THE EFFECT OF SCHOOL CULTURE, LEARNING INTEREST, AND LEARNING MOTIVATION ON NATURAL SCIENCE LEARNING OUTCOMES

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PENGARUH BUDAYA SEKOLAH, MINAT BELAJAR, DAN MOTIVASI BELAJAR TERHADAP HASIL BELAJAR IPA

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ABSTRACT

Abstract: This paper describes the effect of school culture, learning interest, and learning motivation on natural science (IPA) learning outcomes for fifth-grade elementary students in cluster IV. The research is ex-post-facto research. The research sample is 196 students. The data collection methods used are the questionnaire method and document study. Data analyses used are multiple regression and partial correlation. Based on the research that has been conducted, it is concluded that 1) there is a significant effect of school culture on natural science (IPA) learning outcomes for fifth-grade elementary students at Cluster IV in Tabanan with a percentage of 42.1% and an effective contribution of 20.7%, 2) there is a significant effect with a percentage of 44.4% and an effective contribution of 18.5%, 3) there is a significant effect with a percentage of 44.1% and an effective contribution of 17%, and 4) there is a significant effect of school culture, learning interest, and learning motivation on natural science (IPA) learning outcomes for fifth-grade elementary students in Tabanan with a percentage of 56.2%.

Keywords: school culture, learning interest, learning motivation, natural science (IPA) learning outcomes

CITATION

INTRODUCTION

Education is one of the most crucial aspects of human life. Education will shape the talents and skills that a person has which will be able to determine and guide his future. This is in line with the thoughts of Ki Hadjar Dewantara who suggested that education is a guide for the growth and development of children, where through education a person will be able to grow and develop according to his nature both as a human being and as a member of society in order to achieve safety and happiness in his life. Therefore, education is arranged in order to develop a person’s potential and guide them in order to achieve the desired life goals in the future.

Based on Law No.20 of 2003 concerning the National Education System, it is stated that the purpose of education is to develop the potential of students to become human beings who are faithful and devoted to God Almighty, have noble character, being healthy, knowledgeable, capable, creative, independent and being democratic and responsible citizens. Education plays an important role in the progress of a nation because it can change human intellectuals. In order to produce quality human resources, the government implemented the 2013 Curriculum at all levels of education (Jusuf & Sobari, 2022). Where in the 2013 Curriculum the learning process is carried out using a scientific approach (scientific). The scientific approach is believed to be the golden bridge in the development and development of students’ attitudes, knowledge and skills after studying a learning content or after completing a certain education. By implementing the 2013 Curriculum, it is hoped that the teaching and learning process can develop students’ potential to become individuals who are faithful, productive, creative and innovative (Ibrahim, 2016).

One of the main subjects in the 2013 curriculum is Natural Science. It is a field of science related to the description of concepts, principles, and procedures according to (Arfani & Sugiyono, 2014). The research was conducted on fifth grade elementary school students in Cluster IV Tabanan District for the 2021/2022 academic year because the schools in the cluster use the same curriculum, namely the 2013 Curriculum, have similar characteristics and the average environmental culture is the same. Researchers want to prove the variables that influence the learning outcomes of Natural Science in students, so that later these variables can be given more attention by teachers in the learning process to students.

The results of the initial survey showed that the majority of students did not pay attention when science subject took place. Only a few students gave paying attention to the teacher's explanation so that many students did not understand Natural Science Subject. This is due to the lack of motivation and interest of students to learn about it, they think that Natural Science is a lesson that tend to be difficult. This understanding is caused by a school culture that makes them feel unfamiliar and heavy to learn Natural Science Subject. Because all students have a culture of thinking that Science Subject are difficult and scary. Indeed, these cultural conditions will affect the way of learning for students which also affects their interest and motivation to learn Natural Science (Putri dkk., 2018). The results of understanding these inaccurate perceptions lead to lower achievement of students in their learning achievements. Many students have learning achievements below the Minimum Completeness Criteria Value.

Therefore, research was conducted related to the influence of school culture, learning interest, and learning motivation on science learning outcomes. Researchers want to prove scientifically whether student learning achievement in science subjects is influenced by school culture learning interest, and...
learning motivation on science learning outcomes.

METHODS

The research method uses descriptive correlation to see the factors that influence student learning outcomes. The samples taken were 196 from 402 populations, using a random sampling technique. Random sampling is a type of probability sampling in which everyone in the entire target population has an equal chance of being selected (Candra, 2021). The data collection method in this study is the questionnaire method and the documentation study method. The questionnaire method was used to collect data on school culture, interest in learning, and learning motivation. Meanwhile, the documentation study method was carried out to collect data on students' natural science learning outcomes by taking data on students' natural science learning outcomes from UTS scores in semester I of the 2022/2023 academic year.

The data analysis method used in this study is a simple regression analysis method, multiple regression, and partial correlation. In conducting data analysis, this research was carried out in three stages, namely: 1) data description stage, 2) requirements analysis testing stage, 3) hypothesis testing stage. Univariate analysis aims to explain or describe the characteristics of each research variable (Arikunto, 2013).

RESULTS AND DISCUSSION

Research Results

1) Testing Normality of Data Distribution

The normality test of data distribution is carried out to determine whether the frequency distribution of scores on each variable is normally distributed or not. For this, the Kolmogorov-Smirnov test can be used, with the criteria: if p > 0.05 the distribution of data is normally distributed, otherwise if p < 0.05 the distribution of data is not normal. The calculation is done with the help of a computer through the SPSS program. The normality test results showed that all variables were normally distributed because the sig. value on Kolmogorov-Smirnov > 0.05. This means that the scores of school culture variables, interest in learning, learning motivation and learning outcomes in Science have a normal distribution.

2) Testing the Hypothesis

a. There is a Significant Effect of School Culture on Natural Science Learning Outcomes of Fifth Grade Elementary School Students in Cluster IV Tabanan

The first hypothesis states that there is a significant effect of school culture on the learning outcomes of science in grade V primary school students in Cluster IV of Tabanan District. The results of hypothesis testing can be seen in Table 1.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>JK</th>
<th>dk</th>
<th>RJK</th>
<th>F count</th>
<th>F table α = 0.05</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2799,928</td>
<td>1</td>
<td>2799,928</td>
<td>140,829</td>
<td>3.92</td>
<td>Significant</td>
</tr>
<tr>
<td>Residual</td>
<td>3857,067</td>
<td>194</td>
<td>19,882</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6656,995</td>
<td>195</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptions:

- dk = derajat kebebasan (degrees of freedom)
- Jk = jumlah kuadrat (sum of squares)
- Rjk = rerata jumlah kuadrat (mean sum of squares)
Based on the table above, it can be concluded that $r_{count} = 0.649$. This means that $r_{count} = 0.649$ is significant at $\alpha = 0.05$ ($r_{table} = 0.138$). Thus, the null hypothesis ($H_0$) is rejected. This means "there is a significant influence of school culture on science learning outcomes at fifth grade elementary school students in Cluster IV Tabanan District".

b. There is a Significant Influence of Learning Interest on Science Learning Outcomes of Fifth Grade Elementary Students in Kluster IV Tabanan District

Hypothesis testing is done with simple regression techniques. Testing the significance and linearity of the influence between learning interest and science learning outcomes can be seen in Table 2.

Table 2. Significance and Linearity Test of Regression of Science Learning Outcomes on Learning Interest

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>JK</th>
<th>Dk</th>
<th>RJK</th>
<th>$F_{count}$</th>
<th>$F_{table ; \alpha = 0.05}$</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2954,434</td>
<td>1</td>
<td>2954,434</td>
<td>154,801</td>
<td>3.92</td>
<td>Significant</td>
</tr>
<tr>
<td>Residual</td>
<td>3702,560</td>
<td>194</td>
<td>19,085</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6656,995</td>
<td>195</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptions:
dk = derajat kebebasan (degree of freedom)
Jk = jumlah kuadrat (sum of squares)
Rjk = rerata jumlah kuadrat (mean sum of squares)

Based on the table above, it can be concluded that $r_{count} = 0.666$ is significant at $\alpha = 0.05$ ($r_{table} = 0.138$). Thus, the null hypothesis ($H_0$) is rejected. This means "there is a significant influence of learning interest on the learning outcomes of fifth grade elementary school students in Cluster IV Tabanan District".

c. Terdapat Pengaruh yang Signifikan Motivasi Belajar Terhadap Hasil Belajar IPA Siswa Kelas V SD di Kluster IV Kecamatan Tabanan

Pengujian signifikan dan linieritas pengaruh antara motivasi belajar (X3) dengan hasil belajar IPA (Y), seperti tampak pada tabel 3 berikut.

Tabel 3. Uji Signifikansi dan Kelinieran Regresi Hasil Belajar IPA atas Motivasi Belajar

<table>
<thead>
<tr>
<th>Sumber variasi</th>
<th>JK</th>
<th>dk</th>
<th>RJK</th>
<th>$F_{hitung}$</th>
<th>$F_{table ; \alpha = 0.05}$</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2938,883</td>
<td>1</td>
<td>2938,883</td>
<td>153,342</td>
<td>3.92</td>
<td>Signifikan</td>
</tr>
<tr>
<td>Residual</td>
<td>3718,112</td>
<td>194</td>
<td>19,166</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6656,995</td>
<td>195</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptions:
dk = derajat kebebasan (degree of freedom)
Jk = jumlah kuadrat (sum of squares)
Rjk = rerata jumlah kuadrat (mean sum of squares)

Based on the table above, it can be concluded that $r_{count} = 0.664$ is significant at $\alpha = 0.05$ ($r_{table} = 0.138$). Thus, the null hypothesis ($H_0$) means "there is a significant effect of learning motivation on science learning outcomes of fifth grade elementary school students in Cluster IV Tabanan District".
d. There is a Significant Influence of School Culture, Learning Interest, and Learning Motivation on Science Learning Outcomes of Fifth Grade Elementary Students in Cluster IV Tabanan District

To test this fourth hypothesis, multiple regression and partial correlation techniques were used. The test results are as follows.

Multiple Regression

The results of testing the significance of the multiple regression equation are presented in Table 4.

Table 4. Significance Test of Regression Equation of School Culture, Learning Interest, Learning Motivation on Science Learning Outcomes

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>JK</th>
<th>dk</th>
<th>RJK</th>
<th>F count</th>
<th>F table α = 0.05</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3741,797</td>
<td>3</td>
<td>1247,266</td>
<td>82,147</td>
<td>2,68</td>
<td>Significant</td>
</tr>
<tr>
<td>Residual</td>
<td>2915,198</td>
<td>192</td>
<td>15,183</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6656,995</td>
<td>195</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Descriptions:
dk = derajat kebebasan (degree of freedom)
JK = jumlah kuadrat (sum of squares)
Rjk = rerata jumlah kuadrat (mean sum of squares)

Based on the table above, it can be concluded that the null hypothesis (H0) is rejected.

Partial Correlation

The partial correlation technique used is second-level correlation. This is intended to determine the effect of one independent variable with the dependent variable, by controlling other independent variables. Based on the analysis using SPSS, the results are shown in Table 5.

Table 5. Partial Correlation Test of School Culture Variables, Learning Interest, and Learning Motivation

<table>
<thead>
<tr>
<th>Partial Correlation</th>
<th>Correlation Coefficient</th>
<th>t count</th>
<th>t table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>r_{1y-23}</td>
<td>0.340</td>
<td>5,015</td>
<td>1,980</td>
<td>Significant</td>
</tr>
<tr>
<td>r_{2y-13}</td>
<td>0.256</td>
<td>3,668</td>
<td>1,980</td>
<td>Significant</td>
</tr>
<tr>
<td>r_{3y-12}</td>
<td>0.235</td>
<td>3,354</td>
<td>1,980</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Description:
r_{1y-23} = The correlation between school culture variables and science learning outcomes is controlled by learning interest and learning motivation variables.
r_{2y-13} = The correlation between learning interest variables and science learning outcomes is controlled by school culture and learning motivation variables.
r_{3y-12} = The correlation between learning motivation variables and science learning outcomes is controlled by school culture variables and interest in learning.

Discussion of Research Results

Based on descriptive analysis of school culture category in this study is in the good category. School culture indicators that get the highest score are devotion and faith values, while school culture indicators that get the lowest score are respect for achievement. The indicator of interest in learning that gets the highest score is satisfaction, while the
indicator of interest in learning that gets the lowest score is perseverance. The indicator of learning motivation that gets the highest score is the existence of interesting activities in learning, while the indicator of learning motivation that gets the lowest score is the desire and desire to succeed. The category of science learning outcomes in this study is in the sufficient category.

The Influence of School Culture on Science Learning Outcomes of Fifth Grade Elementary Students in Kluster IV Tabanan District

Based on the research results previously presented, testing the first hypothesis found that there is a significant influence of school culture on science learning outcomes of fifth grade students in elementary schools in Cluster IV Tabanan District, with $F_{reg} = 140.829$ and an influence of 42.1%. The effective contribution of school culture variables to students' science learning outcomes is 20.7%. The findings in this study were also confirmed by research (Amalia, 2020; Amtu dkk., 2020; Putri dkk., 2018) their research concluded that school culture has a significant effect on learning achievement. The results of their research indirectly strengthen the results of this study.

The results of this study indicated that the better the school culture in elementary schools in Cluster IV Tabanan District, the better the science learning outcomes of students in elementary schools in Cluster IV Tabanan District. Therefore, school culture must be considered and always put forward positive values so that the school culture created is as expected, and will also have a positive impact on the quality of education that occurs in primary schools in Cluster IV Tabanan District.

School culture is something that is built from the meeting between the values adopted by all citizens in the school (Karfindo & Mustafa, 2017). This opinion is also reinforced by the opinion (Murti, 2021), which states that school culture is a pattern of values, principles, traditions and habits formed in the long journey of the school, developed by the school over a long period of time and become a guide and believed by all school members so as to encourage the emergence of attitudes and behaviour of school members.

School culture values are built by the thoughts of school members in the school, which then appear in various symbols and actions that can be observed and felt in daily school life. The existence of positive habits such as the school literacy movement, disciplinary attitudes in learning activities, these habits will cultivate in students and later will be able to form a school culture. A good school culture will make it possible to increase student interest and motivation to learn which in turn can improve student learning outcomes.

Furthermore, (Pratama dkk., 2022) also suggested the importance of school culture. As an organization, schools must have: (1) competence to live, grow and develop and adapt to various existing environments, and (2) integration in the school environment that allows the school to produce individuals who have positive traits. Therefore, an organisation, including a school, must have a pattern of basic assumptions held by all school members.

The Influence of Learning Interest on Science Learning Outcomes of Fifth Grade Elementary Students in Cluster IV Tabanan District

Based on the results of the research previously presented, testing the second hypothesis found that there was a significant influence on learning interest on the science learning outcomes of fifth grade students in elementary schools in Cluster IV Tabanan District, with an influence of 44.4%. The effective contribution of the learning interest variable to students' science learning outcomes

Gusti Ayu Agung Purnadewi | school culture, interest in learning, motivation to learn, science learning outcomes

Pages | 789
is 18.5%. The findings in this study are also reinforced by research (Herpratiwi & Tohir, 2022; Nugroho dkk., 2020; Prastika, 2020; Silfitrah & Mailili, 2020). In their research, they concluded that interest in learning had a significant effect on student learning outcomes, but the learning outcomes they studied were mathematics learning outcomes. The results of their research indirectly strengthen the results of this study. These results indicate that the better students’ interest in learning, the better the science learning outcomes of students in elementary schools in Cluster IV Tabanan District. Therefore, teachers must pay attention to the student interest factor in the learning process.

Interest is an interest or liking that arises in an individual that will affect success in the learning process. If students have an interest in a lesson, then they will pay attention to the subject and be enthusiastic in learning. Students will be actively involved in learning, and more easily understand the lesson so that it will improve their learning outcomes. This opinion is in accordance with the opinion (Sri, 2015) which states that students who are interested in a subject will have higher attention. Interest serves as a strong driver to be actively involved in teaching and learning activities. Therefore, a teacher must pay attention to student learning interests in the learning process. Conveyed several steps to increase interest in learning including arousing children's sense of need for the importance of learning (Hapsari, 2014). Strategies in arousing the need to learn can be done by building dialogue and personal approaches, developing conducive communication with children. In this context, parents or teachers should not be present to intervene or dictate but are present to provide support and interest in being on the right track as a learner.

A teacher should be able to create an interesting and fun learning atmosphere so that students are active in the learning process, such as the use of media or learning models that can train students’ scientific thinking skills. With this, students can feel happy, get satisfaction from learning and can improve their learning outcomes.

The Influence of Learning Motivation on Science Learning Outcomes of Fifth Grade Elementary Students in Cluster IV Tabanan District

Based on the research results previously presented, testing the third hypothesis found that there was a significant influence of learning motivation on the science learning outcomes of fifth grade students in elementary schools in Cluster IV Tabanan District, with F_{reg} = 153.342 with an influence of 44.1%. The effective contribution of learning motivation variables to students’ science learning outcomes is 17%. The findings in this study are also reinforced by research (Amalia, 2020; Amtu dkk., 2020; Silfitrah & Mailili, 2020). In their research, they concluded that learning motivation has a significant effect on student learning outcomes. The results of their research indirectly strengthen the results of this study. These results indicate that the better the motivation of students to learn, the better the science learning outcomes of students in elementary schools in Cluster IV Tabanan District. Therefore, student learning motivation in the classroom must be able to be grown and developed by teachers in learning activities, because learning motivation will greatly affect the quality of student learning. This is in line with the opinion (Herpratiwi & Tohir, 2022), which states that motivation and learning are two things that influence each other. This means that motivation affects learning, on the other hand learning also affects motivation.

Learning motivation is a supporting factor that can optimise students’ ability to achieve learning outcomes (Marisa, 2020).
Students who have high learning motivation in the learning process will certainly be more focused and enthusiastic in learning, rather than students who have low learning motivation. Student learning motivation must be fostered by a teacher through various innovative learning methods for students, so that student learning outcomes can be improved properly.

Furthermore (Rubiyanto & Clara, 2019) also revealed the characteristics of learning motivation in a person, namely: 1) persevere in facing tasks (can work continuously for a long time, never stops before finishing), 2) resilient in facing difficulties (not easily discouraged) does not require external encouragement to perform as well as possible (not quickly satisfied with the achievements he has achieved), 3) show interest in various problems, 4) prefer to work independently, 5) get bored quickly on routine tasks (things that are mechanical, repetitive so that they are less creative), 6) can defend his opinion, 7) does not easily let go of what he believes, and 8) likes to find and solve problem problems.

If students have the characteristics as above, then the student will have a strong enough motivation. Students who have been motivated will have the desire and hope to succeed, and if they fail, the student will try his best to be able to achieve success which is shown in the learning outcomes. With diligent effort and based on strong motivation, it will produce good learning results.

Together, the Influence of School Culture, Learning Interest, and Learning Motivation on Science Learning Outcomes of Fifth Grade Elementary Students in Cluster IV Tabanan District

Based on the research results previously presented, testing the fourth hypothesis found that together, there is a significant influence of school culture, interest in learning, learning motivation on the science learning outcomes of fifth grade students in elementary schools in Cluster IV Tabanan District, with $F_{reg} = 82.147$ and an influence of 56.2%. Learning outcomes are all abilities that students have after students follow the learning process. Learning outcomes are obtained at the end of learning which shows students’ ability to understand a lesson content (Maliki & Erwinsyah, 2020). The good and bad of student learning outcomes at school is certainly influenced by various factors. The three factors proven in this study to affect student learning outcomes are school culture, learning interest, and student learning motivation.

School culture is the atmosphere of school life that is built from the meeting between the values adopted by all elements and components of the school including education stakeholders. School culture is a system of values, beliefs and norms that are accepted together, and implemented with full awareness as natural behavior, which is formed by an environment that creates a common understanding among all elements and school personnel.

If the school culture supports the learning process, the school community will work together to try to achieve learning goals together. One example is that by carrying out the learning process using various media and innovative learning (Mudia Altidkk., 2020). This will certainly increase students’ interest and motivation to learn, so that student learning outcomes can be achieved optimally.

CONCLUSION

The conclusions that can be drawn based on the research that has been conducted are as follows:

1) There is a significant influence of school culture on the science learning outcomes of fifth grade elementary school students
in Cluster IV Tabanan District in the 2022/2023 school year.

2) There is a significant influence of learning interest on the science learning outcomes of fifth grade elementary school students in Cluster IV of Tabanan District in the academic year 2022/2023.

3) There is a significant effect of learning motivation on the science learning outcomes of fifth grade elementary school students in Cluster IV Tabanan District in the academic year 2022/2023.

4) Together, there is a significant influence of school culture, interest in learning, and motivation to learn on the science learning outcomes of fifth grade elementary school students in Cluster IV of Tabanan District in the academic year 2022/2023.

Suggestions

Based on the research that has been conducted, the following suggestions can be made.

1) To teachers, it is recommended that the results of this study be used as insight into the influence of school culture, learning interest and learning motivation on science learning outcomes, and can get to know students better and motivate students in learning which can ultimately foster interest and motivation to learn to students and always get used to a positive school culture, and teachers are expected to use various methods in learning, use learning media as optimally as possible, try to make the classroom atmosphere as active as possible, hold competitions for students so that students become enthusiastic in learning, and carry out evaluations periodically and as objectively as possible so as to optimize science learning in the classroom.

2) To the principal, it is suggested that he can use the results of this study as a supporting learning resource for teachers in the school, in order to improve the quality of learning by fostering a positive school culture, fostering interest and motivation to learn to students so that they can produce quality students.

3) To the parents of students, it is suggested that they can better understand and support their children in learning so that their interest and motivation to learn will grow, besides that from an early age parents must know the learning style of their children so that children feel comfortable when learning, and can improve the achievement of their knowledge competencies.

4) To other researchers it is suggested that the results of this study can be used as a reference for conducting further research and are useful for all researchers who need reference.

REFERENCES


http://inilislite.undiksha.ac.id/opac/deta il-opac?id=14692

https://www.google.co.id/books/editio n/Pengantar_Metodologi_Penelitian?v SFCEAAAQBAJ?hl=en&gbpv=1&dq =arikunto&pg=PA193&printsec=front cover

https://books.google.co.id/books?hl=en &lr=&id=txMDwAAQBAJ&oi=fnd&pg=PP1&q=Percaya+diri+itu+penting&ots=0UE 1a40m-w&sig=z-rZPFGBY2b3Fwqojr9xmN4LINA&redir_esc=y#v=onepage&q=Percaya%20 diri%20itu%20penting&f=false


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