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IMPROVING LEARNING OUTCOMES THROUGH THE PICTURE AND PICTURE MODEL INTEGRATED WITH WORDWALL IN IPAS FOR GRADE IV STUDENTS

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ABSTRACT

This study aims to improve students' learning outcomes through the Picture and Picture learning model integrated with the Wordwall application in the IPAS subject for fourth-grade students. The research employed a quantitative approach with a pre-experimental design (one-group pretest–posttest design). The sample consisted of all 28 students in Class IVA at SD Negeri 101740 Tanjung Selamat, comprising 9 male and 19 female students. Data were collected using learning achievement tests administered before and after the intervention, as well as observation and documentation techniques. The collected data were then analyzed quantitatively. The findings indicate that the use of Wordwall significantly improved students' learning outcomes, as evidenced by the increase in mean scores from the pretest to the posttest. This improvement reflects a higher level of understanding of the instructional material. Furthermore, the integration of the Picture and Picture model with Wordwall was effective and engaging, fostering interactive learning through visual representations and digital quiz activities. Students demonstrated greater participation, focus, and enthusiasm during lessons. In addition to enhancing conceptual understanding, the model also supported the development of students' critical thinking and collaborative skills. In conclusion, the Picture and Picture model supported by the Wordwall application can serve as an effective alternative instructional strategy for improving students' learning outcomes.

Keywords : Picture and Picture Model; Wordwall Application; Learning Outcomes.

INTRODUCTION

In line with the rapid development of information technology in the era of globalization, advances in science and technology have had a significant impact on various aspects of human life. To improve the quality of education, appropriate learning models and media are needed to support the teaching and learning process. Learning models supported by instructional media can make learning more varied, particularly through the use of images and animations that enhance presentation and engagement.

Accordingly, the Picture and Picture model based on Wordwall can be used to convey messages through visual representations, stimulate students' thinking and feelings, and enhance imagination, attention, and motivation. Thus, learning models and media play an essential role in facilitating learning and supporting students' understanding of the material delivered in class, ultimately increasing students' interest in learning. The use of media is therefore intended to help overcome various obstacles that may arise during the learning process.

The application of the Picture and Picture model integrated with Wordwall in improving learning outcomes in the IPAS (Integrated Science and Social Studies) subject is grounded in the need to facilitate learning that is more interactive, contextual, and enjoyable. IPAS involves concepts related to natural and social phenomena, many of which are abstract and require visualization to support students' comprehension.

Wordwall is a web-based application commonly used as an assessment tool that provides various templates for designing learning materials and test items. It enables teachers to present content through matching, grouping, and essay formats, among others. Based on observations conducted at SD Negeri 101740 Tanjung Selamat, the learning process still tends to be teacher-centered, with students remaining passive and merely receiving information. During lessons, teachers generally write on the board, students copy the notes, the teacher explains the material, and students complete written exercises. Such practices limit variation in learning activities and negatively affect students' learning outcomes.

This condition is reflected in students' low achievement, as shown by daily test scores in the 2025/2026 academic year, where many fourth-grade students have not yet achieved the Minimum Mastery Criteria (KKM) set by the school. The following section presents the even-semester scores of fourth-grade students at SD Negeri 101740 Tanjung Selamat.

Table 1. Daily Assessment Scores of Students

No	Subject	Students	KKM	Score	Frequency	Percentage	Description
1	IPAS	28	70	<70	19	67,8%	Not Achieved
				>70	9	32, 1%	Achieved

Based on Table 1, it is known that in the IPAS subject, only 9 students (32.1%) achieved the Minimum Mastery Criterion (MMC), while 19 students (67.8%) did not meet the criterion. Therefore, it can be concluded that learning in the IPAS subject has not yet been considered successful, as the number of students who did not reach the MMC is greater than those who did.

In light of this condition, the researcher intends to address students' suboptimal learning outcomes by implementing classroom action research through the application of appropriate learning models and media. In this approach, students are encouraged to be more confident and to concentrate more actively during the learning process. One strategy that may promote active student participation is the integration of learning models and media, enabling students to engage more fully and better understand the material presented by the teacher.

RESEARCH METHODS

The approach used in this study was a quantitative approach with a pre-experimental research design (pre-experimental design). The specific design employed was a one-group pretest–posttest design.

The sample consisted of all students in Class IVA at SD Negeri 101740 Tanjung Selamat, totaling 28 students, including 9 male and 19 female students. The data were collected using learning achievement tests administered during and after the learning process. Once all data had been collected, they were grouped into observation data, test results, and documentation. These data were then analyzed using quantitative analysis techniques.

To evaluate the effectiveness of the learning media, data were collected through tests, observations, documentation, and validation questionnaires administered to media experts and material experts.

RESULTS AND DISCUSSION

Based on the observations conducted prior to the intervention, it was found that the teacher in Class 4A implemented learning in a monotonous manner, relying only on textbooks and the lecture method without using other learning model variations. Assignments were also limited to textbook activities. As a result, several students appeared to be busy with their own activities, were unfocused when the teacher explained the material, and some looked bored. This condition was consistent with the classroom teacher's statement, who said, "in the learning process here, I only use textbooks and explain as usual in front of the class."

From these preliminary observations, it was concluded that the main problem in IPAS learning was students' low motivation. This occurred because the teacher merely explained the material without using any learning media that could encourage students to become more enthusiastic and motivated in the learning process.

The results of the learning achievement test administered before the intervention showed a minimum score of 35 and a maximum score of 50. The mean pretest score was 38.93 with a standard deviation of 3.934. Meanwhile, the mean posttest score after the intervention was 83.39 with a standard deviation of 6.244. The descriptive statistics are presented as follows:

Table 2. Summary of Pretest and Posttest Statistics

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
PretestIPAS	28	35	50	1090	38.93	3.934
PostestIPAS	28	65	95	2335	83.39	6.244
Valid N (listwise)	28					

Table 3. Comparison of Students' Pretest and Posttest Results

Statistical Category	Descriptive Statistics	
	Pre-Test	Post-Test
Number of samples	28	28
Highest score	50	95
Lowest score	35	65
Mean	38.93	83.39
Standard deviation	3.934	6.244

From Table 3, it can be seen that the students' mean score before the treatment using the Picture and Picture model integrated with the Wordwall application (pretest) was 38.93. After the treatment, the mean posttest score increased to 83.39. These results indicate that the implementation of the Picture and Picture model based on Wordwall effectively improved students' learning outcomes.

ANOVA

Setelah diberiperlakuan H1

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	157.574	3	52.525	1.408	.265
Within Groups	895.105	24	37.296		
Total	1052.679	27			

Table 4. Statistic ANOVA

Based on the data, the significance value obtained is less than 0.05. Therefore, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. This result indicates that the use of the Picture and Picture model integrated with the Wordwall application has a significant effect on students' learning outcomes.

Discussion

The implementation of the Picture and Picture learning model based on the Wordwall application in the IPAS subject was carried out through several structured stages, starting from planning, implementation, and evaluation. At the planning stage, the teacher prepared learning tools such as lesson modules and teaching materials, as well as supporting media in the form of images to be used in the Picture and Picture model. In addition, the teacher developed interactive content using the Wordwall application, including picture-based quizzes, matching activities, and random wheel tasks, which were aligned with the IPAS material.

The implementation stage began with introductory activities such as apperception and the presentation of learning objectives. The teacher then displayed images related to the lesson and encouraged students to observe, discuss, and arrange the images logically. Afterwards, students were guided to complete interactive activities using Wordwall, either individually or in groups. These activities fostered active student participation and created an engaging learning atmosphere.

In the evaluation stage, the teacher assessed students' learning outcomes through assessments prepared in advance, both through Wordwall activities and worksheets. The results showed an increase in students' scores after the implementation of the learning model, indicating that the Picture and Picture model integrated with Wordwall was effective in improving students' understanding of IPAS concepts.

Thus, the application of the Picture and Picture model based on the Wordwall application succeeded in creating a more visual, interactive, and enjoyable learning process, which had a positive impact on the learning outcomes of fourth-grade students at SD Negeri 101740 Tanjung Selamat. The Picture and Picture learning model is a cooperative learning strategy that emphasizes the use of visual media in the form of images to facilitate students' understanding of the material. In practice, this model encourages students to observe, connect, and describe images presented systematically according to the topic being studied.

Integrating the Wordwall application into the Picture and Picture model brings innovation to the learning process. Wordwall provides various types of interactive activities, such as matching games, random wheels, quizzes, and ranking tasks, which can be modified based on instructional needs. As a result, learning becomes more interesting, interactive, and aligned with technological developments that appeal to students.

The findings of this study indicate that the use of the Picture and Picture model integrated with Wordwall has a positive effect on students' learning outcomes. This is evidenced by the increase in the mean scores. The average pretest score before the implementation of the model was 38.93, while the posttest mean score increased to 83.39. This improvement demonstrates the effectiveness of the model in enhancing students' understanding.

CONCLUSION

The use of the Wordwall application has been proven to improve students' learning outcomes in the IPAS subject for Grade IV students at SD Negeri 101740 Tanjung Selamat. This is shown by the increase in the average score from the pretest to the posttest, which reflects an improvement in students' understanding of the material taught. The implementation of the Picture and Picture learning model based on the Wordwall application was effective and engaging for students. The learning process became more interactive and enjoyable through the use of visual images and digital quizzes provided by the application. Students became more active, focused, and enthusiastic during the learning activities. This model not only enhances students' conceptual understanding visually, but also trains their critical thinking and collaboration skills through group discussions and participation in interactive games. Therefore, the Picture and Picture model based on Wordwall can be used as an alternative learning strategy that is effective in improving students' learning outcomes.

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