



The Relationship of Coping Strategies, Self-Efficacy, and Scientific Attitudes towards Science Learning Outcomes of Fifth Grade Elementary School Students

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Abstrak

Kurangnya sarana dan prasarana guru yang terbatas dalam memanfaatkan IPTEK dan IPTEK menjadi faktor penyebab terjadinya learning loss. Kolaborasi yang kuat dan simultan antara seluruh tenaga kependidikan harus ditingkatkan untuk mewujudkan kebebasan belajar dalam bahasa Indonesia. Tujuan penelitian adalah untuk menganalisis pengaruh strategi coping, self-efficacy, dan sikap ilmiah terhadap hasil belajar IPA. Populasi dalam penelitian ini adalah siswa kelas V SD yang berjumlah 270 orang. Sampel penelitian berjumlah 159 siswa yang ditentukan dengan teknik proporsional random sampling. Data strategi coping, data efikasi diri dan data sikap ilmiah dikumpulkan dengan lembar angket. Data hasil belajar IPA dikumpulkan dengan tes objektif berupa tes pilihan ganda. Data dianalisis dengan menggunakan program SPSS 20 berbantuan regresi berganda berbantuan program. Nilai hitung strategi coping, self-efficacy, sikap ilmiah dan simultan lebih besar dari nilai stabilnya. Hal ini menunjukkan bahwa terdapat pengaruh positif yang signifikan antara strategi coping terhadap hasil belajar IPA. Terdapat pengaruh positif yang signifikan antara efikasi diri terhadap hasil belajar IPA. Terdapat pengaruh positif yang signifikan sikap ilmiah terhadap hasil belajar IPA. Secara simultan terdapat pengaruh positif yang signifikan antara strategi coping, self-efficacy, dan sikap ilmiah terhadap hasil belajar IPA siswa. Dengan demikian disimpulkan bahwa terdapat pengaruh yang signifikan antara strategi coping, self-efficacy dan sikap ilmiah terhadap hasil belajar IPA siswa kelas V Sekolah Dasar.

Kata Kunci: Strategi Coping, Efikasi Diri, Sikap Ilmiah, IPA

Abstract

Lack of facilities and infrastructure limited teacher in utilizing science and technology and science become a factor causing learning loss. Strong and simultaneous collaboration between all educational personnel must be improved to realize the freedom of learning in Indonesian. The purpose of the study was to analyze the influence of coping strategies, self-efficacy, and scientific attitudes on science learning outcomes. The population in this study was 270 grade V elementary school student. The study sample totaled 159 students who were determined by proportional random sampling technique. Coping strategy data, self-efficacy data and scientific attitude data were collected with questionnaire sheets. Data on science learning outcomes are collected with an objective test in the form of a multiple choice test. Data were analyzed using SPSS 20 program-assisted multiple liner regression. The rcount value of coping strategies, self-efficacy, scientific attitudes and simultaneously greater than the rtable value. This shows that there is a significant positive influence between coping strategies on science learning outcomes. There is a significant positive influence between self-efficacy on science learning outcomes. There is a significant positive influence on scientific attitudes towards science learning outcomes. Simultaneously there is a significant positive influence of coping strategies, self-efficacy, and scientific attitudes on student science learning outcomes. Thus, it was concluded that there was a significant influence between coping strategies, self-efficacy and scientific attitudes on the results of science learning for fifth grade students of elementary school.

Keywords: Coping Strategies, Self-Efficacy, Scientific Attitudes, Science

History:

Received : March 28, 2023

Revised : April 10, 2023

Accepted : May 06, 2023

Published : May 25, 2023

Publisher: Undiksha Press

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1. INTRODUCTION

Issue in Indonesia today, our education is experiencing setbacks (learning loss). Lack of facilities and infrastructure limited teacher in utilizing science and technology and science become a factor causing learning loss (Hau et al., 2020; Jabor & Azhar, 2019). Strong and simultaneous collaboration between all educational personnel must be improved to realize the freedom of learning in Indonesian. The Head of the Tabanan Regency Education Office assumes that ideal education in Tabanan can be achieved by intensifying digitalization-based character education and local wisdom. Educational ideal conditions occur for students when character education and general knowledge are met (Kibirige & Teffo, 2014; Suprayitno & Wahyudi, 2020). The achievement of student learning outcomes is generally influenced by two factors, namely internally and externally (Anggraini et al., 2017; Karimi et al., 2017; Ramli et al., 2018). Internal factors tend to have a greater influence on student learning outcomes compared to external factors (Arikunto, 2010; Riyanti, 2021).

Preliminary research conducted in the form of interviews with teachers through the KKG Class V discussion forum on WhatsApp Group. In addition, researchers also conduct midterm value analysis and daily assessments, especially on the content of science lessons. Based on the results of the preliminary study, researchers found that the learning outcomes of grade V elementary school students in Cluster III of Kediri District were still in the low category. The initial assumption of internal factors that cause low achievement of learning outcomes in grade V students is the psychological condition of students such as stress, and anxiety disorders (Groenendijk et al., 2013; Pertiwi, D & Sudarsono, A, 2015).

Efforts that can be made by teachers to overcome stress and anxiety disorders of students in learning are coping strategies. In English Coping comes from the word "cope" which means to fight, or overcome. The most common forms of coping strategies are grouped in two types (Ibrahim-González & Noordin, 2012; Ravindran et al., 2020). First, problem focused coping (PFC) is a coping that is more focused on reducing the demands of stressful situations. Second, emotion focused coping (EFC) is a form of coping that focuses on regulating emotional responses when under stress. The coping strategy referred to in this study is a stress response in the form of student self-adjustment behavior that appears when dealing with pressure (Alexander & Onwuegbuzie, 2007; Suprianti & Jayanta, 2020). The stress response in question is a physiological response, cognitive response, psychological response, and a behavioral response. The pressure in question is an emotional situation when students are required to complete 20 items of learning outcomes evaluation test questions. Data on students' coping strategies when completing such evaluation tests were collected using questionnaires. Effective coping strategies are thought to affect the achievement of student learning outcomes. Effective coping is important for students in overcoming academic stress (Gilakjani & Sabouri, 2017; Hermann & Menzel, 2013). Therefore, the study of coping strategies is important to do.

The next dimension of the student's internal factors is self-efficacy. The definition of self-efficacy is a form of belief in one's own ability to get things done. Self-efficacy is formed through simultaneous interactions between the environment, self-abilities, and learning experiences. Self-efficacy is a form of a person's self-confidence in their abilities (Akuba et al., 2020; Vastyanov et al., 2021). The characteristics of a person who has balanced self-efficacy in general appear as follows (a) have a high commitment, (b) are passionate, (c) quickly rise from disappointment and/or despair, (d) consider challenges to be a new thing that can be mastered, and (e) able to adapt and participate in the activities being followed. Self-efficacy is thought to affect student learning outcomes. Indirectly, the self-confidence that students have affects their efforts and motivation to learn (Azizah, 2021; Çiftçi & Yıldız, 2019).

Therefore, in improving the achievement of learning outcomes, students' self-efficacy needs to be considered. The self-efficacy referred to in this study is related to self-confidence, self-calmness, optimism, surrender and the poor resistance that students have to their ability to take the evaluation test (Bahadur & Boodun, 2013; Martí et al., 2022). The evaluation test refers to a test used to collect data on science learning outcomes. Measurement of students' self-efficacy was carried out using a questionnaire with a likert scale with 4 answer choices. Score weighting uses tiered options (highly appropriate, appropriate/agreed, less appropriate, and highly non-matched). Data regarding the self-efficacy of grade V students are accumulated score weights. Self-efficacy is thought to affect student learning outcomes. Indirectly, students' self-confidence affects their efforts and motivation to learn (El-Adl & Alkharusi, 2020; Huang et al., 2019).

Therefore, in improving the achievement of learning outcomes, students' self-efficacy needs to be considered. Academic assignments or loads are not a big problem in students who have balanced self-efficacy. Because students have self-confidence in their own abilities and do not give up quickly (Paul et al., 2021; Vastyanov et al., 2021; Wei & Chou, 2020). Self-efficacy studies in science subjects at the elementary level as far as the researcher's knowledge does not exist. For this reason, studies related to self-efficacy are important to do. In the component of science learning there is a scientific attitude. Self-efficacy is thought to affect student learning outcomes. Indirectly, students' self-confidence affects their efforts and motivation to learn (Amalia & Hidayat, 2021; Kwarikunda et al., 2020).

Therefore, in improving the achievement of learning outcomes, students' self-efficacy needs to be considered. Academic assignments or loads are not a big problem in students who have balanced self-efficacy. Because students have self-confidence in their own abilities and do not give up quickly. Self-efficacy studies in science subjects at the elementary level as far as the researcher's knowledge does not exist. For this reason, studies related to self-efficacy are important to do. The scientific attitude referred to in this study is the behavior or attitude of scientists that needs to be developed in students so that they are able to work scientifically using scientific procedures and methods (Kiel et al., 2020; Sipahutar, 2020; Yang et al., 2021). In this study, the scientific attitudes studied included a curious attitude, an attitude of discovery, an attitude of critical thinking and a firm attitude of establishment. Scientific attitude data were collected using questionnaires with a likert scale. The 20 questions on the questionnaire refer to the four aspects of the study of the scientific attitude. A scientific attitude is an aspect/component formed as a result of a series of scientific processes.

Several studies from previous studies related to coping strategies, self-efficacy, scientific attitudes and science learning outcomes strengthen the assumption of a correlation between them. Researchers also assume that coping strategies, self-efficacy and scientific attitudes including internal factors in students have a contribution to learning readiness so that they affect student learning outcomes. Previous research related to coping strategies and self-efficacy has been widely studied in psychological research. Educational research studies related to coping strategies and self-efficacy in elementary school students to the extent that researchers' knowledge does not exist (Alexander & Onwuegbuzie, 2007; Freire et al., 2020). For this reason, researchers see the need to study this. Thus, the formulation of the problem in this study is to analyze the relationship between coping strategies, self-efficacy, and scientific attitudes towards the learning outcomes of Science students of Class V SD Cluster III, Kediri District, for the 2022/2023 academic year.

2. METHOD

This study aims to analyze the influence of coping strategies, self-efficacy and scientific attitudes of students on learning outcomes, especially on the content of science

lessons. The method used is qualitative research of ex post facto type. The design in this study used a simple linear regression analysis (R). This study used 4 variables, namely 3 free variables and 1 bound variable. Independent variables in this study include coping strategies (X1), self-efficacy (X2), and scientific attitudes (X3). The bound variable in this study is the learning outcomes of science (Y). The constellation of the variables is show in [Figure 1](#).

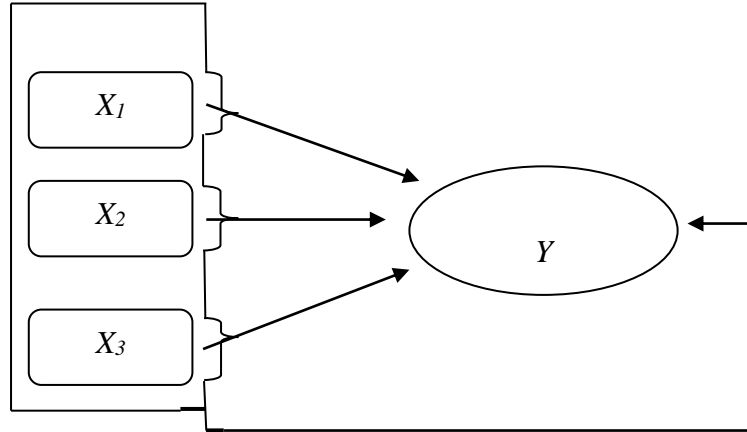


Figure 1. The Constellation of The Variables

Data collection of each variable is carried out using research instruments that have been designed by researchers and have passed validity tests and judges' tests. Data collection of each variable is carried out using research instruments that have been designed by researchers and have passed validity tests and judges tests. Collection of data on coping strategies, self-efficacy and scientific attitudes using questionnaire sheets. Meanwhile science learning outcomes data were collected using multiple choice test form learning outcomes tests.

The target population of this study is 270 students who are all grade V students of SD Cluster III, Kediri District, Academic Year 2022/2023. The distribution of the research population in 10 public and private elementary schools in Cluster III of Kediri District was 12 classes. In this study, to determine the sample using sampling techniques. The sampling technique referred to in this study is propositional random sampling. If the sampling takes into account the presence of a proportion or the size of the comparison between the parts contained in the population, the proportional sampling technique is used. Meanwhile, random means random sample selection. Thus, the proportional random sampling technique is a technique of determining random samples by taking into account the number of proportion in each school, which in this case is in each class V elementary school which is included in Group III of Kediri District. The proportional random sampling technique was used in this study because in one group of each school the number of class V students is different so that they must pay attention to the proposal of each school. Samples are determined randomly by lottery. The sample of this study was 159 students.

The instrument used for collecting data on science learning outcomes, namely in the cognitive realm, is an objective test with 20 questions. Scoring using conventional techniques, each correct question item is given a score of 1, and if the student does not answer or the student's answer is incorrectly given a score of 0. The score of each grain is then accumulated. The accumulated number of scores is a variable score of science learning outcomes. The range of scores that students may get is 0-20. A score of 0 is the ideal minimum score and a score of 20 is the ideal maximum score for the variable of science learning outcomes.

To determine the level of student coping strategies, an instrument is used in the form of a questionnaire with 20 questions. The preparation of the coping strategy questionnaire is guided by the theory of Lazarus and Folkom, namely coping strategies inventory, namely (1) problem focused coping (PFC) is a coping that is more focused on the problem, and (2) emotion focused coping (EFC) is a form of coping that focuses on emotions. The validity test for the coping strategy questionnaire instrument consists of a content validity test and an item validity test. Test the validity of the content by means of test judges or experts who are experts in fields related to the coping strategies of the students studied. Test the validity of the coping strategy questionnaire items using Pearson Product Moment. In this study, testing the validity of coping strategy questionnaire items using the SPSS 20 program tool. To determine the reliability of the coping strategy questionnaire used the formula Alpha Cronbach. Calculation of the reliability of the coping strategy questionnaire using the SPSS 20 program tool. The calculation results showed a coping strategy questionnaire reliability rate of 0.869. The coefficient of reliability of the coping strategy questionnaire is in the very high category, so the coping strategy questionnaire can be used in research. The coping strategy questionnaire can provide information related to the level of coping strategies with relatively the same results even though they are carried out at different times and places.

To measure students' self-efficacy, a questionnaire with a likert scale was used. The self-efficacy referred to in this study is related to the self-confidence that students have in their ability to take the evaluation test. The evaluation test in question is an evaluation test used to collect data on science learning outcomes. Scoring uses a likert scale with 5 answer choices. Score weighting using nested options (always, often, sometimes, rarely and never). The validity test of the self-efficacy questionnaire consists of a content validity test and an item validity test. Test the validity of the content by means of a test of judges or experts who are experts in fields related to the self-efficacy of the students studied. Test the validity of the items of the self-efficacy questionnaire using Pearson Product Moment. In this study, testing the validity of the self-efficacy questionnaire items using the SPSS 20 program tool. To determine the reliability of the self-efficacy questionnaire used the formula Alpha Cronbach. Calculation of the reliability of the self-efficacy questionnaire using the SPSS 20 program tool. The calculation results showed a self-efficacy questionnaire reliability rate of 0.869. This means that the reliability coefficient of the self-efficacy questionnaire is in a very high category, so the self-efficacy questionnaire can be used in research. Self-efficacy questionnaires can provide information related to self-efficacy levels with relatively similar results even though they were carried out at different times and places.

To measure students' scientific attitudes, questionnaires with scoring using a likert scale. The scientific attitudes measured are inquisitiveness, discovery attitude, critical thinking attitude and firm stance. This scientific attitude questionnaire contains 20 lists of statements relating to the four aspects of scientific attitudes to be measured. Filling out the questionnaire using a check mark (\surd) on the alternative answer choice. Weighting uses nested options, i.e. never, rarely, sometimes, often and always. The validity test for the scientific attitude questionnaire instrument consists of a content validity test and an item validity test. Test the validity of the content by means of test judges or experts who are experts in fields related to the coping strategies of the students studied. In this study, the content validity test used 2 judges or experts. The results of the expert assessment were analyzed using the Gregory Test. Test the validity of scientific attitude questionnaire items using Pearson Product Moment. In this study, testing the validity of scientific attitude questionnaire items using the SPSS 20 program tool. To determine the reliability of the scientific attitude questionnaire using the formula Alpha Cronbach. Calculation of the reliability of the scientific attitude questionnaire using the program tool SPSS 20. Scientific attitude

questionnaires can provide information related to the level of scientific attitudes with relatively similar results even though they are carried out at different times and places.

3. RESULTS AND DISCUSSION

Results

The data that have been revealed in this study are Science Learning Outcomes (Y), Coping Strategies (X1), Self-Efficacy (X2) and Scientific Attitudes (X3). The results of the descriptive analysis in this study were calculated with the help of SPSS 20 as show in [Table 1](#).

Table 1. Descriptive Analysis Results

Research Variables	Samples	Min	Max	Average	Std. Deviation
Science Learning Outcomes		50.00	90.00	70.2658	11.66220
Coping Strategies	159	33.00	88.00	61.8987	10.51079
Self-Efficacy		33.00	88.00	61.8987	10.51079
Scientific Attitudes		39.00	89.00	63.3418	11.90872
Total	159	155	355	257.405	44.5925

Base on [Table 1](#), with a significance level of 5% show that the p-value is 0.952 or greater than the alpha value of 5%, so it can be concluded that the assumption of normality is met. Before the hypothesis test is carried out, assumption testing is carried out, including the normality test of data distribution, linearity test, multicollinearity test, non-autocorrelation test, and homoscedasticity test. SPSS 20 assisted normality testing using the Kolmogorov-Smirnov One-Sample test. The result of the normality test is sow in [Table 2](#).

Table 2. Summary of Normality Test Results

Research Variable	One-Sample Kolmogorov-Smirnov ^z		
	Statistic	Df	Sig.
Science Learning Outcomes	0.058	159	0.200
Coping Strategies	0.059	159	0.200
Self-Efficacy	0.060	159	0.200
Scientific Attitudes	0.058	159	0.200

Base on [Table 2](#), with a significance level of 5% show that the p-value is 0.952 or greater than the alpha value of 5%, so it can be concluded that the assumption of normality is met. Linearity test is carried out to determine the relationship between free variables and bound variables. Based on the analysis of the linearity test conducted on each free variable on science learning outcomes is show in [Table 3](#).

Table 3. Summary of Linearity Test Results

	X ₁ * Y		X ₂ * Y		X ₃ * Y	
	Linarites	Deviation from Linearity	Linarites	Deviation from Linearity	Linarites	Deviation from Linearity
F	107.835	1.098	108.384	1.141	109.101	1.094
Sig.	0.000	0.333	0.000	0.342	0.000	0.346

Base on [Table 3](#), the signification of Linearity of 0.000 ($p < 0.05$). So that coping strategies, self-efficacy and scientific attitudes with science learning outcomes have a linear relationship. While the signification of Deviation from Linearity of the three free variables shows a value greater than 0,05 ($p > 0.05$) so that it can be concluded that coping strategies, self-efficacy, and scientific attitudes with the results of learning science have a meaningful relationship. Summary of multicollinearity test is show in [Table 4](#).

Table 4. Summary of Multicollinearity Test Results

Model	Sig.	Collinearity Statistics	
		Tolerance	VIF
(Constant)	0.000		
Coping Strategies	0.000	0.274	3.655
Self-Efficacy	0.040	0.305	3.274
Scientific Attitudes	0.000	0.377	2.650

Based on the results of the analysis, as show in [Table 4](#) the assumptions of coping strategy data, self-efficacy and scientific attitudes in the absence of multicollinearity are met. This means that free variables have a strong or positive correlation to bound variables. This means that between coping strategies, self-efficacy and scientific attitudes have a positive correlation line to science learning outcomes. One way to find out whether or not Homoscedasticity exists in a multiple linear regression model is to look at a scatterplot graph as show in [Figure 2](#).

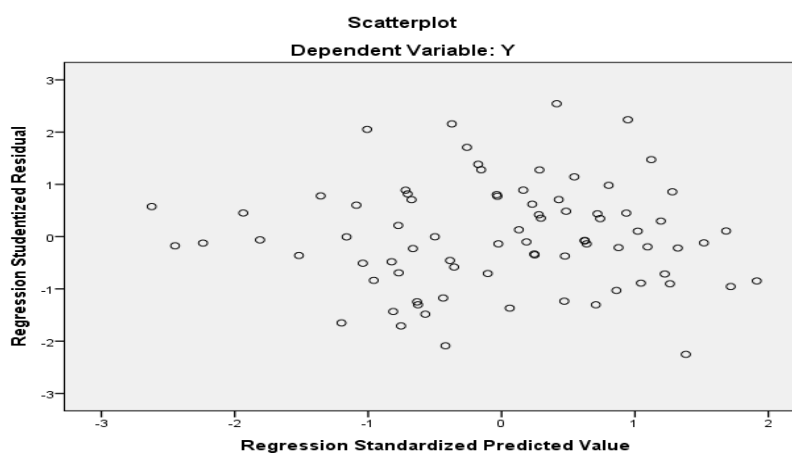


Figure 2. Scatterplot Homoscedasticity

Based on the [Figure 2](#) can be seen that the dots are scattered randomly or do not form a certain pattern. Thus it can be concluded that the assumption of Homoscedasticity is fulfilled. Or it can be interpreted that there is no heteroscedasticity. The last assumption test is a non-autocorrelation test with the Durbin-Watson test. The result is show in [Table 5](#).

Table 5. Summary of Non Autocorrelation Test Results

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.971	0.942	0.940	1.14191	2.027

Base on The result in [Table 5](#), non-autocorrelation testing using assisted SPSS 20. Based on the results of the analysis, it can be concluded that there is no autocorrelation or

non-autocorrelation assumptions are met. Thus it means that there is no autocorrelation between research variables.

After the assumption test is carried out, it is known that all the conditions for conducting a hypothesis test are met. For this reason, the next test is the hypothesis test. In this study, hypothesis testing I, II, and III used simple regression analysis with the Pearson Product Moment test. Meanwhile, the IVth hypothesis testing uses multiple regression analysis, namely to test the presence or absence of simultaneous influences of coping strategies, self-efficacy and scientific attitudes towards science learning outcomes. The data used in hypothesis testing were analyzed with the help of the SPSS 20 program.

Hypothesis Test I

Based on the results of the correlation analysis assisted by the SPSS 20 application with Pearson's analysis technique. The result is show in Table 6.

Table 6. Summary of Hypothesis Tes I

Variable	N	Pearson Correlation	Sig. (2-tailed)	R	R Square	Adjusted RSquare	Std. Error of the Estimate
Coping Strategies	159	1	0.000	0.594	0.353	0.350	6.714
learning Outcomes of Science	159	0.594	0.000				

Base on Table 6 it is known that the calculation is 0.594 whereas r_{table} is obtained by degrees of freedom ($df=N-2$), at the level of significance 5%, is 0.1262. This shows that the r_{count} is larger than the r_{table} . Because the r_{count} is greater than the r_{table} , it can be declared H_0 rejected. Thus, it can be concluded that there is an influence of coping strategies on the learning outcomes of science students in grade V of SD Cluster III, Kediri District, Tabanan Regency. Magnitude *R Square coping* strategies is 0.353. Then the magnitude of determination is the value of (R^2) multiplied 100% = $0.353 \times 100\% = 35.3\%$. Thus, it can be stated that the results of learning science for grade V students of SD Cluster III, Kediri District, were influenced by coping strategies by 35.3% and the rest were influenced by other variables that were not studied in this study, namely 64.7%.

Hypothesis Test II

Based on the results of the correlation analysis assisted by the SPSS 20 application with Pearson's analysis technique. The result is show in Table 7.

Table 7. Summary of Hypothesis Tes II

Variable	N	Pearson Correlation	Sig. (2-tailed)	R	R Square	Adjusted RSquare	Std. Error of the Estimate
Self-Efficacy Learning	159	1	0.000	0.623	0.389	0.385	6.529
Outcomes of Science	159	0.623	0.000				

Base on [Table 7](#) it is known that the calculation is 0,623 whereas r_{tabel} is obtained by degrees of freedom ($df=N-2$), at the level of significance 5%, is 0,1262. This shows that the r_{hitung} is larger than the r_{tabel} . Because the r_{hitung} is greater than the r_{tabel} , H_0 is rejected and declared H_1 is accepted. It can be stated that there is an influence of self-efficacy on the learning outcomes of science students in grade V of SD Cluster III, Kediri District, Tabanan Regency. This means that there is a significant contribution of self-efficacy with the results of learning science for grade V students of SD Cluster III, Kediri District, Tabanan Regency. Magnitude *R Square* self-eficacy is 0,389. Then the magnitude of determination is the value of (R^2) multiplied 100% = 0,389 x 100% = 38,9%. Thus, it can be stated that the results of learning science for grade V students of SD Cluster III, Kediri District, Tabanan Regency were influenced by Self-Efficacy of 38.9% and the rest were influenced by other variables that were not studied in this study, namely 61.1%.

Hypothesis Test III

[Table 8](#) show the results of the correlation analysis assisted by the SPSS 20 application with Pearson's analysis technique.

Table 8. Summary of Hypothesis Tes III

Variable	N	Pearson Correlation	Sig. (2-tailed)	R	R Square	Adjusted RSquare	Std. Error of the Estimate
Scientific Attitudes Learning Outcomes of Science	159	1	0.000	0.517	0.268	0.263	8.886
	159	0.517	0.000				

Bas on [Table 8](#), it is known that the calculation is 0,517 whereas r_{tabel} is obtained by degrees of freedom ($df=N-2$), at a significance level of 5%, by 0,1262. This shows that the r_{hitung} is larger than the r_{tabel} . Because the r_{hitung} is greater than the r_{tabel} , H_0 is rejected and H_1 is accepted. Thus, it can be stated that there is an influence of scientific attitudes on the results of science learning for grade V students of SD Cluster III, Kediri District, Tabanan Regency. This means that there is a significant contribution to scientific attitudes with the results of learning science for grade V students of SD Cluster III, Kediri District, Tabanan Regency. The magnitude of *R Square* self-eficacy is 0,268. Then the magnitude of determination is the value of (R^2) multiplied 100% = 0,268 x 100% = 26,8%. Thus, it can be stated that the results of learning science for grade V students of SD Cluster III, Kediri District, Tabanan Regency are influenced by scientific attitudes by 26.8% and the rest are influenced by other variables that were not studied in this study, namely 73,2%.

Hypothesis Test IV

The regression line equation for IV hypothesis testing is $\hat{Y} = 2,344 + 0,284 X_1 + 0,336 X_2 + 0,248 X_3$. The equation shows that the value of the coefficient of science learning outcomes is 3.210. These results show that there is a simultaneous influence of scientific attitudes with the results of learning science. The detail result is show in [Table 9](#).

Table 9. Summary of Coping Strategy Test Results, Self-Efficacy, and Scientific Attitudes towards Science Learning Outcomes

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	2.344	5.583	
Coping Strategies	0.284	0.052	0.328
Self-Efficacy	0.336	0.060	0.345
Scientific Attitudes	0.248	0.044	0.309

Base on [Table 9](#), the simultaneous correlation of coping strategies, self-efficacy and scientific attitudes with science learning outcomes was 0.755. While the coefficient of determination is 0.570 or 57%. This shows that there is a significant influence on coping strategies, self-efficacy and scientific attitudes with science learning outcomes. Based on calculations, it is known that the effective contribution (SE) of coping strategies (X1) to science learning outcomes (Y) is 19.48%. The effective contribution (SE) of self-efficacy (X2) to science learning outcomes (Y) was 21.52%. The effective contribution (SE) of scientific attitudes (X3) to science learning outcomes (Y) was 15.98%. With a total SE of 57% or equal to the coefficient of determination (R square) of regression analysis of 57%. Then the value of the relative contribution (SR) of the coping strategy (X1) to the learning outcomes of science (Y) as 34,21%. The relative contribution (SR) of self-efficacy (X2) to science learning outcomes (Y) was 37.71%. Meanwhile, the relative contribution (SR) of scientific attitudes (X3) to science learning outcomes (Y) was 28.08%. The total relative donation (SR) is 100% or equal to 1.

Discussion

In this discussion, four things will be explained that can be conveyed based on the results of research conducted on fifth grade elementary school students in Cluster III, Kediri Regency, Tabanan Regency. This discussion involves factors that influence science learning outcomes, namely coping strategies, self-efficacy, and scientific attitudes. In addition, it will also discuss the simultaneous influence of these three factors on science learning outcomes.

Based on the results of the study, it was found that there was a significant influence of coping strategies on science learning outcomes. Coping strategies refer to individual efforts to deal with stress and challenges faced. In the context of learning science, effective coping strategies can help students overcome learning difficulties and improve their learning outcomes. The results of the study in line with previous study that show that students who have good coping strategies tend to achieve better science learning outcomes compared to those who do not have effective coping strategies ([Eren & Coskun, 2016](#); [Hermann & Menzel, 2013](#); [Mahvar et al., 2018](#)).

In addition, the results of this study also found a significant effect of self-efficacy on science learning outcomes. Self-efficacy refers to an individual's belief in his own ability to achieve the goals and tasks given. In the context of learning science, students who have a high level of self-efficacy tend to have strong motivation and self-confidence in dealing with complex science material. This contributes to improving their science learning outcomes ([Kwarikunda et al., 2020](#); [Salhieh & Al-Abdallat, 2021](#)). Moreover, there is also a significant influence of scientific attitudes on science learning outcomes. Scientific attitude refers to ways of thinking and behaving like a scientist, including curiosity, scepticism, openness to new ideas, and ability to make observations and research. Students who have a positive

scientific attitude tend to be more active and involved in learning science, which in turn affects their learning outcomes.

There is a significant simultaneous effect of coping strategies, self-efficacy, and scientific attitudes on science learning outcomes. That is, these three factors interact with each other and jointly influence students' science learning outcomes. Students who have good coping strategies, high levels of self-efficacy, and positive scientific attitudes tend to achieve better science learning outcomes. In the context of fifth grade elementary school students in Cluster III, Kediri Regency, Tabanan Regency, this study shows that factors such as coping strategies, self-efficacy, and scientific attitude have a significant influence on science learning outcomes. Therefore, it is important for educators and related parties to pay attention and facilitate (Conradty & Bogner, 2020; Tan et al., 2020).

The implications of this study provide a better understanding of the factors that influence science students' learning outcomes. Teachers and educators can use this knowledge to develop more effective learning strategies and support the development of coping strategies, self-efficacy, and students' scientific attitudes. By paying attention to these factors, educators can improve the quality of science learning and student learning outcomes. In addition to the implications for students, students can use the results of this study to improve their learning performance. They can develop effective coping strategies, increase their level of self-efficacy, and adopt a positive scientific attitude. Thus, they can improve their science learning outcomes and achieve better academic success.

The main limitation of this study is the limited sample coverage of fifth grade elementary school students in Cluster III, Kediri Regency, Tabanan Regency. Therefore, the results of this study may not be directly generalizable to the wider student population. For broader generalizations, studies with larger samples and from different geographical areas can be carried out. Then, even though this research identifies coping strategies, self-efficacy, and scientific attitudes as factors that influence science learning outcomes, there may be other factors that were not considered in this research. Factors such as family environment, intrinsic motivation, or quality of teaching can also contribute to student science learning outcomes. Suggestions that can be submitted are (1) for class V students in Group III Kediri District to be more active in managing coping strategies, self-efficacy and scientific attitudes towards science-charged learning; (2) teachers should collaborate with parents to facilitate students in managing coping strategies, self-efficacy and scientific attitudes of students to support the improvement of their learning outcomes; and (3) For readers, the results of this study can be used as one of the inputs for educational actors in improving the quality of the learning process of science content in their respective classes.

4. CONCLUSIONS

The conclusions that can be conveyed are (1) there is a significant influence of coping strategies on science learning outcomes; (2) there is a significant influence of self-efficacy on science learning outcomes; (3) there is a significant influence of scientific attitudes on science learning outcomes; and (4) there is a simultaneous significant influence of coping strategies, self-efficacy and scientific attitudes on science learning outcomes in grade V elementary school students in Cluster III Kediri District, Tabanan Regency.

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