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Effectiveness of the SAVI Learning Model Assisted by Interactive Video on the Learning Outcomes of Fourth Grade Elementary School Students

Feri Ariyani*, Fina Fakhriyah, F. Shoufika Hilyana

Elementary School Teacher Education, Universitas Muria Kudus, Kudus, 59352, Indonesia

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* Corresponding author:

E-mail: feriarayani21@gmail.com

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ABSTRACT

This study aims to determine the differences in pretest and posttest scores in the Somatic, Auditory, Visual, Intellectual (SAVI) Learning Model assisted by interactive video on the learning outcomes of fourth-grade elementary school students. This research uses a quantitative research method with a one-group pretest-posttest design. The research was conducted by applying the SAVI learning model with interactive video assistance to the research subjects. The data analysis technique used is the paired sample T-test using IBM SPSS 26 software. The research sample consisted of 30 fourth-grade students at SD Negeri Pakem 01. The study results show a significant difference between the pretest and posttest scores of students after implementing the SAVI learning model assisted by interactive video, as indicated by the results of the paired sample T-test.

1. Introduction

Education plays an important role in improving the quality of human resources (Amalia et al., 2022). Social and Natural Sciences in elementary schools focus on understanding and applying scientific concepts related to natural and social phenomena. Social and Sciences learning at the elementary level covers various topics related to exploring phenomena, facts, and theories such as material properties, living organisms, environmental changes, and other fundamental scientific concepts. Additionally, this subject aims to develop students' critical, analytical, and observational skills (Setyawati et al., 2020). By understanding and applying scientific concepts from an early age, students are expected to develop an interest and skills in science (Nursiah et al., 2022).

The learning process should be carried out using effective and efficient methods to ensure proper knowledge transfer. A pleasant and engaging classroom atmosphere, along with effective classroom management, can encourage students to participate actively, fostering enthusiasm for learning (Istiqomah et al., 2020). Directly involving students in applying the theories taught can enhance their learning experience, making learning more engaging (Sunarsih, 2021).

Furthermore, in understanding students, teachers need to have skills in managing classroom activities. Teachers will encounter students with diverse characteristics. Some students can follow lessons smoothly, while others experience difficulties in learning (Salsabila & Puspitasari, 2020). Effective learning management requires not only good teaching strategies but also adequate learning tools. Currently, the learning process is still dominated by lecture methods (Rahmah et al., 2019). Teaching is essentially a process of communication, where teachers act as communicators delivering instructional content (Ainni, 2020).

The learning process involves interactions between teachers and students to achieve optimal learning outcomes. Currently, many students struggle to understand social and sciences, making it difficult to achieve satisfactory learning outcomes (Putri et al., 2021). Low learning outcomes in Social and Science can be caused by various factors, such as ineffective teaching methods, lack of concrete learning materials, absence of hands-on learning experiences, and students' perception that the subject is difficult. To address these challenges, teachers must understand each student's learning style and needs to create effective teaching methods (Panjaitan et al., 2019).

Based on interviews at SD Negeri Pakem 01, students faced difficulties understanding social and sciences due to the extensive material covered. Additionally, teaching methods were monotonous, primarily consisting of lectures and assignments. As a result, many students did not meet the school's learning achievement criteria. Akbar et al. (2022) stated that monotonous teaching methods focus students' attention only on the teacher, leading to low academic performance. Consequently, students become bored, disengaged, and struggle to understand the material.

To make learning more engaging, teachers should introduce varied teaching methods, such as interactive discussions, hands-on experiments, or educational technology. This approach helps students better understand social and sciences concepts and actively participate in learning (Panjaitan et al., 2019). One suitable learning model is the Somatic, Auditory, Visual, Intellectual (SAVI) approach, which involves physical activities, listening, seeing, and intellectual thinking (Apsah et al., 2023). SAVI encourages students to engage in learning through experiments, observations, and presentations.

To enhance student learning outcomes, teachers can integrate technology with the SAVI model using interactive videos. Interactive videos provide educational content in an engaging and easy-to-understand format (Fakhriyana & Riayah,

2021). These videos allow students to interact directly with the material, making learning more effective (Pertiwi & Putra, 2023).

Based on these issues, this research examines the Effectiveness of the Somatic, Auditory, Visual, Intellectual (SAVI) Learning Model Assisted by Interactive Video on the Learning Outcomes of Fourth-Grade Elementary School Students. The objective of this research is to analyze the differences in pretest and posttest scores of the SAVI learning model assisted by interactive video on the learning outcomes of fourth-grade elementary school students.

2. Methodology

The research was conducted in the fourth-grade class of SD Negeri Pakem 01, Sukolilo District, Pati Regency. The research period was from January 2024 to June 2024. The population in this study consisted of 30 fourth-grade students at SD Negeri Pakem 01. The sampling technique used was simple random sampling. According to Sugiyono (2019), a sample is a subset of the total population that possesses specific characteristics. This study employed a quantitative research method with a One-Group Pretest-Posttest Design. The research design used is shown in Table 1.

Table 1. One Group Pretest-Posttest Research Design

<i>Pretest</i>	<i>Treatment</i>	<i>Posttest</i>
O₁	X	O₂

(source: Sugiyono, 2019)

Sugiyono (2019) states that quantitative research is a type of research based on positivism and is used to study specific populations or samples. The quantitative research paradigm emphasizes theory testing by measuring research variables and analyzing numerical data (Rukminingsih et al., 2020). The data analysis technique used in this study is the paired sample T-test. This test is conducted after fulfilling the prerequisite of normality testing. Rusydi & Fadhli (2018) state that the normality test is a prerequisite test aimed at determining whether the data follows a normal distribution or not.

3. Results and Discussion

This research was conducted at SD Negeri Pakem 01 with fourth-grade students. The study utilized a paired sample T-test. The research was completed in less than one month. To collect data, the researcher first administered a pretest to the fourth-grade students before providing treatment or intervention. The pretest results indicated that students still faced difficulties in learning social and sciences, as seen from their responses to relatively simple questions. Many students provided random answers to questions they did not understand, and some questions were left unanswered.

Following the pretest, the students received treatment using the Somatic, Auditory, Visual, Intellectual (SAVI) learning model assisted by interactive video. This intervention was implemented from the pretest until the third session. In the fourth session, students were given a posttest. The posttest results revealed a noticeable improvement in students' ability to answer the given questions compared to their pretest performance. Based on the research findings, the detailed results are presented in Table 2, which summarizes the conceptual understanding scores of the fourth-grade students.

Table 2. Recapitulation of Grade IV Students' Concept Understanding Values

Data size	Pretest	Posttest
Data Amount	30	30
Number of Values	988	2506
Average	32,93	83,53
Lowest value	20	70
The highest score	56	94

(source: Researcher Data, 2024)

After the treatment was administered, the students' posttest results were obtained. The average posttest score for fourth-grade students was 83.53, which was significantly higher than the average pretest score of 32.93 ($83.53 > 32.93$). Additionally, scores for each conceptual understanding indicator, ranging from C1 to C6, were also recorded. These data can be observed in Figure 1, which presents the pretest-posttest conceptual understanding diagram.

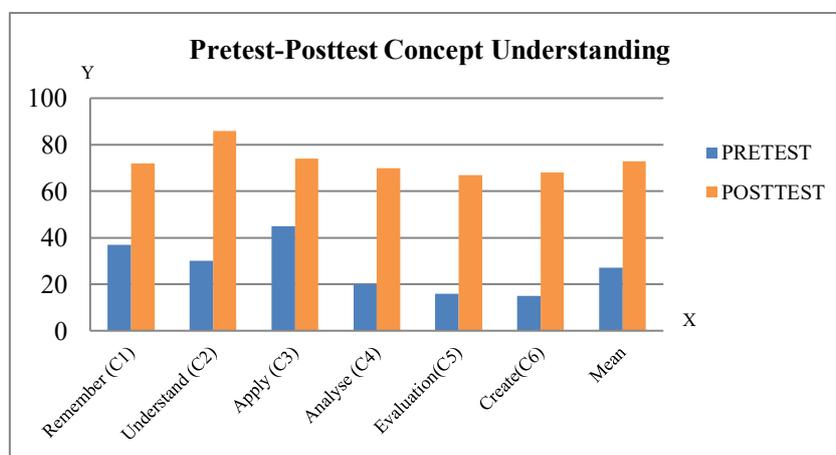


Figure 1. Pretest-Posttest Diagram of Concept Understanding
(source: Researcher Data, 2024)

The lowest and highest pretest scores were recorded in the creating indicator (C6) and applying indicator (C3), respectively. Meanwhile, the lowest and highest posttest scores were observed in the evaluating indicator (C5) and understanding indicator (C2). According to Amalia et al. (2020), the success of learning can be assessed based on students' learning outcomes, as an effective learning process will result in better academic performance. Based on these findings, it can be concluded that the average posttest score was higher than the pretest score.

Additionally, the students' process skills results are presented in Table 3, which summarizes the process skills scores of fourth-grade students.

Table 3. Recapitulation of Grade IV Students' Process Skills Values

Data size	Pretest	Posttest
Data Amount	30	30
Number of Values	1050	2574
Average	35	86
Lowest value	25	76
The highest score	46	96

(source: Researcher Data, 2024)

The process skills results in this study showed that the average pretest score was 35, while the average posttest score increased to 86. Regarding each process skills indicator, the lowest and highest pretest scores were observed in the communicating and observing indicators, respectively. Similarly, the lowest and highest posttest scores were also found in the communicating and observing indicators. The observing indicator showed the most significant improvement. This is illustrated in Figure 2, which presents the process skills diagram.

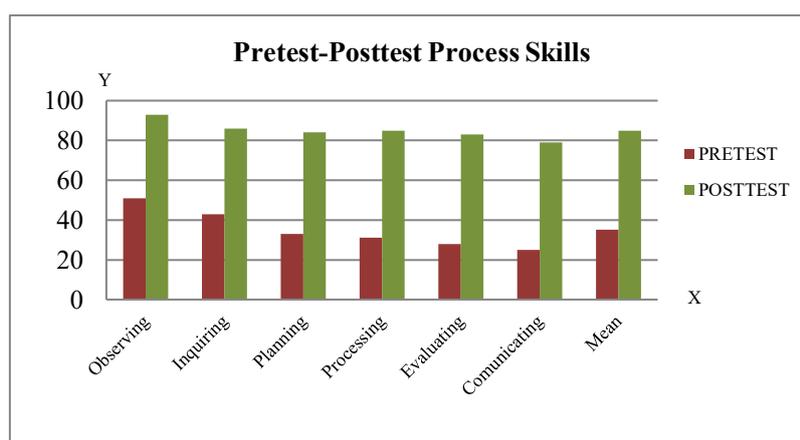


Figure 2. Process Skills Indicator Diagram
(Source: Researcher Data, 2024)

Based on the data obtained in the study, a prerequisite test was then conducted, namely the normality test.

Normality Test

Rusydi & Fadhli (2018) stated that the normality test is a prerequisite test aimed at determining whether the data follows a normal distribution. In this study, the normality test was conducted using the Shapiro-Wilk test with the IBM SPSS 26 software. The normality test was applied to student learning outcome data, including conceptual understanding scores and process skills. The results of the Shapiro-Wilk test are presented in Table 4, which shows the normality test results for conceptual understanding.

Pair 1	Pre test -	9.482	1.731	-54.141	-47.059	-29.230	29	.000
	Posttest	50.600						

(source: Researcher Data, 2024)

Based on the results of the paired sample T-test, a significance value (2-Tailed) of $0.000 < 0.05$ was obtained, indicating a significant difference in the average conceptual understanding scores before and after the learning process. The results of the paired sample T-test for process skills can be seen in Table 7.

Table 7. Results of the Paired Sample T-test for Process Skills

		Paired Samples Test								
		Paired Differences						t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	Pre Test - Post test	-50.967	3.347	.611	-52.217	-49.717	-83.392	29	.000	

(source: Researcher Data, 2024)

Based on the results of the paired sample T-test for process skills, a significance value (2-Tailed) of $0.000 < 0.05$ was obtained, indicating a significant difference in the average process skills scores before and after learning using the Somatic, Auditory, Visual, Intellectual (SAVI) learning model assisted by interactive video. From the results of the paired sample T-test for conceptual understanding and process skills, it can be concluded that there is a significant difference in the average learning outcomes of fourth-grade elementary school students before and after learning using the SAVI model with interactive video assistance.

During the research process, in the preparation stage, the teacher began the lesson with greetings, followed by student attendance, and then conducted an ice-breaking session to encourage and motivate students (somatic). This was followed by a triggering question before starting the lesson. In the delivery stage, the teacher explained the material on cultural diversity to students (auditory). To reinforce the explanation, an interactive video on cultural diversity was shown (visual). The video contained questions that students had to answer. In this activity, the teacher divided the students into several groups, where they discussed and determined the answers to the questions in the video (intellectual). During the problem-solving session, the teacher observed students' process skills, and this data was used as the posttest process skills score. After students completed the questions in the video, the teacher and students reviewed the answers together. Once the intervention was completed, posttest data was collected from the students.

There was a clear difference between the pretest and posttest results. During the pretest, students appeared confused and had difficulty understanding the

questions. They also took longer to respond and answered based on their existing knowledge. In contrast, during the posttest, students were more engaged and actively answered all questions. The responses showed that students could answer correctly with greater confidence. Furthermore, the average score analysis revealed that after the intervention, the average conceptual understanding score of social and sciences students increased by 50.60 points. This indicates that the conceptual understanding score of social and sciences students using the SAVI learning model assisted by interactive video was significantly better than that of students taught using conventional methods.

These findings align with previous research conducted by Antika et al. (2019), which stated that the SAVI learning model significantly affects students' learning outcomes. Kusumaningsih et al. (2019) also found that the SAVI model positively influences students' active learning participation. Additionally, Setyani et al. (2019) reported that the SAVI learning model has a significant impact on student engagement and positive feedback during the learning process.

During the first session, students appeared hesitant and shy when the lesson began. When asked triggering questions, some students were reluctant to answer, while a few responded confidently. However, after watching the video, students became more interested in the lesson. By the second session, students showed increased enthusiasm for learning. From the beginning of the lesson, including the ice-breaking session, question-and-answer activities, video presentations, and quiz exercises, students demonstrated a much higher level of engagement than in the first session. Based on these observations, it can be concluded that learning using the Somatic, Auditory, Visual, Intellectual (SAVI) model assisted by interactive video provides positive motivation to students, encouraging them to actively participate in the learning process.

The average process skills score of Social and sciences students increased by 50.96 points, proving that students' process skills scores using the SAVI learning model assisted by interactive video were significantly better than those taught using conventional methods. Students tended to be more engaged when using the SAVI learning model with interactive video. These findings are consistent with research by Sukendra (2020), which stated that the SAVI learning model provides students with experiences that encourage active participation in the classroom. The model integrates students' sensory abilities, including movement (somatic), hearing (auditory), sight (visual), and critical thinking (intellectual), simultaneously during the learning process.

In addition to the implementation of the SAVI learning model, other factors also influence students' social and sciences learning outcomes. Marlina & Sholehun (2021) suggested that students' learning outcomes are influenced by two main factors: internal factors, such as students' motivation, interest in learning, learning styles, and talents; and external factors, such as the classroom environment, teaching methods, and teacher effectiveness. In their study, Putri & Rino (2023) identified the main factors affecting students' learning outcomes as school-related factors, including curriculum, relationships, school discipline, infrastructure, and

parental upbringing. The second factor is personal potential, including health conditions, interests, talents, and students' readiness to learn. Asbar et al. (2023) concluded that the use of the Somatic, Auditory, Visual, Intellectual (SAVI) learning model requires students to engage all their senses in the learning process, ensuring that they do not only focus on cognitive abilities but also actively participate in the learning process.

4. Conclusion

Based on the results and discussion presented, it can be concluded that the Somatic, Auditory, Visual, Intellectual (SAVI) learning model assisted by interactive video has a significant impact on the learning outcomes of fourth-grade elementary school students in social and sciences. This is evidenced by the results of the paired sample T-test for conceptual understanding. The increase in the average conceptual understanding score indicates a difference between the pretest and posttest scores after implementing the SAVI learning model. Additionally, the results of the paired sample T-test for process skills and the increase in the average process skills score demonstrate a difference in students' learning abilities before and after the application of the Somatic, Auditory, Visual, Intellectual (SAVI) model.

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