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Thinking Disposition Profile of Class XI IPA Students in a Palembang School

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ABSTRACT. This study aims to determine to find out how far students' critical thinking skills are. Through the description above, the researcher plans to determine the critical disposition ability profile of students in one of the schools in Palembang. This research was conducted in one of the schools in Palembang. The total sample is 70 people. The instruments used in this research are Critical Thinking Disposition Test and Critical Thinking Ability test. Data analysis using SPSS version 22 software application. The critical thinking ability of high school students in biology learning is still low, because the average value obtained is still less than the KKM. Meanwhile, the students' critical disposition ability is thickly proportional, because the average value obtained is in the good category. Based on these results, it was found that there was no relationship between critical thinking skills and critical disposition because there was no association between the two.

Key Word*: Profile*, *Thinking disposition, Critical Thinking, Biology*

INTRODUCTION

In the 21st century critical thinking skills must be empowered through learning in schools, especially in science learning (Saavedra & Opfer, 2012). Critical thinking skills are students' abilities in analyzing arguments, making conclusions using reasoning, assessing or evaluating, and making decisions or problem solving (Zakiah & Lestari, 2019). Critical thinking has been agreed as an educational goal, especially in secondary school education. But in reality, Indonesian students' critical thinking skills are still low. It is known that based on the results of the 2018 Program for International Student Assessment (PISA), Indonesia's literacy score is ranked 74 out of 79 participating countries. Frequently used questions consist of 6 levels (lowest level 1 and level 6 the highest).

To overcome this (Zakiah & Lestari, 2019) says that the emergence of critical thinking depends on a set of teaching and learning skills and dispositions. Although some previous researchers said that critical thinking is complexly constructed through learning motivation and habits of mind, in fact the disposition of critical thinking is also one of the important components in critical thinking. It is agreed by (EL-Shaer & Gaber, 2014), that critical thinking is a combination of cognitive skills and disposition skills.

Cognitive skills relate to students' abilities in analyzing activities, drawing conclusions, evaluating, explaining and correcting a problem in a problem, making decisions or assessing. While the disposition is the material of thought that is integrated into the behavior of students to think critically. This disposition skill can also motivate students to start applying their cognitive skills while engaging in higher-order thinking such as solving problems and making decisions. Supported by (Facione, 2000), that when students have consistent internal motivation, they will have a strong tendency to think critically in making decisions about a problem.

To solve a problem, students have seven components in a critical disposition, namely Truth-Seeking, Open-Mind, Analyticity, Systematicity, Self-Confidence, Inquisitiveness, and Maturity (Facione et al., 1995). According to ; West et al., 2008). Truth-seeking is a disposition to actively seek or investigate the best knowledge in a particular context, Open-mind is open and tolerant of alternative (different) views, Analyticity, linking knowledge in solving problems that arise or applying reasoning and evidence to solve problems, Systematicity, organizing systematically and thoroughly (by inquiry), Self-confidence is the disposition of confidence in identifying questions and solving problems, Inquisitiveness explores curiosity about new knowledge, Maturity is a disposition to be wiser in making decisions.

The importance of critical disposition as an initial condition needed to have students' critical thinking skills (Facione, 2000). So the teacher must know to what extent the students' critical thinking skills. Through the description above, the researcher plans to determine the critical disposition ability profile of students in one of the schools in Palembang.

METHOD

The research applies quantitative methods that are used to see how the profile of critical thinking dispositions in biology class XI students is. This research was conducted on students in one school in Palembang with a total sample of 70 people. The samples involved in this study were students of class XI. IPA 1 as many as 35 people and class XI. IPA 2 as many as 35 people. The instrument used in this research is the Critical Thinking Disposition Test in Biology (TDBKB) (Syahfitri, 2019). To see the demographic data of students by calculating descriptive statistics while to see the relationship between students' critical thinking skills and critical dispositions using comparative analysis with the help of SPSS version 22 software application.

RESULT AND DISCUSSION

Based on the results of the analysis using the SPSS version 22 software application. Overall the value of students' critical thinking skills can be seen in (Table 1). Based on (Table 1), it is found that the average value of students' critical thinking is still low, this is because the average

value obtained is lower than the KKM value that has been determined by the school (75). Based on the results of observations that have been made, there are several reasons that cause students to have low results, one of which is learning activities that have not been maximized. This is because students have not been able to analyze, synthesize, make judgments, create and apply new knowledge to real-world situations (Abrami et al., 2015). It can be said that the challenges of learning in the 21st century, especially in the conditions of the Covid-19 pandemic, have not been maximally achieved. Supported by (Repo et al., 2017), several problems faced by students related to students 'thinking abilities, namely: the lack of students' ability to build arguments; students are not good at paraphrasing the meaning of the original source; students only carry out the learning process in accordance with the work steps provided, causing students to be less flexible in solving problems.

Table 1. Students' Critical Thinking Ability Test Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Kelas_XI.1	35	55	80	65.57	6.036
Kelas_XI. 2	35	55	75	65.00	5.000

While the results of the analysis that has been carried out using SPSS 22, the overall average value of critical disposition can be seen in (Table 2). It can be categorized that the students' critical disposition ability is in good category, because based on (Nopriana & Noto, 2017) when the critical disposition value is between 70-89, it is categorized as good. According to (Wayudi et al., 2019), that critical thinking disposition is one of the three aspects of generic skills of critical thinking. In addition, according to (Syahfitri, 2019) taking a critical disposition test can encourage students to think critically.

Table 2. Students' Disposition Ability Test Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Class_XI.1	35	64	96	79.89	8.202
Class_XI.2	35	56	100	80.00	9.701

Table 3. Results of Students' Critical Thinking Ability and Critical Disposition Ability

Group Statistics

	Kode	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
Gabungan	Berpikir_Kritis	70	65.21	5.346	.639	.000
	Disposisi_Kritis	70	79.94	8.918	1.066	.000

Based on the results of the calculations in table 3, it was found that the standard deviation of students' critical thinking skills and critical disposition abilities was below the average value. This means that the data is homogeneous, this shows that the ability of each student to work on critical thinking skills and critical dispositions is not much different, this shows that the diversity of data is low (Kadir, 2015). This is in line with the Sig value. in (Table 3), because the results of Sig. obtained less than 0.05, it can be concluded that the ability to think critically and critical disposition has a significant difference (Alghadari, 2016; Kadir, 2015).

In accordance with the data analysis results (Table 3), it is known that there is no relationship between the value of critical thinking and critical disposition. This is because there is no association between critical thinking skills. In addition, based on field facts, it was found that the learning conditions in the Covid-19 pandemic era did not work in accordance with the learning objectives in the 21st century era, so that students' critical abilities could not be fulfilled.

This agrees with (Arum & S.Minangwati, 2014), that the attainment of critical thinking skills is influential with strategies and tactics associated with determining actions and interactions that occur in high school classrooms. Compared to the critical disposition ability, the value obtained in this result is in the good category. This is because the ability of critical disposition will continue to develop in each student through the learning process from children to adults (Nopriana & Noto, 2017).

CONCLUSION

Based on the results of data analysis, it can be seen that the critical thinking ability of high school students in biology learning is still low, because the average value obtained is still less than the Minimum Completeness Criteria (KKM). Meanwhile, the students' critical disposition ability is thickly proportional, because the average value obtained is in the good category. Based on these results, it was found that there was no relationship between critical thinking skills and critical disposition because there was no association between the two. This is due to several factors, including not achieving learning activities that support the achievement of students' thinking skills while the achievement of good grades in critical dispositions is because critical disposition abilities will always develop outside the learning process at school.

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