

OPTIMIZING STUDENT LEARNING OUTCOMES THROUGH THE FLIPPED CLASSROOM MODEL IN THIRD GRADE ELEMENTARY SCHOOL

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Abstract

This study was conducted because student achievement in the Natural and Social Sciences (IPAS) subject for third-grade students at SD Negeri 1 Susukan remains low. The use of conventional teaching methods has led to a decrease in student activity and independence during the learning process. This study aims to determine the effect of implementing the flipped classroom model on student achievement regarding the diversity of Earth's surface features. The method used was quantitative with a one-group pretest-posttest pre-experimental design. This study involved 25 third-grade students. Data collection was carried out through observation, documentation, and tests consisting of pretests and posttests. Data analysis was performed using normality tests, n-gain tests, and t-tests for paired samples with the assistance of SPSS version 22. The results of the normality test indicate that the pretest and posttest data follow a normal distribution, with significance values of 0.193 and 0.063, respectively, as both are greater than 0.05. This study demonstrates that the implementation of the flipped classroom model can improve student learning outcomes. The N-Gain score of 0.7010 falls into the high category, while the N-Gain percentage of 70.0954 falls into the moderately effective category. Based on the results of the hypothesis test, a significance value of 0.000 was obtained, which is smaller than 0.05, and a calculated t-value of 14.400, which is greater than the table t-value of 2.064. Therefore, H₀ is rejected and H₁ is accepted. Thus, the flipped classroom model has a significant impact on student learning outcomes.

Keywords: Learning outcomes; flipped classroom model; IPAS

Abstrak

Penelitian ini dilakukan karena hasil belajar peserta didik pada pelajaran Ilmu Pengetahuan Alam dan Sosial (IPAS) di kelas III di SD Negeri 1 Susukan masih rendah. Metode pembelajaran yang masih konvensional membuat peserta didik menjadi kurang aktif dan kurang mandiri saat belajar. Penelitian ini bertujuan untuk mengetahui pengaruh penerapan model *Flipped Classroom* terhadap hasil belajar peserta didik pada materi ragam bentang alam. Metode yang dipakai adalah kuantitatif dengan desain *Pre-Experimental tipe One Group Pretest-Posttest Design*. Penelitian ini melibatkan 25 peserta didik dari kelas III. Pengumpulan data dilakukan melalui observasi, dokumentasi, dan tes uraian yang terdiri dari *pretest* dan *posttest*. Analisis data dilakukan dengan menggunakan uji normalitas, uji n-gain, dan uji *paired sample t-test* dengan bantuan SPSS versi 22. Hasil pengujian normalitas menunjukkan bahwa data *pretest* dan *posttest* memiliki distribusi normal dengan nilai signifikansi masing-masing 0,193 dan 0,063, karena keduanya lebih besar dari 0,05. Penelitian menunjukkan bahwa menggunakan model *Flipped Classroom* dapat meningkatkan hasil belajar peserta didik. Nilai N-Gain Score yang mencapai 0,7010 termasuk dalam kategori tinggi, sementara N-Gain Persen sebesar 70,0954 masuk dalam kategori cukup efektif. Dari hasil uji hipotesis, didapatkan nilai signifikansi 0,000 yang lebih kecil dari 0,05 dan nilai t_{hitung} 14,400 yang lebih besar dari t_{tabel} 2,064. Oleh karena itu, H₀ ditolak dan H₁ diterima. Dengan cara ini, model *Flipped Classroom* memberikan dampak yang besar terhadap hasil belajar peserta didik.

Kata Kunci: Hasil Belajar; Model *Flipped Classroom*; IPAS

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Introduction

Education in the digital age is evolving rapidly alongside advances in science and technology. These changes require teachers to create engaging, student-centered learning experiences so that learning objectives can be effectively achieved. Teachers are no longer solely responsible for delivering content; they also act as facilitators who can leverage technology in the teaching-learning process. In the 21st century, education has undergone a shift in its direction and objectives. This is influenced by developments in science and technology. Changes in human goals or ways of thinking in the 21st century also demand major changes in national educational goals. This is done so that the Indonesian nation can compete in line with the progress of the times (Asyiah & Sati, 2020). The flipped classroom model is considered suitable for implementation in the Merdeka Curriculum because it supports student-centered learning, is flexible, and encourages active participation throughout the learning process. This model has demonstrated a positive impact on student learning outcomes in elementary schools (Albar, 2026).

Choosing the right instructional model is also crucial for improving the quality of learning. An instructional model is a framework that teachers use to design learning activities. The goal is to ensure that the learning process proceeds systematically and achieves the desired outcomes (Sagala dalam Hendracita, 2021) a learning model is a guide used by teachers to systematically plan and implement the teaching-and-learning process. Therefore, teachers must understand and use learning models that are appropriate for their students' characteristics so that the learning process becomes more meaningful. This is also emphasized in Regulation of the Minister of Education and Culture of the Republic of Indonesia No. 103 of 2014, which states that learning must employ approaches, strategies, models, and methods that align with students' characteristics and learning objectives. Based on observations in the third-grade class at Susukan 1 Public Elementary School, it is well known that the learning process is still dominated by direct instruction or face-to-face lectures, which make students passive and less engaged in learning activities. Students merely listen to the lecturer's explanations and take notes without any activities that encourage active participation, discussion, or collaboration among students. As a result, students easily become bored and struggle to understand the material, particularly abstract concepts related to relief forms. This situation leads to low student achievement, as evidenced by the large number of students who still receive grades below the Minimum Passing Grade (MPG).

Low student achievement is due to the ineffective implementation of innovative teaching models in the classroom. Learning outcomes refer to the competencies students acquire after completing the learning process. If learning outcomes are low, it indicates that the learning process is ineffective. (Purwaningsih, 2022). Therefore, a learning model is needed to enhance students' active participation, independence, and engagement in the learning process. The pedagogical approach considered most suitable for technological advancements and the needs of 21st-century students is the flipped classroom model. The flipped classroom model is a learning approach that reverses the traditional learning process. In this model, students study the material in advance at home using videos or digital learning media. Meanwhile, class time is used for discussion, problem-solving, Q&A, and reinforcing conceptual understanding. The flipped classroom model gives students the opportunity to learn independently before class begins, so that class time can be used for more active and collaborative activities (Savitri & Meilana, 2022).

Previous research has shown that the flipped classroom model has a positive impact on student learning outcomes. A study conducted by (Paramita et al., 2023) revealed that the

implementation of the flipped classroom model, supported by PowerPoint, is more effective than traditional classroom instruction in improving students' critical thinking skills and their performance in science subjects. Research by (Azhari, 2024), also indicates that the use of the flipped classroom model can improve learning outcomes and self-confidence among elementary school students. This occurs because the learning process becomes more active and student-centered. Additionally (Arya et al., 2024) shows that the flipped classroom model, which uses instructional videos and worksheets, is more effective than traditional teaching in improving students' mathematics learning outcomes. Another study conducted by (Melati et al., 2025) shows that the flipped classroom model using videos can improve students' learning outcomes in the field of SBDP. Numerous studies from various countries indicate that the flipped classroom model can enhance student engagement, learning effectiveness, and academic performance. This occurs because the model allows for a more flexible learning schedule and active learning activities in the classroom (Hutton, 2020).

Previous research has shown that the flipped classroom model has a positive impact on students' academic achievement, critical thinking skills, self-confidence, and independent learning at the elementary school level. However, most of these studies have focused on students in upper elementary grades and have primarily examined cognitive achievement. Research on the implementation of the flipped classroom model in the early grades of elementary school—specifically in the context of teaching Earth Science with the theme of Earth's surface diversity—remains limited. Furthermore, previous studies generally emphasized academic achievement without thoroughly examining the affective and psychomotor aspects of the learning process.

The innovation of this study lies in three main aspects. First, this study applied the flipped classroom model to third-grade students, a group that has received relatively little attention in previous studies. Second, this study focused on the IPAS theme of Earth's surface diversity, which required students to develop conceptual understanding through self-directed learning before class and collaborative activities during classroom sessions. Third, this study evaluates the effectiveness of the flipped classroom model not only in terms of cognitive learning outcomes but also through improvements in affective aspects, psychomotor skills, teacher performance, and the quality of instructional activities. Thus, this study offers a more comprehensive perspective on the contribution of the flipped classroom model to improving the quality of learning in elementary school, particularly in the early grades.

This study contributes to the advancement of research in the field of elementary education by providing empirical evidence regarding the effectiveness of the flipped classroom model, not only in improving students' cognitive achievement but also in strengthening their affective and psychomotor competencies. These findings complement previous studies by examining the application of the flipped classroom model in teaching IPAS in third grade on the theme of the diversity of Earth's surfaces—a topic that has received little attention in previous studies. Furthermore, this study offers a more comprehensive evaluation of the effectiveness of this approach through an analysis of learning outcomes, student attitudes, psychomotor performance, teacher performance, and pedagogical implementation. Thus, this study enriches the existing literature on flipped classroom practices in early elementary education.

Research Methods

This study employs a quantitative approach and experimental methods. Research methods are scientific approaches that help researchers collect, analyze, and interpret data,

thereby enabling the research objectives to be achieved more clearly (Mansir & Karim, 2020). Quantitative experiments are used to observe differences before and after the application of a treatment, according to (Hamid dalam Yuniar 2022). Experimental methods are used to determine whether a treatment has an effect on a specific variable under controlled conditions. The research design used is a single-group pretest-posttest pre-experimental design. In this design, a single group takes a pretest before the intervention and a posttest after the intervention to observe changes in learning outcomes following the implementation of the flipped classroom model (Putra et al., 2025). In this design, a single group takes a pretest before the intervention and a posttest after the intervention. In this design, a single group takes a pretest before the intervention and a posttest after the intervention.

This study was conducted at Susukan 1 Public Elementary School during the second semester of the 2025/2026 school year. The study population consisted of all students at Susukan 1 Public Elementary School, while the sample consisted of 25 students from Class 3C, comprising 14 boys and 11 girls. The sampling technique used was non-probabilistic sampling, specifically purposive sampling. Purposive sampling was used because the selection of the sample was based on specific considerations aligned with the research objectives.

The research procedure was carried out in three stages: the preparation stage, the implementation stage, and the final stage. During the preparation stage, preliminary observations were conducted, teaching materials were developed, and research instruments were designed and tested. The implementation phase began with a pretest, followed by the application of the flipped classroom model through self-directed learning activities prior to face-to-face sessions and discussions during class. The final stage involved administering a post-test to measure learning outcomes following the intervention.

The data in this study consist of quantitative data obtained from the students' pretest and posttest results. In addition, supplementary data were collected through observation and documentation during the learning process. The research instruments used included observation sheets, documentation, and learning outcome tests. The test format used was an essay test consisting of five questions aligned with the learning indicators of the physical geography program. Before use, the research instruments were first tested to evaluate their quality; instrument testing included validity, reliability, difficulty level, and item discrimination.

Data were analyzed using descriptive and inferential statistics. A prerequisite test was conducted using the Shapiro-Wilk normality test. Improvements in learning outcomes were analyzed using N-Gain, while hypothesis testing was performed using a paired t-test with the assistance of SPSS version 22.

Result and Discussion

Before the research instrument is used in the data collection process, an instrument test is first conducted, which includes validity testing, reliability testing, question difficulty level testing, and question discrimination testing.

Tabel 1. Validity Test

Question number	r_{hitung}	r_{tabel}	Information
1	0,847	0,3297	Valid
2	0,864	0,3297	Valid
3	0,854	0,3297	Valid
4	0,786	0,3297	Valid
5	0,685	0,3297	Valid

Based on table 1 above, the validity test results show that the rhitung values for each item, namely 0.847, 0.864, 0.854, 0.786, and 0.685, are greater than the rtabel value of 0.3297. Thus, all items are declared valid. Therefore, the test instrument used has met the validity requirements, making it suitable for use in research to measure students' learning outcomes.

Table 2. Realibility Test

Reliability Statistics	
Cronbach's	N of Items
.855	5

Based on table 2 above, the results of the reliability test conducted using SPSS version 22 show a Cronbach's alpha value of 0.855, which means the instrument is reliable because its Cronbach's alpha value is greater than 0.60.

Table 3. Uji Tingkat Kesukaran Soal

Question number	Difficulty Index	Category
1	0,76	Easy
2	0,68	Medium
3	0,72	Easy
4	0,52	Medium
5	0.27	Difficult

Based on table 3 above, the results of the difficulty index test show that question number 1 has a difficulty index of 0.76, placing it in the "easy" category; question number 2 has an index of 0.68, placing it in the "moderate" category; question number 3 has an index of 0.72, classified as easy; question number 4 has an index of 0.52, classified as moderate; and question number 5 has an index of 0.27, classified as difficult. These results indicate that the difficulty levels of the questions are distributed across the easy, moderate, and difficult categories. Therefore, the test items used have varying levels of difficulty, which allows for a better assessment of students' abilities. The difficulty level of a question is an important indicator in the analysis of an instrument's quality, as it is used to determine the extent to which a test item can be solved by students. The difficulty index indicates the question category, namely easy, moderate, or difficult. Good questions must have varying levels of difficulty in order to measure students' abilities more comprehensively and objectively. In this protocol, a group took a pre-test before the intervention and a post-test after the intervention. Variations in difficulty levels also make it easier for teachers to evaluate students' abilities at different levels of material comprehension (Saputri, 2023). The results of the analysis conducted as part of this study indicate that the assessment tool used consists of a mix of questions with easy, moderate, and difficult levels of difficulty, making it suitable for evaluating students' learning achievements. The inclusion of questions with varying levels of difficulty indicates that the assessment tool not only allows for the measurement of students' basic competencies but also identifies students with above-average abilities. Questions that are too easy generally do not allow for effective differentiation of student abilities, while questions that are too difficult can prevent students from demonstrating their true abilities. Therefore, it is important to develop assessment tools with a balanced level of difficulty in order to obtain more accurate and effective measurements of learning achievement (Trisnayanti et al., 2024).

Table 4. Results of the Question Differentiation Test

Question number	Difference Power Index	Category
1	0,46	Good
2	0.32	Enough
3	0,40	Good
4	0,29	Enough
5	0.21	Enough

Based on table 4 above, the discrimination index results show that item number 1 has a discrimination index of 0.46 and falls into the “good” category. Item number 2 has an index of 0.32 and falls into the “fair” category. Item number 3 has an index of 0.40 and also falls into the “good” category. Item number 4 has an index of 0.29 and falls into the “adequate” category, while item number 5 has an index of 0.21 and also falls into the “adequate” category. These results indicate that some items possess good discriminative power, while others fall into the “adequate” category. Therefore, the items used are capable of distinguishing students with high ability levels from those with low ability levels. Discriminative power is a key indicator in analyzing the quality of items on a test. This allows for a better understanding of the differences in ability levels among students. The higher the discriminative power index of a question, the more effective that question is in distinguishing students who have mastered the material from those who have not (Saputri et al, 2023). Based on Table 4 above, the discrimination index results show that item number 1 has a discrimination index of 0.46 and falls into the “good” category. Item number 2 has an index of 0.32 and falls into the “fair” category. Item number 3 has an index of 0.40 and also falls into the “good” category. Item number 4 has an index of 0.29 and falls into the “adequate” category, while item number 5 has an index of 0.21 and also falls into the “adequate” category. These results indicate that some items possess good discriminative power, while others fall into the “adequate” category. Therefore, the items used make it possible to distinguish students with high ability levels from those with low ability levels. Discriminatory power is a key indicator in the analysis of test item quality. It allows for better identification of differences in ability levels among students. The higher the discriminatory power index of a question, the more effective it is in distinguishing students who have mastered the material from those who have not.

The implementation of the flipped classroom model has brought changes to various aspects of learning. The results of observations regarding teaching modules, teacher performance, and students’ affective and psychomotor skills are presented in table 1 below:

Table 5. Observation Results

Assessment Aspect	Before Implementation	After Implementation	Category
Teaching Module	55,6%	100%	Very Good
Teacher Performance	57,14%	95,23%	Very Good
Affective	20%	96%	Very Good
Psychomotor	36%	100%	Very Good

Based on Table 5 above, it can be seen that the results of observations regarding learning modules, teacher performance, affective aspects, and psychomotor skills showed an improvement after the implementation of the flipped classroom model. Regarding pedagogical modules, the percentage before the implementation of the flipped classroom model was 55.6% in the “adequate” category, which then increased to 100% in the “excellent” category after the model was implemented. Additionally, the observation results regarding teacher performance

before the implementation of the flipped classroom model showed a percentage of 57.14% in the “adequate” category, whereas after implementation, this figure increased to 95.23% in the “very good” category. In terms of the affective domain, the percentage before implementation was 20% in the “poor” category, then increased to 96% in the “very good” category. Meanwhile, in the psychomotor domain, the percentage before implementation was 36% in the “poor” category, and increased to 100% in the “very good” category after the implementation of the flipped classroom model. The improvements observed in all these aspects indicate that the flipped classroom model is effective in enhancing the quality of learning, both in terms of instructional materials and teacher delivery as well as student engagement in the affective and psychomotor aspects.

Students become more engaged by asking questions, participating in discussions, and expressing their opinions throughout the learning process. In addition, they appear to be better able to complete their learning tasks independently. Active student participation is one of the hallmarks of successful student-centered learning. Learning that provides opportunities for students to interact, collaborate, and construct their knowledge independently will result in more meaningful learning experiences and improve the overall quality of learning (Herawati et al., 2023). Students’ active engagement in the learning process indicates an increase in their curiosity and enthusiasm for learning. Learning that makes appropriate use of media and technology can encourage students to participate more actively in the learning process and strengthen their interest in the subject (Sati et al., 2022). Improved observation results in the affective and psychomotor domains indicate that the flipped classroom model is effective in enhancing student engagement during the learning process. Students appeared more active in asking questions, discussing the topics covered, and expressing their opinions throughout the learning process. Additionally, students also seemed better able to complete their learning tasks independently. This conclusion is supported by research (Savitri & Meilana, 2022). The implementation of the flipped classroom model has a positive impact on elementary school students’ understanding of science concepts. Increased emotional engagement and physical activity among students suggest that the use of the flipped classroom model can create a more interactive and student-centered learning experience. Students are better prepared to participate in lessons because they have studied the material before the face-to-face session (Amar & Bancong, 2024).

Table 6. Student Learning Outcomes

Learning Outcomes	N	Lowest score	Highest score	Average
<i>Pretest</i>	25	25	70	45
<i>Posttest</i>	25	70	95	85

Based on Table 6 above, data on student learning outcomes were collected before and after the implementation of the flipped classroom model. In the pre-test results, out of 25 students, the lowest score was 25 and the highest was 70, with an average score of 45. These results indicate that students’ initial competencies prior to the implementation of the flipped classroom model were still relatively low. In contrast, in the post-test results, the lowest score was 70 and the highest was 95, with an average score of 85. These results indicate an improvement in student learning outcomes following the implementation of the flipped classroom model. These results indicate that selecting learning strategies and models appropriate to students’ characteristics can enhance the effectiveness of the learning process. Sati (2024) emphasizes that learning that

considers students' needs and learning styles can create a better learning experience, thereby improving student learning outcomes (Sati et al., 2024). The increase in the average score, which rose from 45 on the pre-test to 85 on the post-test, indicates that the implementation of the flipped classroom model has a positive impact on improving student learning outcomes. This improvement in learning outcomes suggests that students found it easier to understand the material after the implementation of this model. Students have the opportunity to study the material in advance through instructional videos and learning materials before face-to-face sessions. Thus, class time can be used for discussion and problem-solving, making learning more active and constructive. The conclusions of this study align with research (Azhari, 2024) showing that the flipped classroom model can improve the academic achievement and self-confidence of elementary school students. This is due to the fact that students have the opportunity to study the material independently before class, so that class time can be used for discussion and concept reinforcement. Research (Tesalonika et al., 2023) supports these results, showing that flipped classroom-based learning can strengthen elementary school students' independent learning in science.

Table 7. Normality Test *Shapiro-Wilk*

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	,157	25	,114	,945	25	,193
Posttest	,180	25	,036	,924	25	,063

a. Lilliefors Significance Correction

Based on Table 7 above, the results of the normality test for students' learning in the IPAS program (pretest) yielded a significance value of 0.193, while the results of the normality test (posttest) yielded a significance value of 0.63. This indicates that the results of the normality test for students' learning in the IPAS program show a normal distribution because they meet the criterion of a significance value greater than 0.05. The normality test is one of the most important preliminary tests before conducting a hypothesis test using the t-test. Its purpose is to ensure that the data we obtain comes from a population with a normal distribution. The use of the Shapiro-Wilk test in this study is considered appropriate because the sample size is small, with fewer than 50 respondents. The Shapiro-Wilk test has good accuracy for determining whether data are normally distributed, particularly for small to medium-sized samples. Therefore, this test is frequently recommended in educational and experimental research (Sianturi, 2025). If the significance value obtained is greater than 0.05, the data is considered normally distributed and can proceed to parametric testing, such as the paired sample t-test (Serepinah et al., 2023). These results are linked to the characteristics of the flipped classroom model, which gives students the opportunity to study the material before class begins. Thanks to this independent learning, students are better prepared for class, allowing the in-class learning process to focus on discussion, collaboration, and problem-solving. This student-centered approach creates a more active and meaningful learning experience, leading to a more equitable understanding of the material among students. These results align with studies showing that the flipped classroom model promotes self-directed learning, student engagement, and improved learning outcomes through more efficient use of learning time (Munisah, 2025). From a theoretical perspective, the findings of this study support constructivist theory, which views students as active agents in constructing knowledge through their learning experiences. The flipped classroom model allows students to acquire prior knowledge independently before face-

to-face sessions, so that classroom instruction can focus more on reinforcing concepts and encouraging higher-order reflective activities. These results suggest that teachers can use the flipped classroom model as an alternative for IPAS instruction to improve learning readiness, student engagement, and the quality of learning outcomes (Putri et al., 2024).

After the normality test was conducted, the study proceeded with a standardized gain test (N-Gain) to determine the effectiveness of implementing the flipped classroom model in improving student learning outcomes.

Table 8. *Normalized gain Test (N-Gain)*

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Ngain_score	25	,44	,93	,7010	,12813
Ngain_Persen	25	44,44	92,86	70,0954	12,81344
Valid N (listwise)	25				

Based on Table 8 above, the n-gain score for student learning outcomes in the IPAS subject (pre-test and post-test) is 0.7010. This indicates that the n-gain score for student learning outcomes in the IPAS subject (pre-test and post-test) meets the high criteria, as the g value is greater than 0.7. The n-gain percentage for student learning outcomes in the IPAS subject (pre-test and post-test) is 70.0954. This indicates that the n-gain percentage for student learning outcomes in the IPAS subject (pre-test and post-test) falls into the “moderately effective” category, as the value is between 56% and 75%. Therefore, it can be concluded that the implementation of the flipped classroom model in IPAS instruction for third-grade students at Susukan State Elementary School 1 is quite effective. The n-gain value falling within the “high” category indicates that the flipped classroom model has a positive impact on improving student learning outcomes. This finding is supported by a literature review (Relandia et al., 2025).

After determining the level of effectiveness of the learning model using n-gain, a hypothesis test was then conducted using a paired t-test to determine whether or not there was a significant effect on student learning outcomes.

Table 9. *Hypothesis Testing (Paired Sample t-test)*

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pretest - Posttest	-36,000	12,500	2,500	-41,160	-30,840	-14,400	24	,000

Based on table 9 above, the results of the hypothesis test regarding student learning in the IPAS course (pre-test and post-test) show a t-value of 14.400. This means that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted, because the t-value is greater than the critical t-value; that is, 14.400 is greater than 2.064. Additionally, the results of the hypothesis test regarding student learning achievement in IPAS instruction (pre-test and post-test) also show a significance value of 0.000. This indicates that the results of the hypothesis test regarding IPAS learning, which includes pre-test and post-test data, have a significance level below 0.05. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. Thus, it can be concluded that the implementation of the flipped classroom model has an effect on student learning outcomes in the IPAS subject in third grade at SD Negeri 1 Susukan. These findings indicate that student progress depends not only on their talent or

ability, but also on how teachers design and implement the learning process. Well-structured instruction, supported by appropriate strategies, can increase student engagement and, ultimately, improve their academic performance (Purnomo & Karim, 2024).

Conclusion

Based on the research findings, it can be concluded that the implementation of the flipped classroom model has a positive impact on student learning outcomes in the IPAS subject in the third grade at Susukan 1 Public Elementary School. The research instruments used met the criteria for validity and reliability, had varying levels of difficulty, and demonstrated good discriminative power, making them suitable for measuring learning outcomes. The implementation of the flipped classroom model also improved the quality of learning. This was clearly evident from the improvements observed in the teaching modules, teacher performance, and the affective and psychomotor aspects of student learning. Furthermore, student learning outcomes showed a significant improvement following the implementation of the flipped classroom method, indicating a high level of effectiveness. These results indicate that the flipped classroom model is not only capable of improving academic achievement but also of strengthening student engagement and independence in the IPAS learning process. This study is innovative because it applies the flipped classroom model in teaching IPAS to third-grade elementary school students. This method has proven effective in improving students' academic achievement as well as their affective and psychomotor aspects. Therefore, the flipped classroom model can serve as a creative learning option to enhance the quality of instruction in elementary schools. Further research is recommended to evaluate the effectiveness of this model across different subjects, educational levels, or learning aspects.

References

- albar, J. (2026). *Analisis Penggunaan Model Pembelajaran Flipped Classroom Terhadap Hasil Belajar Siswa Kurikulum Merdeka*. 02(02), 97–108.
- Amar, A., & Bancong, H. (2024). *Analysis Of Validity , Practicality And Effectiveness Of Development Of Class 6 Flipbook-Based Digital Teaching Materials*. 7(3), 101–111.
<https://doi.org/10.55215/jpgguseda.V7i3.10203>
- Asyiah, N., & Cirebon, U. M. (2020). *Jurnal cakrawala Pendas Implementasi Strategi 5r Untuk Mengoptimalkan Keterampilan Abad 21 Mahasiswa Pgsd Pendahuluan Situasi Abad 21 Sering Kali Diidentifikasi Masyarakat Informasi , Yang Ditandai Oleh Sistem Pembelajaran Berbasis Digital , Selain Itu Jug*. 6(1), 56–62.
<https://doi.org/10.31949/jcp.V6i1.1741>
- Azhari, N. A. (2024). *Penerapan Model Pembelajaran Flipped Classroom Untuk Meningkatkan Hasil Belajar Dan Kepercayaan Diri Siswa*. 7, 2288–2292.
<https://doi.org/10.54371/jiip.V7i3.3580>
- Herawati, T., Widiyanti, D., & Karim, A. (2023). *Character Building Management In Improving Personality Competence Teacher*. 8(2), 49–64.
- Hutton, A. (N.D.). *The Efficacy Of The Flipped Classroom Technique In Undergraduate Math Education : A Review Of*. 1–24.
<https://doi.org/10.48550/Arxiv.2010.11393>
- Mansir, F. Karim, A. (2020). *Fiqh Learning Methodology In Responding Social Issues In Madrasa*.

- 7(2), 241–251. <https://doi.org/10.15408/Tjems.V7i2.20024>
- Melati, R., Hera, T., & Gunawan, H. (2025). *Pengaruh Model Pembelajaran Flipped Classroom Berbantuan Video Terhadap Hasil Belajar Pada Mata Pelajaran Sbdp Kelas V Sdn 94 Palembang*. 7(3), 270–278. <https://doi.org/10.36232/Jurnalpendidikdasar.V7i3.2887>
- Munisah, E. (2025). *The Effectiveness Of The Use Of Flipped Classroom Strategies In Indonesian Learning In Elementary Schools: A Systematic Literature Review*. 8, 260–272. <https://doi.org/10.23887/Ijerr.V8i1.89442>
- Oktaria, & Warida. (2026). *Pengaruh Model Flipped Classroom Berbantuan Quizziz Terhadap Hasil Belajar Bahasa Indonesia Kelas V Sekolah Dasar*. 6, 1243–1253. <https://doi.org/10.53299/Jppi.V6i2.4054>
- Paramita, A. P., Istiqomah, N., & Mastura, S. (2023). *The Influence Of Problem-Based Learning And Discovery Learning Models On Learning Outcomes Pengaruh Model Problem-Based Learning Dan Discovery Learning Terhadap Hasil Belajar*. 16(1), 22–34.
- Purnomo, H., & Karim, A. (2024). *Principal Leadership And Teacher Performance On Student Success*. 7(2), 2637–2656. <https://doi.org/10.31949/Jee.V7i2.9145>
- Purwaningsih. (2022). *Peningkatan Hasil Belajar Melalui Model Pembelajaran Penemuan Pada Peserta Didik Kelas Viii Smp Negeri 8 Cikarang Utara Kabupaten Bekasi*. 2(4), 422–427.
- Putra, R. D., Murtadho, M. A., Isnaini, M., Afgani, M. W., Islam, U., Raden, N., & Palembang, F. (2025). *Design Penelitian Kuantitatif: Pengertian Dan Macam-Macam Jenisnya Quantitative Research Design: Definition And Types*. 5(3), 191–199. <https://doi.org/10.56832/Edu.V5i3.1805>
- Putri, I. R., Wuryandani, W., Saptono, B., & Prananto, I. W. (2024). *The Influence Of Self-Regulated Learning On Learning Outcomes Moderated By The Flipped Classroom Model In Basic Mathematics Concept Lectures For Prospective Elementary School Teachers*. 20(1), 65–76. <https://doi.org/10.32939/Tarbawi.V20i1.4420>
- Relandia, M. K., Muharram, M. R. W., Agnestasia, & Putri, R. (2025). *Kajian Literatur: Model Flipped Classroom Dalam Pembelajaran Ips Di Sekolah Dasar*. 10(September). <https://doi.org/10.23969/Jp.V10i03.29098>
- Saputri. (2023). 1 2 3 4. 09, 2986–2995. <https://doi.org/10.36989/Didaktik.V9i5.2268>
- Sati, Faiz, A., & Yulianasari, L. (2024). *Analysis Of Student Learning Styles As An Implementation Of Differentiated Learning Strategies In The Indonesian Education Merdeka Curriculum*. 7(3), 2971–2984. <https://doi.org/10.31949/Jee.V7i3.9148>
- Sati, Setiana, D., Amelia, A. N., & Cirebon, U. M. (2022). *Jurnal Basicedu*. 6(1), 51–57. <https://doi.org/10.31004/Basicedu.V6i1.1899>
- Savitri, O., & Meilana, S. F. (2022). *Pengaruh Model Pembelajaran Flipped Classroom Terhadap Pemahaman Konsep Ips Siswa Sekolah Dasar*. 6(4), 7242–7249. <https://doi.org/10.31004/Basicedu.V6i4.3457>

- Serepinah, M., Sarifah, I., Iqbal, M., & Ghozali, A. (2023). *Pengaruh Pembelajaran Daring Terhadap Hasil Belajar Siswa Ditinjau Dari Tingkatan Jenjang Pendidikan*. 9(1), 231–236. <https://doi.org/10.31949/Educatio.V9i1.4431>
- Sianturi, R. (2025). *Test Normality As A Condition Of Hypothesis Testing*. 11(1), 1–14. <https://doi.org/10.36987/Jpms.V11i1.7091>
- Tesalonika, Y. M., Melani, M., & Susanti, I. (2023). *Jurnal Basicedu*. 7(4), 2301–2314. <https://doi.org/10.31004/basicedu.V7i4.5542>
- Trisnayanti, N, A., Wirani, I, A, S., & Rai, I, B. (2024). *Jurnal Pendidikan Bahasa Bali Undiksha Tingkat Kesukaran Dan Daya Beda Butir Soal Sumatif Bahasa Bali Kelas X Di Sma Negeri 1 Mengwi Tahun*. 11(2), 96–105.