IDENTIFICATION OF GENDER DIFFERENCES IN ELEMENTARY SCHOOL STUDENTS' METACOGNITIVE KNOWLEDGE ABOUT THE ENVIRONMENTAL CLEANLINESS

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ABSTRACT

This study aims to determine students' metacognitive knowledge about the cleanliness of the school environment in class V elementary school 130 Pekanbaru. The category of students' metacognitive knowledge reviewed in this study is very low, low, medium, high, and very high categories. This research was conducted to 94 fifth grade students of Sekolah Dasar 130 Pekanbaru. The instrument used to collect data was a metacognitive knowledge test about the cleanliness of the school environment consisting of 12 essay questions. Data analysis used quantitative descriptive methods. The results showed that students' metacognitive knowledge about the cleanliness of the school environment in class V elementary school 130 Pekanbaru showed a medium category with an average value of 58,8. Based on the result of the analysis, it was also found that there was a gender difference that female students were superior to male students, where the students' metacognitive knowledge about the cleanliness of the school environment was very low and in the low category was dominated by male students.

Keywords: metacognitive knowledge; cleanlines of the school environment; quantitative descriptive.

INTRODUCTION

Environmental cleanliness is a condition that is clean and free of dirt. A clean school environment is one of the elements that must exist and must be fostered and developed to achieve expected results. Therefore, all school members must maintain the cleanliness of the school environment so that it can function properly as a forum for educating children in order to have environmental awareness and willingness to do positive things towards the preservation of their school environment. For this reason, maintaining environmental cleanliness needs to be introduced since from early age; for instance, in elementary schools. At this level of age, children are very effective in learning what is in their environment, they have encouragement to know and moving around actively on their environment is very large (Sadulloh, 2010).

For students, knowing and understanding clearly about environmental cleanliness will lead to a sense of awareness and concern for them in creating clean and comfortable environmental conditions. Should the students possess this awareness, they can organize and think for themselves in solving problems, such as what is called as metacognitive. It means a person's ability to regulate the flow of thinking, decide, sort, choose, and even introspect for the sake of improving the mindset itself (Prawiradilaga, 2012). Metacognitive is also a knowledge and belief about a person's cognitive processes and his or her conscious efforts to be involved in the process of behaving and thinking to improve memory and learning processes (Ormrod, 2008).

Metacognitive knowledge is an important part for students to have in learning activities and in doing environmental hygiene tasks. This kind of reinforcement (Eggen, 1996) can help them understand and regulate the learning process in themselves so that they can complete their assignments independently. Also, metacognitive knowledge can help them carry out their tasks more effectively (Atkins, 2009).

Each grade level has different characteristics of metacognitive knowledge. The following is the trend of learning metacognitive development in class V SD students according to (Ormrod, 2008) including 1) The use of spontaneous, conscious, and more effective repetition strategies. 2) The increasing use of organizational strategy as a deliberate learning strategy. 3) The emergence of self-regulated learning strategies (deliberate attempts to focus attention). 4) The emergence of awareness that learning is an active and constructive process. 5) Increased awareness and ability to distinguish one's own strengths and weaknesses, 6) Increase the ability to reflect on one's own thoughts. 7) The ability to continuously develop to assess one's own performance and progress. 8) The emergence of a rather stable interest. 9) Increase focus on goals.

Based on the results of observations related to environmental cleanliness, which was carried out in grade V SD Negeri 130 Pekanbaru, it was found that several students showed metacognitive knowledge in cleaning their school environment. They know the process of thinking in completing cleaning tasks and know their weaknesses in completing environmental cleanliness tasks. The results of preliminary observations indicated that among metacognitive knowledges about environmental hygiene possessed by grade V students include self-knowledge, task knowledge, and knowledge of strategies. Thus, the purpose of this study was to describe students' metacognitive knowledge about environmental hygiene related to three aspects of metacognitive knowledge, namely self-knowledge, task knowledge, and strategy knowledge.

RESEARCH METHOD

This research is descriptive quantitative research. This study seeks to explain existing phenomena by using numbers to describe individual or group characteristics (Syamsudin, 2011). The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics set by the researcher to study and then draw conclusions (Sugiyono, 2015). The sample in this study is the same as the number of population members, namely 94 students.

In this study, the researchers used an instrument in the form of a test in the form of an essay with 12 items covering three aspects of metacognitive knowledge. The score to be given is then converted into 100 and adjusted to the metacognitive knowledge category. The categories for measuring students' metacognitive knowledge in this study are as follows:

Table 1. Measurement of the Students' Metacognitive Knowledge Categories

Value	Categories
$0 \leq X < 20$	Very Low
$20 \leq X < 40$	Low
$40 \leq X < 60$	Medium
$60 \leq X < 80$	High
$80 \leq X < 100$	Very High

(Arikunto, 2006)

RESULTS AND DISCUSSION

Research Results

Students' metacognitive knowledge about the cleanliness of the school environment in class V SD Negeri 130 Pekanbaru was obtained based on an analysis of 3 indicators, namely self-knowledge, task knowledge, and strategic knowledge. The analysis was based on scoring which was then converted into values and classified into 5 categories, namely very low, low, medium, high, and very high. Student knowledge based on 3 indicators of metacognitive knowledge is shown in the figure below.
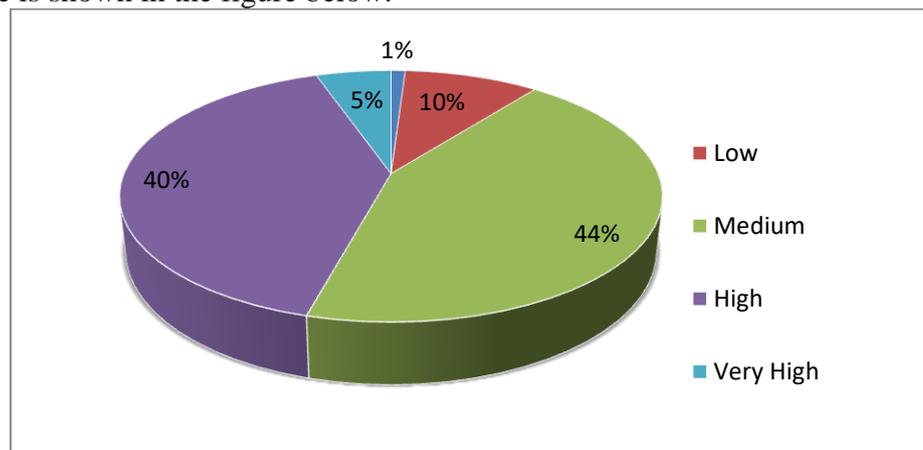

Figure 1. Students' Metacognitive Knowledge

Based on Figure 1, students' metacognitive knowledge after being analyzed using categories shows that more than 84% students get moderate and high categories. Overall students' knowledge in metacognitive knowledge got an average of 58.8. Based on this

average, students' metacognitive knowledge about the cleanliness of the school environment as a whole is included in the moderate category.

On the indicator of self-knowledge, the average result is 65.2 with the high category. Based on Figure 2, it can be interpreted that according to the indicator of self-knowledge, the female students with code S67 answered 2 things that can be done; First is cleaning the windows of the first high class, students with code S67 using the chair. Second, they used wood covered with a rag. And, so does the male student's answer with the S30 code who answered 2 things that can be done; namely, cleaning the high-class window glass, the same as the S67 code student, only if his body size cannot reach the window glass. From these answers, it can be seen that S67 students and S30 students show they are own potential related to strategies in completing cleaning tasks in the classroom. And the students' answers with the code S67 and S30 are correct according to the answer key. This means that students are aware of their strengths and weaknesses.

Figure 2. Questions and Answers on Self-Knowledge Indicators

In the task knowledge, the average score was 47.5. medium category. Based on Figure 3, it can be interpreted that the results of the answers given by students with the S57 code are related to the knowledge of the task of when should the leftovers be thrown away so as not to cause an unpleasant odor, and have almost answered correctly. However, the reasons stated are not correct.

Meanwhile, the female students with the code S16 wrote down the time or when the leftovers are thrown away, especially when they finished eating or went home after school. The reason is that if left for a few days, it will eventually rot and cause an unpleasant odor

because of the decay process caused by bacteria. From the answer, it can be seen that the S16 code students answered completely and correctly according to the answer key.
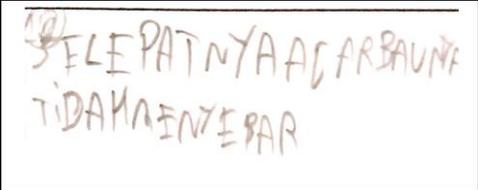

Figure 3. Questions and Answers on the Task Knowledge Indicator

In the knowledge of strategy, it gets an average score of 65.3 in the high category. Based on Figure 4, it can be seen that students with the S40 code answered the questions correctly in line with the answer key. The student wrote down the steps completely and could arrange the steps in order correctly. Different from the answer from the male students with the code S04, the students with the code S04 composed the complete steps. However, in compiling the steps, the students with the code S04 is not sequential. The S04 students should be more detailed and use the repetition strategy in arranging the steps in the correct order, from beginning to end like students with the S40 code.
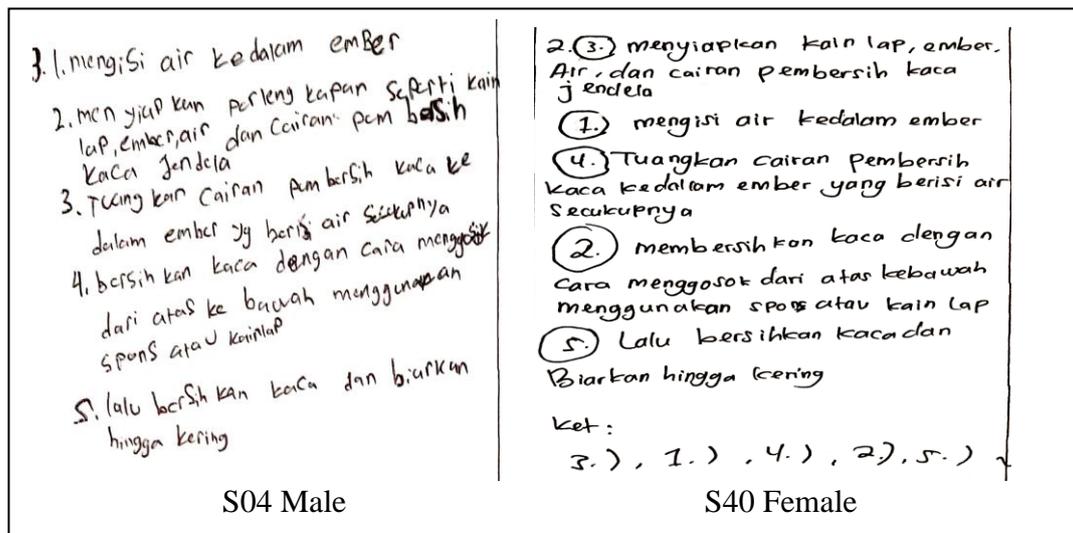
Figure 4. Questions and Answers on Indicators of Strategy Knowledge

Discussion

Metacognitive knowledge about the cleanliness of the school environment in students is scored from three indicators, namely self-knowledge, task knowledge, and strategy knowledge. On the indicator of self-knowledge, it got an average value of 65.2. Based on the average acquisition, the indicators of self-knowledge are in the high category. On the task knowledge indicator, the average score was 47.5. Based on the average acquisition, the task knowledge indicator is in the medium category. The indicators of strategic knowledge obtained an average value of 65.3. Based on the average acquisition, the strategy knowledge indicator is in the high category.

Based on the analysis, it was found that there were differences in metacognitive knowledge based on gender. The security of students' metacognitive knowledge about the cleanliness of the school environment in the very low category and low was dominated by male students. The reason is due to biological factors, namely the difference in brain structure between women and men (Dyah Viji, 2017). Biologically, according to (Pambudiono, 2012) differences in several brain structures allow male students and female students to differ in their ability to process, respond to information, or store long-term information. These results show that female students are more responsible than boys. This is because female students are generally more diligent than male students (Nyayu, 2011).

CONCLUSION AND RECOMMENDATION

Based on the results of research and analysis, it can be concluded that the level of the students' metacognitive knowledge about environmental cleanliness in grade V SD Negeri 130 Pekanbaru as a whole is in the moderate category with an average score of 58.8. The self-knowledge indicator got a high category with an average score of 65.2, the task knowledge indicator got a moderate category with an average score of 47.5, and the strategy knowledge indicator got a high category with an average score of 65.3.

Meanwhile, the level of metacognitive knowledge of students based on gender shows that the very low and low categories are dominated by male students and the moderate and very high categories are dominated by female students.

Based on the above conclusions, some suggestions can be made, namely for teachers, one of the efforts that can be made to increase awareness of environmental cleanliness is to develop students' metacognitive knowledge. This research can be used as a basis for assessing students' metacognitive knowledge. Also, this research can be used as a reference material for further researchers to conduct further studies or research, especially related to developing students' metacognitive knowledge.

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