developed' category. The Evaluate aspect is in the 'very well developed' category. Based on the results above, it can be seen that students from the 2020 class of the Medan State University biology education study program have metacognitive awareness in the well-developed category.

Students are able to plan, implement, monitor and evaluate/reflect on every academic activity carried out both on campus and in the field where they carry out practical lectures.

Setting one's own learning goals and determining appropriate learning strategies to achieve goals is a metacognitive ability which is believed to be a high level cognitive ability required for knowledge management of prospective biology teacher students. (Rasyida, N., 2022).

Data on the frequency of student creativity results for each aspect can be seen in Figure 1. Based on the data in Figure 1, most students are in the very well developed category for each aspect and there is no category that is still very at risk for each aspect.

Metacognitive awareness can help students improve cognitive abilities (Adiansyah, R., 2022). Metacognitive awareness is very important for students to have because it is related to students' maturity and independence in learning which will later be useful in helping students to quickly adapt to technological advances and the demands of the times (Sholihah, M. and Sofiyana M.S., 2021).

Through bullet journaling, students are able to actualize themselves in terms of developing their declarative, procedural and conditional knowledge; Students are also free to write down their academic plans, and track (monitor) the implementation of plans that have been prepared as well as reflect and evaluate whether the activities that have

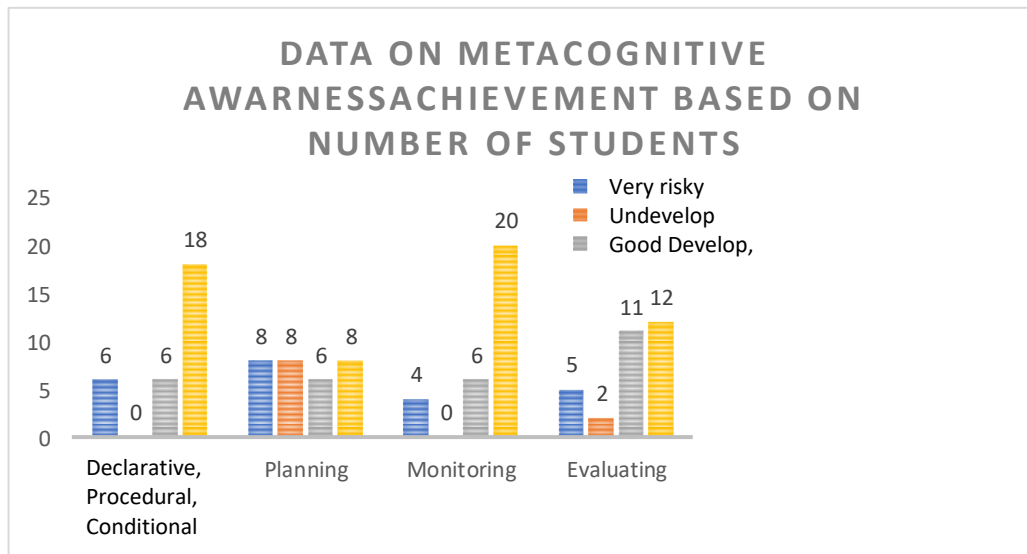been carried out are appropriate. Or no with that plan.

DATA ON METACOGNITIVE AWARNESSACHIEVEMENT BASED ON NUMBER OF STUDENTS

Figure 1. Students with metacognitive awareness achievements based on the categories Very Good Develop, Good Develop, Undevelop, and Very risky.

CONCLUSION

The level of metacognitive awareness in using BuJou for Class of 2020 students in the FMIPA Unimed Biology Education study program is classically in the well developed category. Based on declarative, procedural and conditional aspects of knowledge; monitoring and evaluating are in the well developing category, while the planning aspect is in the starting to develop category.

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