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Implementation of Problem Based Learning Model Assisted by Video Media in Science Learning for Grade IV Elementary School Students

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Abstract

Every human being has the same right to education and hopes to always thrive in education. This study aims to determine the achievement of social studies learning outcomes of grade IV students of SD Negeri 46 Lubuklinggau after the implementation of the Problem Based Learning (PBL) learning model assisted by Vidio media. This study uses a Quantitative Approach with an experimental research method in the form of One Group Pre-test Pos-test design. The subjects in this study are grade IV students of SD Negeri 46 Lubuklinggau for the 2025/2026 school year. The results showed that the average score of the Pre-test was 28 with a standard deviation of 6.14 while the average score of the Post-test was 80.54 with a standard deviation of 5.18. The normalistic test showed that the pre-test data and the post-test data were mormalally distributed because the value χ_(count)^2 was less than χ_(table)^2 which was 1.3173 < 11.07. Furthermore, the analysis using the t-test at a significant level of α= 0.05 showed that t_(calculate=)7.11> t_tabel = 1.64 so that H_oditolak and H_a were accepted. Thus, it can be concluded that the application of the Problem Based Learning learning model assisted by Video Media can significantly improve the learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklinggau and achieve learning completeness with a score category of ≥ 73.

Keywords Elementary School Students, Problem Based Learning, Social Science Learning Outcomes, Video.

INTRODUCTION

Every human being has the same right to education and hopes to always thrive in education. Through education one can gain extensive knowledge. Education is also a complex business. Through education, it can improve the quality of human resources, with the quality of existing resources, humans will try to develop their potential, and change behavior for the better. In addition, education can also mold humans into reliable and skilled human resources in their fields.

In the educational process in schools, learning activities are the most important activities. The success or failure of educational goals depends on how the learning process is experienced

by students. In learning activities, teachers are the main center of education, which means that teachers are required to be able to channel their knowledge to students through learning activities. According to Sutianah (2021:1) learning itself is defined as a process of changing behavior as a result of interaction with the environment in meeting their life needs.

Learning in elementary school is expected to be carried out in a fun, challenging, motivating way for students and able to improve achievement and can develop cognitive abilities in students. According to Suwarno (2022: 41), cognitive ability is the basis for a child's ability to think. So cognitive processes are related to the level of intelligence that marks a person with various interests, especially aimed at learning ideas. Therefore, the role of students in learning must also be realized in the subject of Natural and Social Sciences (IPAS).

Based on the observations made by the author in grade IV of SD Negeri 46 Lubuklinggau on September 30, 2025, through an interview with grade IV teachers with Mrs. Rusmala Dewi, S.Pd that in learning students are less enthusiastic due to the lack of use of varied learning models, then many students are sleepy and not enthusiastic during the learning process that takes place so that it has an impact on low student learning outcomes. The low learning outcomes of students are due to the inability of students to follow the learning that takes place.

The implementation of learning carried out by teachers has an impact on student learning outcomes that are still low and below the average KKTP set by the school, which is 73. The percentage achieved was 34% as many as 15 students out of 44 students and the percentage of students who had not been achieved was 66% or 29 students out of a total of 44 students. Based on the percentage above, the learning process at SD Negeri 46 Lubuklinggau must be really paid attention to by the school, in order to maximize and minimize the problems that occur.

Based on the problems that have been explained, to overcome the above problems, teachers must be more effective and must use the right model in IPAS learning that is in accordance with the basic competencies in IPAS learning. In Luthfi's (2025:41) opinion, Problem Based Learning is a learning model that places real problems as the starting point of the learning process. In the Problem Based Learning model, students are expected to be in actual situations that require them to improve their problem-solving and critical thinking skills, while learning the basic concepts of the subjects studied, this way allows the teacher to know what the students already know and understand before explaining what the teacher teaches so that the model can be applied to IPAS learning. This model aims to develop students' activeness in solving problems, students are placed as learning subjects, the role of teachers is a supervisor in the learning process and a facilitator in learning.

Student learning outcomes are one of the benchmarks for success in the world of education. According to Syofyan (2023:2), learning outcomes are a form of applying a person's abilities, both behavior and other things that are basically obtained from learning activities and have been measured through learning outcome tests. The learning outcomes achieved by students have different levels as expected, so it is necessary to pay attention to the learning model that is in accordance with the learning objectives that are expected to be achieved. In

the learning process, it is very necessary to have a varied learning model in order to activate students in the learning process and the learning model used makes students not saturated in the learning process. One of the learning models that can be used is the Problem Based Learning (PBL) learning model.

This Problem Based Learning (PBL) learning model is very suitable for learning the diversity of ethnicities, ethnicities, nations and religions where students are given concrete problems first through learning videos and then solved the problem together through group learning videos, so that learning will be more fun and attract students' interest so that the learning process is no longer monotonous.

The Problem Based Learning (PBL) learning model, according to Luthfi (2025: 16) the Problem Based Learning model is a learning model that applies a pattern of giving problems or cases to students to solve which confronts students with a real problem that aims to provide opportunities for students to be active in building themselves through the problem-solving process. The Problem Based Learning (PBL) learning model can be used as a way of delivering learning materials because this learning model is able to make students be active and not bored in receiving learning. The Problem Based Learning (PBL) learning model can be applied to science subjects. Video media According to the Opinion of Rahayu (2024:37) The word video comes from the Latin word meaning "I see." All electronic media formats that use moving images to convey messages can be called video. Video is a moving image that is recorded on a tape or CD that each of the shapes is different in size, the work, the most commonly used video formats are videotape, DVD, Videodisc, and internet video, video media.

The material on Topic A of Ethnicity, Ethnicity, Ethnicity/Religion, is in Chapter 6 "Indonesiaku Kaya Budaya" in Grade IV Material on Learning Outcomes (IPAS Understanding) of Students to Understand the Ethnic/Ethnic and Religious Diversity in the Independent Curriculum. Teachers have difficulty in applying the material because students feel bored because learning is presented in the usual way so that many students do not understand what is explained, in the description above it can be said that the use of learning models can optimize the learning process, especially in science learning.

Based on the problems that have been described in the background above, it is necessary to conduct a research with the title "The Application of the Problem Based Learning (PBL) Learning Model with the Help of Video Media in the Learning of Science Students in Grade IV of SD Negeri 46 Lubuklinggau". Based on the formulation of the problem, the purpose of this study is "To determine the achievement of the learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklinggau after the implementation of the Problem Based Learning (PBL) learning model assisted by video media". The results of this research are theoretically expected to be used as a source of knowledge about the application of the video-assisted Problem Based Learning (PBL) model, as well as a learning model that can be used in social studies subjects.

METHODS

The type of research used is Experimental research. (Sugiyono 2018:72). Based on the experimental method used in this study, it was carried out without a comparative class of only one class. The design in this study is a one-group pretest-posttest design. That is, it only has 2 result data, pre-test (O_1) and post-test (02). Table 3.1 Pre-Test and Post-Test Experimental Design and can be seen in Table 3.1.

Table 1.
Pre-test and Post test One Group desain

Pre-test	Treatment	Post-test
O_1	X	O_2

Description:
O_1 = Pre-test (before being given the Treatment)
X = Treatment with the Video-Assisted Learning Problem-Based Learning model
O_2 = Post-test (after treatment)

This research was carried out at SD Negeri 46 Lubuklinggau, which is located at Jalan Majapahit Rt 05 Majapahit Village, East Lubuklinggau District 1 Lubuklinggau City. The research time is in the even semester of 2025/2026. The population in this study is all fourth grade students of SD Negeri 46 Lubuklinggau for the 2026 school year. In detail, the population of this study can be seen in table 3.2. Below:

Sampling was done using the Random Sampling technique. Random Sampling is a sample determination technique where every member of the population has an equal chance of being selected. The Random Sampling technique used in this study was carried out by lottery. The sample in this study was grade IV students who were selected according to a lottery conducted by the researcher who was used to be given tests and treatments using the video-assisted Problem Based Learning model. Based on the draw conducted by the researcher, class IVA was selected as a sample of this study with a total of 24 students.

According to Jakni (2016: 151), a research instrument is a tool used to be able to obtain or collect data in order to solve a research problem and to achieve research objectives. The type of instrument used is a test, a test given in this study to collect data from the grades of grade IV students. The test was carried out twice in two experiments, namely before (pre-test) and after (post-test), namely regarding the learning material.

Sugiyono (2013: 173) argues that valid means that the instrument can be used to measure what should be measured. Valid instruments must have both internal and external validity. An instrument that has internal or rational validity if the criteria in the instrument are rationally or theoretically able to reflect what is being measured. An instrument that has external validity if the criteria in the instrument are compiled based on existing empirical facts.

So that in order to measure the validity coefficient, we must use the product moment correlation formula, such as the following formula:

$$r_{xy} \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

(According to Jakni, 2016: 165)

Description:

r_{xy} = Correlation coefficient between Variables X and Y

N = Number of test takers

X = Test result value

Y = Daily average value

According to Sugiyono (2017:333) In quantitative research, the data analysis techniques that can be used are clear, they are directed to answer the formulation of the problem or test the hypothesis that has been formulated in the proposal. The data analysis techniques carried out in this study are as follows:

a. Determining the Mean Value and Standard Deviation

The average values and standard deviations for quantitative data in the initial test (pre-test) and final test (post-test) with the following formula:

$$\bar{x} = \frac{\sum f x_i}{n}$$

(Riduwan, 2020: 188)

$$S = \sqrt{\frac{\sum (x_{i-\bar{x}})}{n-1}}$$

(Stuart O'Neill, 2017: 57)

Description:

$\bar{X}$: Red (average)

x_i : Value x to i to n

n : Number of Samples

s : Baku Junction

b. Data Normality Test

This normality test is used to see the normality of the data, whether the data to be analyzed is normally distributed or not. To perform the normality test, a formula (χ^2 chi squared) is used, namely:

$$\chi^2 = \sum_{i=1}^{k} \left(\frac{(f_{0-} f_e)}{f_e} \right)$$

Description:
χ^2 : Chi Square
f_0 : Observed frequency
f_e : Expected frequency

Sugiyono (2016:243), that compared to the degree of freedom = $\chi^2_{hitung}\chi^2_{tabel}(d_k)k - 1$, where k is the number of data interval classes with a significant level of 5%. If < then it can be stated that the data is distributed normally. If ≥, then it can be stated that the data is not normally distributed.$\chi^2_{hitung}\chi^2_{tabel}\chi^2_{hitung}\chi^2_{tabel}$

FINDINGS AND DISCUSSION

This research was carried out directly by researchers at SD Negeri 46 Lubuklinggau from March 3, 2026 to April 4, 2026 using one class as a sample, namely class IV A SD Negeri 46 Lubuklinggau in the even semester of the 2025/2026 school year with a total of 24 students. In this study, the learning process uses the Problem Based Learning model with the Assistance of Video Media**.**

In this study, the researcher obtained data using a written test. However, before the implementation of the research begins, the questions that will be used for the written test are first tested. The instrument trial has the purpose of determining the quality of the questions that will be used as an instrument to collect data in the research process of the instrument trial was carried out in class V of SD Negeri 46 Lubuklinggau on Wednesday, March 3, 2026 with a total of 20 students. The questions used consisted of 10 questions, of the 10 questions only 8 were valid and 2 questions were invalid. Therefore, there are only 8 questions that can be used for pre-test and post-test.

This study was conducted in 5 meetings, with details of one meeting to test the instrument, one meeting for the initial test (pre-test), two meetings were held for the learning process using the Problem Based Learning model Assisted by Video Media and one meeting for the final test (post-test) at the end of the meeting.

At the time of the research, the researcher conducted a pre-test, which was used to determine the students' initial ability in the material regarding ethnic diversity, ethnicity, ethnicity, and religion. Initial ability (pre-test) is the ability possessed by students before participating in the learning process that will be given. After the students' initial ability (pre-test) is carried out and known, learning activities are carried out using the Problem Based Learning model Assisted by Video Media**.** Then at the end of the study, a final test (post-test) was carried out to determine the final ability of students in mastering material regarding ethnicity, ethnicity, ethnicity, and religion which is the learning outcome of students after the learning process using the Problem Based Learning model assisted by Video Media.

Description of Initial Test Data (Pre-Tets)

The pre-test was carried out on Monday, March 9, 2026 in class IV A, this pre-test was carried out to determine the initial ability of student learning outcomes in the material of Ethnicity, ethnicity, ethnicity, ethnicity, and religion before being given treatment using the

Problem Based Learning model Assisted by Video Media**.** The questions given are 8 questions in the form of descriptions. A list of pre-test scores can be seen in table 2.

Table 2.

Pre-Test Data Recap

Value	Remarks	*Pre-test*	
		Frequency	Percentage
>73	Achieved	0	0%
≤ 73	Not Achieved	24	100%
Quantity		24	
Average Score		28%	
Baku Junction		6,14%	

The results of the research and preliminary tests in table 2 above show that out of 24 students none got a score of more than 73. The highest score is 38 and the lowest is 17. The average ($\bar{x}$) overall score is 28. So, descriptively, it can be said that students' initial abilities before the implementation of the Problem Based Learning Model Assisted by Video Media include the category that has not been achieved.

Description of Final Test Data (Post-test)

The final test of students intended in this study is the learning outcomes of students after participating in the learning process using the Problem Based Learning model Assisted by Video Media. Learning outcomes can be said to be achieved if the student's score has reached the KKTP. The post-test in this study was carried out at the last meeting on Tuesday, March 31, 2026, attended by 24 students. A list of post-test scores can be seen in table 3.

Table 3.

Post-test Data Recapitulation

Value	Remarks	*Post-test*	
		Frequency	Percentage
>73	Achieved	24	100%
≤ 73	Not Achieved	0	0%
Quantity		24	
Average Score		80,54%	
Baku Junction		5,18%	

Based on the results of the research and the final test in table 3 above, it shows that out of 24 students, all students got a score of more than 73. The highest score is 90 and the lowest is 73. The average ($\bar{x}$) overall score was 80.54. So, in terms of description, it can be said that the final ability of students before the implementation of the Problem Based Learning model Assisted by Video Media is included in the category of Achieved.

Based on table 4.1 and table 3, it can be seen that the average student scores that have increased after learning has been applied using the Problem Based Learning model assisted

by Video Media on ethnic, ethnic, ethnic, and religious diversity materials. The average score to Student learning achievement increases from the initial test to the final test.

Testing Requirements Analysis

a. Data Normality Test

The normality test aims to find out whether the data obtained is normally distributed or not. To find out the normality of the data with a match test (Chi Square). Based on the achievement of statistical calculations about the normality test of data with a significant level of 5% or if < then the data is distributed normally and if > then the data is not distributed normally. Based on the results of the recapitulation of the results of the normality test $\chi^2\alpha = 0{,}05, \chi^2_{\text{hitung}}\chi^2_{\text{tabel}}\chi^2_{\text{hitung}}\chi^2_{\text{tabel}}$ of pre-test and post-test data, it can be seen in table 4.

Table 3.

Recapitulation of *Pre-test* and *Post-test Results*

Data	χ^2_{hitung}	Dk	χ^2_{tabel}	Conclusion
Post-test	1,3173	5	11,07	Normally Distributed

Based on the results of the normality test data, the final test *(post-test)* value was obtained. While the value = 11.07 with (5%). Thus, the final test $\chi^2_{hitung} = 1{,}3173\chi^2_{tabel}\alpha = 0{,}05\chi^2_{hitung}$*data (post-test)* is distributed normally.

Hypothesis Testing (t-test)

This hypothesis test aims to find out the truth of a statement and can draw conclusions whether the statement is accepted or rejected**.** To find out the hypothesis, a t-test formula is used with testing criteria if it is rejected and accepted at a significant level (the hypothesis pairs used are: $t_{hitung} \geq t_{tabel,}H_0H_a\alpha = 0{,}05$).

H_o : The average post-test score of IPAS learning outcomes of grade IV students of SD Negeri 46 Lubuklinggau after participating in IPAS learning using the *Problem Based Learning* Assisted Video Media learning model has not been significantly achieved (73).$\mu_0 <$

H_a : The average score of the learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklinggau after participating in IPAS learning using *the Problem Based Learning* Learning model with Video Media Assisted Learning was significantly achieved (73).$\mu_0 \geq$

The testing criteria if then rejected and accepted. Based on the results of the calculation of the t-test in $t_{hitung} \geq t_{tabel,}H_0H_a$*the post-test,* it can be seen in table 4.4.

Table 5.

Normality Test Results of *Post-test Data*

t_{hitung}	t_{tabel}	Remarks
7,11	1,64	$t_{hitung} \geq t_{tabel,} H_a$ Accepted

Based on table 5, the results of the t-test analysis of the final ability of students show that (7.11) (1.64), it can be said that rejected and accepted means the average score of the learning outcomes of science students in grade IV of SD Negeri Negeri 46 Lubuklinggau after participating in learning using $t_{hitung} > t_{tabel} H_0 H_a$the Problem Based Learning learning modelAssisted by Video Media is more than or equal to 73 (KKTP). Thus, the hypothesis proposed in this study can be accepted as true, so it can be concluded that "The learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklingau after the implementation of the Problem Based Learning Learning Learning model assisted by Video Media were significantly achieved.

This research was conducted from March 3, 2026 to April 4, 2026 and was carried out directly by researchers in the learning process. In this study, the researcher chose the Problem Based Learning Assisted Video Media learning model with the aim of seeing the learning outcomes of social studies students in grade IV of SD Negeri 46 Lubuklinggau Before carrying out the research, the researcher had conducted an instrument test in class V of SD Negeri 46 Lubuklinggau. This is done to determine the quality of the questions used as an instrument to collect data in the research process. Before the learning process is carried out, students are first given a pre-test on Monday, March 9, 2026 with ethnicity, ethnicity, ethnicity, and religion material to find out the learning outcomes of students' social studies.

Based on the analysis of data from the pre-test results, the average score was 28. Meanwhile, the analysis of the data from the post-test results showed that the average score obtained by students was 80.54. Based on the results of the post-test, it can be said that there is an increase in the average score of students' IPAS.

The results of the calculation of the normality test of pre-test and post-test data showed that the values of both data were distributed normally. Then to test the hypothesis using a significant t-test or 5% shows that it is rejected and accepted. $\alpha = 0{,}05\ \chi^2_{hitung} \geq \chi^2_{tabel} H_0 H_a$

During the implementation of the pre-test, there were still many mistakes students made in answering questions. This is because students do not understand the material in the question, some of the material on Ethnicity, Ethnicity, Ethnicity, Ethnicity, Ethnicity, and Religion of the material. After the pre-test, grade IV A students participated in learning activities using the Problem Based Learning Assisted Video Media learning model conducted by the researcher.

Based on the results of the research conducted by the researcher, the learning outcomes of students after participating in learning activities using the Problem Based Learning Assisted Video learning model are better than before participating in learning using the Problem Based Learning Learning Assisted by Video Media. Learning through the Problem Based Learning Assisted Video Media learning model occurs if teachers can solve problems in materials related to learning materials that can develop students' abilities. The role of teachers in learning using the Problem Based Learning Learning model assisted by Video Media as a facilitator, guide and motivator. This is very important to provide feedback and develop students' ideas in solving problems so that students can adapt in learning activities.

In classroom learning activities using the Problem Based Learning Assisted Video Media learning model, there are several obstacles, such as researchers and students need time and adjustments to be able to adapt to learning activities. The first meeting on Wednesday, March 11, 2026, the researcher conducted learning activities on ethnic, ethnic, ethnic, and religious diversity materials using the Teaching Model guidelines that had been made before. The researcher focuses students' attention to attract students' initial understanding of the material presented. At the beginning of the activity, the teacher gave several questions related to ethnic and religious diversity to the students to find out to what extent he knew, students were given the opportunity to watch teaching videos related to ethnic and religious diversity materials, then students observed what problems appeared in the video, students answered the questions given, students were formed into several groups, The teacher reconveyed the main points of the material studied related to ethnic and religious diversity.

In this learning activity, students still look confused in carrying out learning activities in groups, students find it difficult to carry out group learning activities so that the class is less conducive because students are busy playing with their group friends or with other groups, but students feel enthusiastic in group learning activities. To overcome this, the researcher went around to each group and guided and helped students who had difficulties in conducting group discussions. After the discussion, the teacher conveyed the main points of the material studied related to ethnic and religious diversity. At the first meeting, each group was quite good at discussing and recording important information given even though there were still some students who were still not confident.

At the second meeting on Friday, March 13, 2026, before entering the new material, students and researchers repeated the previous material. Then after students understand the previous material, the researcher continues the material. The implementation of learning is still based on the Teaching Module that has been prepared like the first meeting. The researcher still focuses the students' attention first at the beginning of learning, then students can learn by using the Problem Based Learning Assisted Video Learning learning model, students look enthusiastic when the researcher begins to direct students in the group activities carried out, students can already work well together in groups. After carrying out the group learning activities, students already understand how to solve problems in the material that has been studied. Meanwhile, friends of other groups can already pay attention to their friends who are delivering the results of their discussion.

After the researcher completes the learning activities for two meetings, the next meeting will be held a post-test on Tuesday, March 31 in grade IV of SD Negeri 46 Lubuklinggau. Post-tests are given to students to find out the learning results after learning activities are carried out. Post-test is used as a benchmark in determining student learning outcomes after applying the Problem Based Learning Assisted Video Media learning model.

After the post-test was carried out, the researcher checked the results and made calculations, from the data obtained, the researcher found that the students' answers were

good even though there were still some students who still did not answer correctly. But overall, students can understand the purpose of the questions given by the researcher.

Based on the relevant research conducted by Astari, the results of data analysis can be concluded that the science learning outcomes of class V of SD Negeri 46 Lubuklinggau after applying the Problem Based Learning model assisted by interactive video media were significantly achieved. This is in line with the opinion of Dimasraga (2019) who conducted a study using the Problem Based Learning Assisted Video Media learning model which was proven to improve student achievement outcomes in the experimental class compared to the control class.

In the implementation of this study, it was found that through the Problem Based Learning Learning model assisted by Video Media, it is suitable to be used to make students active in the learning process of learning activities, so that it can optimize student learning outcomes. The application of the Problem Based Learning Assisted Learning Learning model by Video Media can help students in clarifying, solving problems and being able to pay attention to the material through learning videos in the material of Ethnic and Religious Diversity. This is in line with the opinion of Nurdina (2018) who states that utilizing group learning activities in the learning process can help students learn to be more innovative, can also improve social relationships with other friends and also the environment around them.

Based on the description and calculation, the results of the t-test analysis of the students' final ability show that (7.11) (1.64), it can be said that rejected and accepted means that the average score of the learning outcomes of the fourth grade of students of SD Negeri Negeri 46 Lubuklinggau after participating in learning using $t_{hitung} > t_{tabel} H_0 H_a$the Problem Based Learning modelAssisted by Video Media over 73 (KKTP). Thus, the hypothesis proposed in this study can be accepted as true, so it can be concluded that "The learning outcomes of IPAS students in grade IV of SD Negeri 46 after applying the Problem Based Learning Learning Assisted Video Media learning model were significantly achieved.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that "The learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklinggau after the implementation of the Problem Based Learning learning model assisted by Video Learning were significantly achieved". Based on the results of the calculation carried out by the hypothesis test analysis of the final data of the students, the price = 7.11 was obtained. Based on the results of t_{hitung} the post-test score with a significant level of α = 0.05, obtained = 1.64, then 7.11 > 1.64, then rejected and accepted. This study can be concluded that the t_{tabel} t_{hitung} t_{tabel} $H_o H_a$Problem Based Learning learning model assisted by Video Learning can complete the learning outcomes of IPAS students in grade IV of SD Negeri 46 Lubuklinggau.

For researchers, it is hoped that in the future they can make the results of this research one of the first steps to further analyze how much knowledge gained in college can be applied in the future.

REFERENCES

Adha, M, J., Aryani, Z., *et al*. (2025). Improving Natural and Social Sciences (IPAS) Learning Outcomes Using a Jigsaw-Type Cooperative Learning Model in Class V of SD Negeri 133/III Pondok Siguang. *Multidisciplinary Journal*, 3 (1), 325-331.

Akrim. (2020). *Learning Design*. Depok: PT RajaGrafindo Persada.

Akrim. (2022). *Learning Strategy Textbook*. Medan: Umsu Press

Amelia, D, J. (2019). *Elementary School Learning Media Oriented Multiple Intellences*. Malang: UMMPress.

Amelia, E. D., Imran, M. E., & Anisa, A. (2024). The Effect of the RADEC (Read, Answer, Discussion, Explain, and Create) Learning Model on the Critical Thinking Ability of Class V Students in Science Learning at SD Inpres Pattallassang. *Journal on Education*, 6(3), 17890-17901.

Amral & Asmar. (2020). *The Essence of Learning and Learning*. Bogor: Guepedia.

Andryannisa, M. A. Z., Wahyudi, A. P., & Sayekti, S. P. (2023). Efforts to improve student learning outcomes by using the recitation method in the subject of moral beliefs at Riyadhul Jannah Islamic Elementary School Depok. *Journal of Social Education and Humanities*, 2(3).

Arikunto, Suharsimi. (2013). *Research Procedures of a Practical Approach*. Jakarta: PT. Rineka Cipta.

Aurelia, B. F., Sufa, F. F., & Jumanto, J. (2024). The Effect of the Application of Learning Model (Radec) on Creative Thinking Ability in Grade 4 Elementary School Science Subjects. *Journal of Basic Science*, 8 (5), 3703-3712.

A'yun, Elis Qurota, et al. "Analysis of Direct Instruction Learning Model with Lecture Method." Didactic: *PGSD Scientific Journal STKIP Subang* 11.02 (2025): 230-239.

Effendi, Ramlan. (2021). The Concept of Revision of the Bloom Taxonomy and Its Implementation in Junior High School Mathematics Lessons." JIPMat 2.1.

Emi, E. (2024). The application of the discovery learning model to improve the learning outcomes of grade V students in the science subject at SDN 03 Bengkayang. *Journal of Education and Teacher Training*, 2(3), 580-591.

Fahrurrozi, *et al*. (2022). *Creative Learning Models and Critical Thinking in Elementary Schools*. Jakarta: Unj Press.

Faizah, H., & Kamal., R. (2024). Learning and Learning. *Journal of Basicedu*., 8(1), 466-476.

Farhan, M., & Taofik, D. A. S. (2025). The application of puzzle-based learning media to improve the learning outcomes of IPAS students in grade V of elementary school. *Scientific Journal of Basic Education*, 10 (2), 2548-695

Hayudinna, H. G., & Muzkiyah, A. (2024). Analysis of Critical Reasoning Skills in Natural and Social Education (Ipas) Learning in the Independent Curriculum in Elementary Schools. *Journal of Basicedu*, 8(3), 2438-2447.

Hernita, H., & Dharma, S. (2023). Literature Study: The Utilization of the Radec Model on

High-Level Thinking Skills in Pkn Learning in Elementary Schools. *Journal on Education*, 6(1), 5918-5927.

Iwanda, C. N. S., Malika, H. N., & Aqshadigrama, M. (2022). RADEC as an innovative learning model for Islamic religious education after the Covid-19 pandemic in schools. *Scientific Journal of Educational Vehicles,* 8(24), 430-440.

Jakni. (2016). *Experimental Research Methodology in the Education Sector*. Bandung: Alfabeta.

Jalinus., N., Syahril., Sukardi., *et al*. (2023). *Vocational Pedagogy; Teacher Competence and Its Complexity*.Yogyakarta: Deepublish Digital.

Kaharrudin, A. (2020). *Innovative & Varied Learning*. Gowa: The Legacy of Almaida.

Kustirini., Sarwi., Purnamasari, V., et al. (2024). *Science literacy-based learning innovations support the strengthening of life skills of elementary/middle school students*. Semarang: Cahaya Ghani Recovery.

Mahmud. (2011). *Educational Research Methods*. Bandung: Pustaka Setia.

Mahsun, A., Hadiyani P, A., Fithriyah, M., *et al*. (2023). *Social Studies in Basic Education*. Title: A Letter of Intent to Publish.

Mahtumi, I., Purnamaningsih, I, R., Purbangkara, T. (2022). *Projects Based Learning*. Ponorogo: Uwais Inspiration Indonesia.

Manganghang, J, M. (2023). *Pedagogic Competence in Improving the Quality of Education.* Yogyakarta: Deepublish Digital.

Wow. (2024). *The Right Steps to Improve Student Learning Outcomes Using Learning Videos*. Central Lombok: Indonesian Center for Education and Research Development.

Mustadi., A. (2020). *Foundations of Elementary School Education*. Yogyakarta: Uny Press.

Pohan, E, A. (2020). *The concept of online learning is based on a scientific approach*. Purwodadi: CV Sarnu Untung.

Pulusometimes. W, T. (2021). *Integrated Learning Textbook*. Gorontalo: Ideas Publishing.

Riduwan. (2020). *Formulas and Data in Statistical Analysis.* Bandung: Alfabeta.

Linnae. (2020). *Monograph; The Relationship of the Use of Blanded Learning to Mathematics Learning Outcomes.* Yogyakarta: Cv Kanhaya Karya

Septiyaningsih., R., Reffy, P., Widyastuti., *et al*. (2023). *Learning Media Supports the Learning Ability of Elementary School Students.* Semarang: Cahaya Ghani Recovery.

Setiawan, A., Rahman, T., & Nurlaelah, E. (2021). Implementation of the RADEC learning model to improve science learning outcomes of elementary school students. *Journal of Basic Education, 12(1), 45–54.*

Sopandi, W. (2017). The quality improvement of learning processes and achievements through the Read-Answer-Discuss-Explain-Create (RADEC) learning model. Proceedings of International Conference on Elementary Education, Universitas Pendidikan Indonesia.

Sudarsana, I. K. (2018). Optimizing the use of technology in the implementation of the curriculum in schools (constructivism theory perspective). *Cetta: Educational Science Journal*, *1*(1), 8-15.

Sugiyono, (2013). *Mixed Methods.* Bandung: Alfabeta.

Sugiyono. (2017). *Educational Research Methods, Quantitative, Qualitative and R&D Approaches*. Bandung: Alfabeta, Cv.

Sugiyono. 2018. *Quantitative, Qualitative, and R&D Research Methods*. Bandung: Alfabeta.

Suhelayanti., Syamsiah, Z., Rahmawati, I., *et al.* (2023). *Natural and Social Sciences Learning (IPAS).* Medan: Yayasan Kita Menulis.

Sutianah, C. (2022). *Learning and Learning.* Pasuruan: Cv. Publisher Qiara Media.

Sutrisno. (2020). *Increasing Interest and Learning Outcomes of Computer Topology Materials with Learning Media*. Malang: Ahlimedia Press.

Tanjung., R. (2024). *Concept Sentence and Social Studies Learning*. Banyumas: Insight of Knowledge.

Tarumasely., Y. (2022). *Learning Planning Textbook.* Lamongan: Academia Publication.

Wahid., A. (2023). *Basic Concept Textbook*. Yogyakarta: Blue Ocean.