

## **Effects of Online and Offline Learning and Interest Learning on Learning Outcomes**

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### **Abstract**

The purpose of this study was to find out the differences in (1) the results of online and offline learning in Class V students, (2) the learning outcomes of students with high and low interest in Class V students and, (3) the interaction between online and offline learning and learning interest on student learning outcomes. This study used an experiment where the research group was divided into two classes, namely online learning classes and offline learning combined with students who had high, medium and low interest. Data collection techniques through questionnaires and tests, where the population and sample used were fifth grade students of 66 students. This study used the 2-way Anova data analysis technique. Based on the calculation of the 2-way analysis obtained: (1) There is a significant difference between online learning and offline learning on student learning outcomes, (2) there is a significant difference in learning interest on student outcomes, and (3) There is a significant interaction between online learning and offline learning and interest in learning on student learning outcomes. Based on the results of this study, it was concluded that online learning and learning interest in student outcomes can improve student learning outcomes.

**Keywords:** Online, Offline, Interest In Learning, Learning Outcomes

### **Abstrak**

Tujuan penelitian ini adalah untuk mengetahui perbedaan (1) hasil belajar online dan offline siswa kelas V, (2) hasil belajar siswa minat tinggi dan rendah pada siswa kelas V dan, (3) perbedaan interaksi antara pembelajaran online dan offline dan minat belajar terhadap hasil belajar siswa. Penelitian ini menggunakan eksperimen dimana kelompok penelitian dibagi menjadi dua kelas yaitu kelas pembelajaran online dan pembelajaran offline yang dipadukan dengan siswa yang memiliki minat tinggi, sedang dan rendah. Teknik pengumpulan data melalui angket dan tes, dimana populasi dan sampel yang digunakan adalah siswa kelas V sebanyak 66 siswa. Penelitian ini menggunakan teknik analisis data Anova 2 jalur. Berdasarkan perhitungan analisis 2 arah diperoleh: (1) Terdapat perbedaan yang signifikan antara pembelajaran daring dan pembelajaran luring terhadap hasil belajar siswa, (2) Terdapat perbedaan minat belajar yang signifikan terhadap hasil belajar siswa, dan (3) Terdapat interaksi yang signifikan antara pembelajaran online dan pembelajaran offline dan minat belajar terhadap hasil belajar siswa. Berdasarkan hasil penelitian ini disimpulkan bahwa pembelajaran online dan minat belajar terhadap hasil belajar siswa dapat meningkatkan hasil belajar siswa.

**Kata Kunci:** Online, Offline, Minat Belajar, Hasil Belajar

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## **INTRODUCTION**

In order for students to study well, a teacher needs to prepare various tools that can encourage student motivation and interest in learning, such as the use of appropriate and interesting learning media, active involvement in learning and the teacher's appreciation of the learning outcomes that have been obtained. In addition, students can study well when the teacher can avoid or solve problems related to their learning activities.

In teaching and learning activities the following problems often arise. (1) teaching and learning activities that are still teacher-centered, where most of the learning time is still dominated by

the activities of conveying knowledge by the teacher, while students are "forced" to pay attention and accept it, so that teaching and learning activities are less interesting, (2) learning materials are abstract-theoretical -academic, less related to the daily problems students face in the family, community, natural surroundings and world of work, (3) Assessment is only carried out with tests that emphasize knowledge, do not assess the quality and learning abilities of authentic students in authentic situations (S. Purnamasari et al., 2022; Syahmi et al., 2022; Wityastuti et al., 2022). From this problem, basically the teacher is still the only source of learning for students, so that in the context of modern education they are less able to improve students' abilities, understanding and learning outcomes. This certainly requires handling and changes so that the above problems can be overcome. Handling can be done by the teacher by designing interesting learning so that students' interest in learning grows. changes are also needed for students to be more active and involved in teaching and learning activities so that there is synergy between teachers and students in achieving learning goals. One of the lessons that allows for synergy between teachers and students is using learning media (Juanda & Hendriyani, 2022; Nita Yunitasari et al., 2022; Wityastuti et al., 2022). (S. Purnamasari et al., 2022; Rahmawati et al., 2022; Syahmi et al., 2022) revealed that learning media is an important part of the learning process. the notion of media in the teaching and learning process tends to be interpreted as graphic, photographic, or electronic tools for capturing, processing, and rearranging visual or verbal information. Furthermore, (Juanda & Hendriyani, 2022; Nita Yunitasari et al., 2022; Wityastuti et al., 2022) concluded that learning media are anything that can be used to channel messages from sender to receiver so as to stimulate thoughts, feelings, attention and the interest and willingness of students in such a way that the learning process occurs in order to achieve learning objectives effectively.

## **METHODS**

This study used an experimental design method by giving different treatments to the two sample groups, conditioning them to be homogeneous. Where there will be two groups, namely the control group and the experimental group. One of the sample groups was given treatment in the form of applying online learning. Meanwhile, the group that applies offline learning (offline). After the two class groups were divided into two parts, the control and experimental classes, then each group was divided into two, the control group and the experimental group were divided into two, namely those with high interest and low interest. Data collection techniques refer to a method, the form of which is shown in its use in collecting data using questionnaires, interviews, observations, tests, documentation and so on. The instruments used to collect data in this study were tests and questionnaires. While the requirements to be a good instrument, the validity and reliability of tests and questionnaires must be tested. In carrying out calculations on the data obtained, the researcher will then use the SPSS for windows program which will speed up the calculations and be more accurate in the calculations because the formula has been computerized so the possibility of error is smaller.

## RESULTS AND DISCUSSION

After carrying out the learning process in each class, where class V-A will use offline learning and online learning which is applied to class V-B in Elementary School (SD). In addition, at the beginning before learning is carried out, students are given a questionnaire whose function is to identify students' learning interests. In this study identified students' interest in learning where there were three predetermined criteria of interest in learning, namely high learning interest, moderate learning interest and low learning interest.

Based on the questionnaire that had been distributed, three learning interests were obtained from each class, although the number of students who had certain learning interests had not the same number of types of learning interests so that the research focus remained on the three predetermined learning interest criteria. High learning interest is a high learning interest that is owned by students where students carry out activities that have been determined in the questionnaire and have a tendency to agree with the statements specified in the questionnaire with a minimum score of above 57 or with a percentage value of 75%. Meanwhile, moderate learning interest is an interest in learning that is owned by students who are in the questionnaire value range between 37 to 56, meaning that the activities carried out by students or students agreeing with the statements set out in the questionnaire are in the range of 50% to 75%. Meanwhile, low learning interest is an interest in learning that is owned by students where students do not agree that they have carried out activities as specified in the questionnaire or do not agree with the statements specified in the questionnaire, which is less than 50%.

The descriptive results of the classes involved in this study are as follows.

Table 1. Descriptive Statistics

### Descriptive Statistics

Dependent Variable: Nilai-Posttest

Pembelajaran	Minat	Mean	Std. Deviation	N
Kelas Daring	Tinggi	80.3846	6.91060	13
	Sedang	78.0556	4.89264	18
	Rendah	72.5000	3.53553	2
	Total	78.6364	5.89925	33
Kelas Luring	Tinggi	87.5000	4.47214	16
	Sedang	78.9286	2.12908	14
	Rendah	78.3333	5.77350	3
	Total	83.0303	5.71995	33
Total	Tinggi	84.3103	6.64457	29
	Sedang	78.4375	3.90151	32
	Rendah	76.0000	5.47723	5
	Total	80.8333	6.17584	66

Based on the table it can be explained that the students involved in this study were two classes, namely class V-A and class V-B in elementary school (SD) with a total of 66 students, where

in the implementation of this study the sample was the entire population so that this research is also known as with total sampling, so that the samples are class V-A and class V-B. The learning implementation applied to class V-A is using offline and class V-B is using online.

The table above explains that applied offline learning and online learning can improve student learning outcomes, as indicated by the final learning outcomes obtained by students. For class V-A, in general, there was a significant increase where at the beginning of learning it had an average of 75.33 while at the end of learning the learning outcomes obtained were 83.03. large, which at the beginning of learning has an average of 74.97 while at the end of learning the learning outcomes obtained are 78.64 The table above also describes the number of students in class V-A who have high learning interest, moderate learning interest and low learning interest, namely students with high learning interest totaled 16 students with an average score of 87.50, students with moderate learning interest totaled 14 students with an average score of 78.93, while students with low learning interest totaled 3 students with an average score of 78.33, Likewise with class V-B which has a high learning interest, moderate learning interest and learning interest r is low, namely students with high learning interest totaling 13 students with an average score of 80.38, students with moderate learning interest totaling 18 students with an average score of 78.03, while students with low learning interest totaling 2 students with the average value is 72.50.

Based on observations and calculation results it is known that in offline learning there are more students who have a high learning interest and have a better average score when compared to those who apply online learning where students who have a high learning interest are fewer than students who are interested in learning moderate and the average value of students is dominated by moderate learning interest, has an average value that tends to be the same as students who have moderate or low learning interest. And overall, students who are the research sample are more likely to have a moderate interest in learning in the two classes that apply offline learning and online learning.

Based on the table above, it can be explained that in general differences occur between the application of offline learning and the application of online learning, both for students who have a high learning interest or students who have a moderate learning interest. Based on the results of these descriptive calculations it can be explained that there are differences in student learning outcomes between students who are taught using offline learning and those taught using online learning for students who are interested in learning high, students who are interested in learning moderate and students who are interested in learning moderate even to see these differences significant or not significant needed evidence with statistical calculations.

With regard to the 2 factor analysis of variance carried out can be seen in the following table.

Table 2. 2 Factor Analysis Of Variance Carried

## Tests of Between-Subjects Effects

Dependent Variable: Nilai-Posttest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1061.050 <sup>a</sup>	5	212.210	8.979	.000
Intercept	205768.958	1	205768.958	8706.010	.000
Faktor_A	173.714	1	173.714	7.350	.009
Faktor_B	589.094	2	294.547	12.462	.000
Faktor_A * Faktor_B	150.648	2	75.324	3.187	.048
Error	1418.117	60	23.635		
Total	433725.000	66			
Corrected Total	2479.167	65			

a. R Squared = ,428 (Adjusted R Squared = ,380)

Based on the table above it can be explained with regard to factor 1 (learning), factor 2 (interest in learning) and Factors 1 and Factor 2 which are interactions between the application of offline learning and online learning and interest in learning with the following results.

1. 1. The value of FA (learning application) = 7.350 with a significance value smaller than  $\alpha < 0.05$ , namely 0.009, with  $df_1 = 1$  and  $df_2 = 65$  obtained the value of F table = 4.02 so that it can be explained that  $F_{count} > F_{table}$ , this means that there are differences in the learning outcomes of fifth grade students between those taught using offline learning and those taught using online learning in elementary schools (SD).
2. FB value (Factor 2/student learning interest) = 12.462, with a significance value smaller than  $\alpha < 0.05$ , namely 0.000, with  $df_1 = 2$  and  $df_2 = 65$  obtained F table value = 3.15 so it can be explained that  $F_{count} > F_{table}$ , meaning that there is a difference in the learning outcomes of fifth grade students between students who have a high learning interest, students who have a moderate learning interest and students who have a low learning interest in elementary school (SD).
3. The FAB value (factors A and B) obtained a calculated F value of 3.187 with a significant level of 0.048, comparison with F table and a significant level of  $\alpha = 0.05$ ; ( $3.187 > 3.15$ ), so that it can be explained that there is an effect of the use of offline learning models and online learning on student learning outcomes in terms of the learning interests of different students in elementary schools (SD).

Based on the results of research and calculations carried out using analysis of variance of the 2 factors, it can be explained that in general it is related to the hypotheses that have been given before. Based on these calculations it can be explained that all hypotheses can be accepted based on calculations using two-way analysis of variance. In detail, with respect to the hypothesis that has been put forward it can be explained that in this study there are differences in student learning outcomes caused by the use of offline learning and online learning in students with high learning interest, moderate learning interest and low learning interest, so that there is an interaction between the use of

the method learning that is applied to student learning outcomes. Where in this study, the use of offline learning was more able to improve student learning outcomes compared to the use of online learning. In addition, students with high learning interest also have better learning outcomes compared to students who have moderate learning interest and/or students who have low learning interest.

### ***Discussion***

Based on the results of the research, data presentation, and data analysis on the effect of using offline learning models and online learning on student learning outcomes in terms of different student learning interests, it can be analyzed and interpreted as follows.

### **Application of Online and Offline Learning**

At the beginning of learning the learning outcomes of class V students, namely class V-A and class V-B, have learning outcomes that can be said to be the same, indicated by the student learning outcomes or test scores that are not much different, namely around a value of 75. This means that these two samples meet the criteria as a sample research where the data owned by both are homogeneous so that the results of the implementation of offline learning and online learning can be a comparison in order to find out student learning outcomes. After implementing offline learning and online learning in each class according to the research stages, the results showed an increase in student learning outcomes through the application of this learning. This is shown by the results of descriptive calculations of each application of learning that was applied before and after the application of this learning, where it was found that classes taught using offline learning had better student learning outcomes compared to classes taught using online learning.

In general, the application of offline learning and online learning is very dependent on the time of implementation and students' interest in learning. The increase in student learning outcomes based on the results of calculations is quite different between the beginning of learning and after learning is treated. In addition, regarding learning outcomes between offline learning and online learning it can be said to be significantly different because it is proven by the average difference test where the significance value is below 0.05, so it can be explained that the student learning outcomes obtained by students in the two groups are means (the difference cannot be ignored), meaning that there are differences in learning outcomes from the implementation of offline learning and online learning.

Based on the calculations, it was found that FA (F calculated for the learning application factor) showed that the FA calculated was greater than F table, meaning that the use of learning applied in class in this study had differences in learning outcomes, between classes that applied offline learning and online learning. This explains that student learning outcomes are influenced by the implementation of learning applied by teachers in class either offline or online. The results of these calculations show that basically student learning outcomes are influenced by the implementation or application of learning so that the proposed hypothesis can be accepted, that is, there are differences in online and offline learning outcomes for Class V students in Elementary School (SD).

In general, the implementation of offline learning in the classroom obtains better learning outcomes when compared to online learning. Offline learning obtains better learning outcomes where in the teaching and learning process in class, the teacher has been able to plan and implement them properly. In offline learning, there are several things that are positive values that the teacher is able to carry out offline learning by collaborating with existing learning media so that students are interested in learning. In addition, offline learning is carried out far from conventional words, where teachers apply offline learning by actively involving students, such as discussions, group activities and encouraging students to discover and understand material independently. In this offline learning, the teacher acts as a facilitator who facilitates students to learn more systematically (Azari & Syafrini, 2021; Sari, 2021; Yoga Mauludy Afarizi Lutfiansyah & Agatha Kristi Pramudika Sari, 2021).

In contrast to the implementation of online learning, where there are several obstacles so that students experience difficulties in the teaching and learning process, because in online learning in this study, students tend to be passive and have limited facilities and are not supported by a stable network so there are several obstacles. Ideally, in implementing online learning, the teacher combines learning with multimedia so that it can encourage students' interest in learning to be better, carrying out a learning process that combines various ways of learning, and by using various media from technology (Eka p, 2021; R. Purnamasari et al. , 2021; Putri et al., 2021).

In this lesson, the teacher uses the network to encourage students to study independently and to find more learning resources. Students who carry out learning activities independently will prepare themselves better, by reading the material before the implementation of learning, adding other learning resources. In addition, through online teachers can use various learning methods and strategies that they feel are suitable for the class being taught so that they will be more liked and encourage student learning interest (Badriyah et al., 2021; Dhamayanti et al., 2021; Purnawinadi, 2021) .

This study obtained that offline learning activities were better than online learning. However, when observed and viewed from the side of the process, the two learning processes have their respective advantages and disadvantages. This is in line with what was conveyed by Petta Solong (2021) The results of the study and discussion show that there are different management between offline and offline learning both in terms of methods, media and learning processes which complement each other in achieving basic competencies. Learning management, both offline and online, supports each other in achieving basic competencies according to the curriculum because each has not been fully achieved. In addition, the results of research from (Khasannah & Nurrochmah, 2021; Nengrum et al., 2021; Thessalonika et al., 2021) state that there are several obstacles in the implementation but they can be resolved properly by the teacher in order to educate students. Both online and offline learning systems are expected by teachers to be creative in educating students, so that learning success can be achieved properly or effectively. This research provides information that

teachers actually prefer offline learning where they can interact with students, and also students prefer offline learning with face-to-face.

### **Differences in Student Learning Outcomes with Different Learning Interests**

In the research conducted regarding students' interest in learning, it was found that there were differences in the learning outcomes of fifth grade students in elementary school (SD) which were divided into three criteria, namely students who had a high learning interest compared to those who had moderate learning interest, between groups of learning interest and group of low learning interest and between groups of medium learning interest and low learning interest. In the application of offline students are dominated by students who have a moderate interest in learning, this student's moderate learning interest can be seen from their tendency to learn. Students' interest in learning, whether it is high learning interest, moderate learning interest or low learning interest, is identified in a questionnaire that has been filled out by students where by giving answers to predetermined statements or questions, the total value of the students' interest will be obtained. The total score obtained from each student illustrates student interest in learning, where students with a total questionnaire score of more than 56 will be categorized as students who have a high learning interest, the total score of the questionnaire between 37 to 56 will be categorized as students who have moderate learning interest, and students will be categorized as having low interest in learning if they have a total questionnaire score of less than 37.

Based on the calculation of the average difference test on students' learning interest, a significance value of less than 0.05 is obtained, indicating that there is a significant difference in student learning outcomes between those with high learning interest and students who have moderate learning interest so that it can be explained that student learning outcomes are significantly different between those who have high learning interest and moderate learning interest.

Based on the calculation of the average difference test with a significance value of less than 0.05, it was found that there was a difference in student learning outcomes between those who had a high learning interest and students who had a low learning interest so that it could be explained that student learning outcomes were significantly different between those who had an interest in learning high and medium learning interest. While the calculation of the average different test with a significance value of more than 0.05 was obtained on student learning outcomes between those who have moderate learning interest and students who have low learning interest so that it can be explained that student learning outcomes are not significantly different between those who have learning interest moderate and low interest in learning. And the average difference in learning outcomes is for students who have moderate learning interest with low learning interest, while the second difference is high learning interest with low learning interest, which then is the difference between high learning interest and moderate learning interest which has the smallest difference. However, all the differences in the three learning interests were significantly different, except for students with medium learning interest and low learning interest. However, in general, based on the



calculation of the 2-factor analysis of variance, the FB value (factor of learning interest) is calculated which is greater than the F table, meaning that there is a difference in the learning outcomes of fifth grade students between those who have high learning interest, moderate learning interest and low learning interest at school. Elementary (SD). This explains that in the teaching and learning process, students' interest in learning has an impact or influence on their learning outcomes. This is of course related to the material being taught and the learning methods used by the teacher. In addition, the learning activities owned by students are an indicator that students are interested in participating in learning and want better learning outcomes.

The learning interest that students have will have an influence and impact on student learning outcomes where it can be explained that students with high learning interest will have a feeling of pleasure when participating in learning, will be enthusiastic and some will record important things about the material being discussed or studied (Prasetyo et al., 2021; Wiradarma et al., 2021; Wulansari & Manoy, 2021). Students with high interest will also be reflected in learning activities both in class and outside the classroom, where students will be active in the teaching and learning process, ask the teacher if there are things that have not been understood and try their best to complete the tasks assigned to them so that they can indirectly students read more, discuss and study material and understand many things so that the possibility of solving problems is higher when compared to students who have moderate learning interest or students who have low learning interest. In the end, students with high learning interest will have better learning outcomes when compared to students who have moderate or low learning interest.

Based on the description above, it can be explained that the second hypothesis can be accepted, meaning that there are differences in student learning outcomes between those who have high learning interest, moderate learning interest and low learning interest.

### **Learning Interaction and Learning Interest**

Based on the 2-factor analysis of variance, the calculated FAB value  $>$  F table, with a significance level of less than 0.05 (5%) so that it can be explained that there is an influence and interaction between the use of offline learning models and online learning on student learning outcomes in terms of student learning interest. different. Based on the results of the study, it can be described that there is an increase in student learning outcomes in each use of learning either by using offline learning or by using online learning. Students who are taught using offline learning have better student learning outcomes than students who are taught using online learning. In addition, students who have a high learning interest and are currently dominating students who are taught using offline learning. Likewise with online learning, which is dominated by students with high and medium learning interest. While higher learning outcomes are obtained by classes that apply offline learning. However, the difference between students who have moderate learning interest and low learning interest is not too big, and tends to be small. This means that in both offline and online learning classes, learning outcomes are influenced by students' interest in learning.

Basically, the increase in learning outcomes that occur in each lesson cannot be separated from the stages of learning that are carried out well by the teacher. Whereas with regard to offline learning which obtains better learning results because in its implementation, the teacher uses learning media so that it can stimulate students to be involved in the teaching and learning process. As stated (Barokah et al., 2022; Nurbani & Puspitasari, 2022; Zahwa & Syafi'i, 2022) that media is a type of component in the student environment that can stimulate them to learn. In online learning, students with a high learning interest obtain better learning outcomes compared to students with a lower learning interest. This also explains that basically online learning by utilizing various media can improve student learning outcomes.

The fundamental difference between online learning activities and offline learning lies in the use of learning tools or media. Online is carried out online (without face to face) while offline is carried out face to face. Online learning ensures that it requires media (network) in its implementation, while offline learning can ignore the network because the implementation is carried out face-to-face (Khasannah & Nurrochmah, 2021; Nengrum et al., 2021; Petta Solong, 2021). The biggest obstacle in this research is that online learning is carried out less than ideally where the network is less stable so that it also has an impact on student learning outcomes as a whole. While the relationship with interest in learning can be explained that interest is a feeling of pleasure or displeasure towards an object. Interest has a great influence on learning or activities. Even lessons that interest students will be easier to learn and save because interest adds to learning activities to increase one's interest in receiving lessons at school. Students' interest in learning is one of the factors that can influence their learning outcomes. if someone has a high interest in something, then he will continue to try to do it, so that what he wants can be achieved according to his wishes (Nurhasanah & Sobandi, 2016; Rusmiati, 2017; Yanti & Sumianto, 2021).

With the advantages and characteristics of offline learning combined with the use of learning media it will give the impression and interest of students in learning, so that students are able to understand the subject matter well because they are involved and learn actively and independently in activities and provide more time to study it. Thus, students will be able to solve the problems being faced in the topic being discussed.

Based on the description above, it can be explained that the third hypothesis can be accepted, namely that there is an interaction between online and offline learning and learning interest on student learning outcomes in elementary schools (SD).

## **CONCLUSION**

From research conducted on student learning outcomes using online and offline learning and learning interest on learning outcomes, the distribution of questionnaires and data analysis obtained that: (1) There is a difference between online learning and offline learning on student learning outcomes, (2) there is differences in learning interest in student outcomes, and (3) there is interaction

between online learning and offline learning and learning interest in student learning outcomes. Based on the results of this study, it was concluded that online learning and learning interest in student outcomes can improve student learning outcomes.

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