



The Analysis of Relationship Between Critical Thinking Ability in Early Childhood and Thematic Learning Outcomes

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Abstract

This study aims to determine the relationship between critical thinking skills and early childhood student learning outcomes, as well as to find out how much the level of critical thinking skills has to do with the thematic learning outcomes that the researchers concatenated into learning outcomes for Indonesian language, social studies, and civics in fifth-grade elementary school students. This study used the descriptive-correlational method. The tools used to collect data are Likert scales and documents. The sample used is saturated; the entire population is 83 fifth-grade elementary school students. The correlation technique used in this research is a product-moment correlation, with the t-count results being 3,446 for Indonesian language learning outcomes, 2,819 for social studies learning outcomes, and 8,971 for civics learning outcomes. The results of the correlation between critical thinking skills and Indonesian learning outcomes are 0.253, 0.303 for social studies learning outcomes, and 0.258 for civics learning outcomes. So, the descriptive results are that there is a significant positive relationship between critical thinking skills and learning outcomes in social sciences and civics, with the level of a relationship being at a moderate level.

Keywords: *Critical Thinking Ability, Learning Outcomes, Early Childhood*



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INTRODUCTION

The presence of kids who still struggle to talk, articulate their thoughts, provide justifications, draw conclusions, and then create learning plans demonstrates a low capacity for critical thought (Carmichael, Schwartz, Coyle, & Goldberg, 2019). Students can increase their learning creativity by thinking critically so that they can obtain increased learning outcomes and can actively express their opinions in teaching and learning activities. In 21st century learning, critical thinking skills have become important. With critical thinking skills, students always evaluate ideas logically and systematically (Inge, 2022). The ideas being evaluated are being able to think analytically and considering the mental decisions used (Kushendar & Mayra, 2021). So, it can be defined that critical thinking is the process of thinking by making concepts, synthesizing and applying them, and evaluating all information obtained based on experience, observation, communication, or thoughts that are used as a basis for believing and taking action (Worowirastrri & Istanti, 2019).

Critical thinking is not only intended for people who like to argue by contradicting other people's opinions, but rather, someone can provide a solution to solve an existing problem. According to previous researcher, critical thinking is an important aspect of everyday life. Because by thinking critically, one can develop other thinking skills, such as the ability to solve problems. If you pay attention, there are many phenomena that occur in everyday life that need to be criticized. In an effort to develop critical thinking for students, it is included in the cognitive development of children. Because it involves the process of thinking, especially thinking systematically. The learning process can also utilize games that are tailored to the learning theme (Rahayu & Putra, 2022). Additionally, a prior researcher claimed that the capacity for critical thought includes the capacity for reflective decision-making (Nyihana, 2021).

Instead than receiving information from others, the critical thinking process involves numerous steps of an active process in which a person thinks deeply about issues, poses his or her own questions, and gathers pertinent information (Luturmas, 2022). Examples of critical thinking that can be observed in the school environment include: students being able to convey ideas, arguments, and feelings; having an open and respectful attitude in giving and receiving opinions; listening to each other's opinions; being willing to ask questions and understand a problem that is not understood; being able to draw conclusions from problems that have been successfully resolved; and there are many other examples in the school environment (Suwardi, 2009). So, it is obvious that the development of critical thinking is crucial to the learning process (Maftutah, Jannah, & Utama, 2021). Teachers need to be able to make learning enjoyable for their students so that they can learn (Huda & Rahman, 2020). Such as developing a learning model during the learning process, in thematic learning, students need to master critical thinking skills in order to achieve learning objectives (Ramdhani & Dea, 2021).

Basically, thematic integration is integrated learning using themes so that there is a connection between each subject. Thematic learning is learning with planned activities carried out by the teacher by linking subjects to a theme in order to provide direct, meaningful experiences to students (Mahmudah, Ngali, & Makmun,

2022). Thematic learning consists of several subjects, including mathematics, Indonesian language, citizenship education, and social sciences (Parlina et al., 2022).

Based on the findings of the researcher's interviews with the respondent, an elementary school teacher teaching fifth grade, it was discovered that students' critical thinking abilities were still relatively low, both in terms of the courage to ask questions or express opinions, which in turn had an effect on their learning outcomes. Students are also less engaged in their studies, and their learning motivation is still lacking, so there are still students who are lazy and have an impact on achieving low learning outcomes in thematic learning. The age of 9–10 years, their interests begin to open, their views are more thorough and realistic, and their analysis is sharper and more critical (Fathurohman et al., 2023).

Based on the background above, the researcher wants to know how critical thinking relates to thematic learning outcomes. However, in this study, the researcher narrowed down the thematic subjects themselves. What researchers want to measure is how critical thinking relates to Indonesian language learning outcomes, social sciences learning outcomes, and citizenship education learning outcomes. These three topics provide students with fantastic opportunities to hone their critical thinking abilities by studying phenomena or events that occur, expressing their opinions, and other similar activities (Lismaya, 2019).

Thematic is an application of integrated learning, which consists of several subjects that are integrated into a unit and bound by a theme. Thematic learning is essentially integrated learning that links various disciplines together utilizing themes to provide students firsthand experience. Students may benefit from meaningful experiences through thematic learning. Thematic learning is instruction that is planned around specified themes, and the theme that serves as the focal point is used to comprehend ideas from the subject at hand as well as from other subjects. However, it can also be said that thematic learning is an integrated learning model for SD/MI-aged children, namely for the lower grades, namely grades 1, 2, and 3, based on certain themes related to the world of children. At this time, the implementation of thematic learning is focused on the lower grades, namely grades 1 and 2, but thematic learning can also be implemented for all classes in elementary schools (Luturmas et al., 2022).

As students learn Indonesian, they are essentially being taught how to speak the language correctly and effectively for their purposes. The following are Indonesian's roles in society: (1) it is the official language of the country; (2) it is used as the language of instruction in education; and (3) it provides cultural, scientific, and technological development tools; (4) communication tools at the national level for the purposes of development planning and implementation. Basically, Social Sciences (IPS) is a subject in schools that studies social issues. IPS in the world of education is a concept that develops social skills, attitudes, social skills, and knowledge to develop and shape a person to become a good citizen. IPS is also an educational program that basically questions humans in the physical and social environment. Citizenship education (civics) is a dynamic subject, always developing with the times. Therefore, this civics subject is very important for students to study, and this civics subject is one of the compulsory subjects in elementary schools (Tannady et al., 2022). Citizenship education is education that has a wider scope than other education.

Students can have a positive influence on improving learning outcomes if they have good critical thinking skills because they are trained to optimize their thinking skills so that they can solve the problems they face. According to Huda and Blue's research, students' learning results are significantly impacted by their critical thinking abilities. Each subject aims to make students have the ability to think critically, especially Citizenship Education (Civics) subjects. It can be defined that the ability to think critically is a person's cognitive process that can be used in the process of thinking as a guide by developing a frame of mind beforehand and how to apply it to real activities. Examples such as drawing conclusions, which can be regarded as the ability to connect facts or information with knowledge possessed, can be regarded as the final result hypothesis (Wahab et al., 2022).

Students' talents are learning outcomes that can be seen from a variety of circumstances, including internal and external influences. Generally speaking, learning outcomes are modifications in students' skills and conduct that result from their learning process. Or it can also be said that learning outcomes are abilities that students receive after carrying out the learning process (Astuti, 2015). According to previous researcher, learning outcomes are something that can be seen from two perspectives, namely, from the side of the learner and the side of the teacher. When viewed from the side of students, learning outcomes have increased when viewed from their attitude and mental development, which is getting better than before. A person's capacity can be seen in good conduct in the form of mastery, knowledge, thinking abilities, and motor skills, according to a previous researcher (Salehan et al., 2022). This capacity can be seen in learning outcomes as the process of implementing a person's ability. A prior researcher defined learning outcomes as modifications to attitude or behavior that happen as a result of engaging in a learning process that is in line with the learning objectives. In addition, previous researcher also said that learning outcomes can be interpreted as a form of values, actions, responses, behavior, appreciation, or appreciation and skills.

METHODOLOGY

This kind of correlational investigation is conducted in this study using a quantitative methodology. All of the 83 students in class V SD at an elementary school served as the study's population. The sample in this study uses saturated sampling. Data collection was carried out using questionnaires and tests. In the questionnaire for this study, the researcher used a Likert scale, which provided five alternative answers to the questions in the questionnaire. Before conducting research, the instrument that has been made must first be tested in Class V, which consists of 20 questions. In this study, there are two kinds of instrument testing, namely validity testing and reliability testing. Data analysis using data description, analysis prerequisite test, research hypothesis test, and statistical hypothesis test.

RESULTS AND DISCUSSION

Based on the study's findings, the number of high categories in the critical thinking ability variable was 17% with a total frequency of 13 students, then in the medium category it gained as much as 83% with a total frequency of 69 students, then in the third category, namely the low category of 0% with a total frequency of 0 students. So, it can be seen that in general, the three categories are dominated by the

medium category, because as much as 83%, almost 100%, of this category is occupied. So, it can be said that fifth-grade elementary school children's critical thinking abilities fall into the medium category. Then the number of high categories in the Indonesian language learning outcome variable is 14.4% with a total frequency of 12 students, then in the medium category it gets as high as 74.7% with a total frequency of 62 students, then in the third category, namely the low category, it is 14.4% with a total frequency of 12 students. So, it can be seen that in general, the three categories are dominated by the medium category, because as much as 74.4%, almost 100%, of this category is occupied. So, it can be concluded that the results of teaching Indonesian students are included in the medium category.

The number of high categories in the IPS learning outcome variable is 22.9% with a total frequency of 19 students, then in the medium category it gains as much as 60.2% with a total frequency of 50 students, then in the third category, namely the low category, it gains as much as 13.2% with a total frequency of 11 students. So, it can be seen that in general, the three categories are dominated by the medium category, because as much as 60.2%, or almost 100%, of this category is occupied. It is evident that students' social studies learning outcomes fall into the category of moderate. Furthermore, the high category in the Civics learning outcomes variable is 19.2% with a total frequency of 16 students, then in the medium category it gains as much as 71% with a total frequency of 59 students, then in the third category, namely the low category of 11% with a total frequency of 9 students. So, it can be seen that in general, the three categories are dominated by the medium category, because as much as 60.6%, or almost 100%, of this category is occupied. It can be said that pupils' civics learning outcomes fall into the "moderate" group.

Before entering the data analysis stage, there are several conditions that must be met in order to obtain valid data, namely normal and linear data. In order to obtain normal and linear data, the data must first be tested, namely the normality test and the linearity test. This normality test is a measure of whether the obtained data has a normal or abnormal distribution. This data must be normally distributed in order to proceed to further tests. In this normality test, we use the Kolmogorov-Smirnov normality test with the help of the IBM SPSS 22 application. The second requirement is that for parametric data, a linearity test is needed to prove whether the data has a linear relationship or not. This linearity test is used in testing correlation analysis, so this research needs to use a linearity test. In making a decision, if the significance level is less than 0.05, then the data is said to be linear; conversely, if the significance level of the deviation from linearity is more than 0.05, then the data is said to be linear; and conversely, if the significance level is less than 0.05, then it is said not to have a linear relationship. 95 This linearity test is assisted by using the IBM SPSS 22 application, along with the calculation results from the linearity test: a significant value of 0.384, greater or more than 0.05. These findings demonstrate a linear association between critical thinking abilities and success in learning Indonesian. 0.416, greater or equal to 0.05, is a significant value. Therefore, the evidence points to a linear association between critical thinking abilities and results in social studies learning. 0.548 is a significant value, higher or equal to 0.05. Hence, these findings demonstrate a linear link between critical thinking abilities and civics learning outcomes.

A test to ascertain whether or not there is a relationship between the two variables is the correlation test. The variables of critical thinking abilities and the learning outcomes of Indonesian, social sciences, and civics were examined in this study. The association between critical thinking abilities and the outcomes of learning Indonesian is 0.253, with a significant value of 0.021, according to the results of the correlation test. If the value is less than 0.05, there is a significant correlation between the two variables. The sig value is greater than 0.05 if it is not significant. When the number is smaller or less than 0.05, it indicates that there is a significant relationship between the 2 variables; if it is not significant, the sig value is more than 0.05. There is a correlation or relationship between critical thinking skills and social studies learning outcomes of 0.303. When the number is smaller or less than 0.05, it indicates that there is a significant relationship between the 2 variables; if not significant, the sig value is higher than 0.05. There is a correlation or relationship between critical thinking skills and civics language learning outcomes of 0.258, with a significant value of 0.01.

The coefficient of determination is the proportion to determine the percentage of joint variance between variable X and Y when multiplied by 100%. The coefficient of determination is used to show what percentage of the influence or proportion of variables X and Y. In testing the analysis of the coefficient of determination assisted by using the IBM SPSS 22 application, the following are the results of the analysis of the coefficient of determination: shows that R square is 0.064 when it is in the form of a percent, meaning it is 6.4%. So, this says that the proportion of critical thinking skills to Indonesian language learning outcomes is 6.4%. The remaining 93.6% range is another factor that was not examined by researchers. shows that the R square is 0.092 when it is in the form of a percent, meaning it is 9.2%. So, this says that the proportion of critical thinking skills to social studies learning outcomes is 9.2%. The remaining 90.8% range is another factor that was not examined by researchers. R square is 0.067; if expressed as a percent, it means 6.7%. So, this says that the proportion of critical thinking skills to social studies learning outcomes is 6.7%. The remaining 93.3% range is another factor that was not investigated by researchers.

Based on the significance level of 0.05 and $dk = n-2$, the t table is 1,663, and the t count is 2,446. It can be seen that if $t \text{ count} > t \text{ table}$, namely $2,446 > 1,663$, then H_0 is rejected and H_1 is accepted. It can be concluded that there is a relationship between critical thinking skills and learning outcomes in students' Indonesian lessons. Then, for testing the next hypothesis, namely the hypothesis for social studies learning outcomes. Based on the significance level of 0.05 and $df = n-2$, the t table is 1,663, and the t count is 2,819. It can be seen that $t \text{ count} > t \text{ table}$, namely $2,819 > 1,663$, then H_0 is rejected and H_2 is accepted. We can draw the conclusion that critical thinking abilities and learning results in social studies disciplines are related. The t table is 1,663 and the t count is 8,971 for testing the final hypothesis, which is the hypothesis for civics learning outcomes, based on the significance level of 0.05 and $df = n-2$. As can be seen, H_0 is refused and H_3 is approved since $t \text{ count} > t \text{ table}$, or $8,971 > 1,663$. Conclusion: There is a link between students' civics learning results and their critical thinking abilities.

Statistical testing has been carried out, from analysis testing to hypothesis testing. Starting with descriptive data on each variable, the critical thinking ability variable occupies the moderate category level, namely 83%. The same is the case with

student learning outcomes, namely occupying the moderate category level both in Indonesian, Social studies, and Civics, namely 74.7%, 60.2%, and 71%, respectively. Analysis testing proved that there is a positive relationship because, in testing the correlation analysis, it can be proven that there is a positive relationship. The correlation between critical thinking abilities and the results of learning Indonesian in grade V SD was found to be 0.253; it was 0.303 for the ability relationship between critical thinking abilities and IPS learning outcomes; and it was 0.258 for the relationship between critical thinking abilities and Civics learning outcomes. This is a healthy relationship.

After testing the correlation, this research can prove that H_0 is rejected. Because the researcher's hypotheses state that there isn't a meaningful inverse association between critical thinking abilities and student learning results at H_0 . It differs from the data gained by testing the hypothesis: that there is a substantial association between critical thinking abilities and Indonesian learning outcomes with planned decision making, where $t\text{-count}$ is more than $t\text{-table}$, $2,446 > 1,663$. Similar to how the $t\text{-count}$ is higher than the $t\text{-table}$ for the association between critical thinking skills and social studies learning outcomes $2,819 > 1,663$ so is the case for the relationship between critical thinking skills and civics learning outcomes $8,971 > 1,663$. The two variables are then significantly positively correlated with one another.

It is clear from the high correlation between these two factors how much the use of critical thinking abilities affects the outcomes of learning Indonesian. The coefficient of determination was tested for this test. Tests of the critical thinking skills' coefficient of determination on learning outcomes for the Indonesian language produced results of 6.4%, 9.2%, and 6.7% respectively. Tests of the critical thinking skills' coefficient of determination on learning outcomes for social studies produced results of 9.2% and 6.7% respectively. As a result, other factors that were not considered in this study influenced or contributed to the remaining %.

Thus, based on the findings of statistical tests, it can be concluded that there is a substantial positive association between critical thinking abilities and thematic learning outcomes, specifically civics, social studies, and Indonesian language learning outcomes. Higher critical thinking abilities among pupils result in better learning results.

CONCLUSION

Critical thinking abilities and learning outcomes in Indonesian are significantly positively correlated, with a moderate level correlation coefficient of 0.253. Also, there is a moderate-level, 0.303-equivalent significant positive association between critical thinking abilities and social studies learning results. Also, there is a moderate level, substantial positive link between critical thinking abilities and civics learning outcomes that is as great as 0.258.

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