



The effectiveness of the Student Facilitator and Explaining (SFAE) model in improving fifth-grade students' social studies learning outcomes

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ABSTRACT

This study examined the effectiveness of the Student Facilitator and Explaining (SFAE) model in improving social studies learning outcomes among fifth-grade elementary school students. The study employed a quasi-experimental design involving an experimental group taught using the SFAE model and a control group taught using conventional methods. Data were collected using a learning outcome test, student activity observation sheets, and a short interview guide. Quantitative data were analyzed using prerequisite tests and a t-test, while observational and interview data were analyzed descriptively. The findings showed an improvement in students' social studies learning outcomes following the implementation of the SFAE model. The mean posttest score reached 76.59, with 86.36% of students achieving the minimum mastery criterion. Classroom observations also indicated active student participation during the learning process, particularly in attending to instruction and completing learning activities. Overall, the findings suggest that the SFAE model can support social studies learning outcomes by providing students with opportunities to actively engage with and explain learning material to their peers. However, given the study's limited sample and single-school setting, the findings should be interpreted within the context of this study.

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INTRODUCTION

Basic education plays an important role in developing the knowledge, skills, and values that students need for later stages of learning and social life. At this level, students are expected not only to acquire subject knowledge but also to develop critical thinking, social skills, and civic values (Wardah & Arifin, 2022). Social studies contributes to these goals by introducing social, economic, and cultural concepts that are closely related to students' everyday experiences (Okatafianti & Purnomo, 2025). Beyond the acquisition of factual knowledge, social studies can also provide opportunities for students to develop empathy and multicultural awareness, which are important in Indonesia's diverse social context (Farid et al., 2024). Recent discussions on social studies education have therefore emphasized the need to strengthen information literacy and students' capacity to engage with increasingly complex social issues (Crawford et al., 2025). Effective social studies instruction at the elementary level should consequently enable students to understand subject matter while also developing the skills needed to interpret and respond to their social environment.

Despite these expectations, social studies learning at the elementary level continues to present challenges (Matital et al., 2026). Students may have difficulty understanding concepts when instruction emphasizes memorization without sufficiently connecting the material to real-life situations (Afrilihadi et al., 2025). Limited connections between classroom content and students' experiences may also reduce engagement and contribute to lower learning outcomes (Hidayah et al., 2025). This issue is particularly relevant at the elementary level, where students are gradually moving toward an understanding of more abstract concepts (Trisnani, 2025). At the same time, the effectiveness of interactive instructional approaches may vary according to student characteristics and learning environments (Paramole & Adeoye, 2024). These conditions highlight the need for learning approaches that encourage students to participate actively in constructing and communicating their understanding.

One approach that may support greater student participation is the Student Facilitator and Explaining (SFAE) model (Dewi & Bayu, 2024). Rather than positioning students primarily as recipients of information, SFAE provides opportunities for them to act as facilitators and explain learning material to their peers (Veine et al., 2023). Such activities can encourage students to process information more actively while developing communication skills and confidence (Wati et al., 2024). The shift from passive participation toward a more active role may also create a more collaborative classroom environment (Putra et al., 2021). This characteristic makes SFAE relevant to social studies, where learning involves not only understanding concepts but also communicating ideas and engaging with different perspectives. More broadly, participatory learning approaches can provide opportunities for students to become more actively involved in the learning process (Salmon & Barrera, 2021).

The rationale for SFAE is also consistent with several perspectives on learning (Giannoukos, 2024). From a constructivist perspective, students develop knowledge by actively engaging with and making sense of their learning experiences (Jamaludin & Marini, 2022). Cooperative learning similarly emphasizes interaction among students as they work together to understand learning material (Wulandari, 2022). Vygotsky's social learning perspective further highlights the role of social interaction in cognitive development, including interactions in which students explain ideas and learn with their peers (Qiptiyah, 2024). Taken together, these perspectives provide a theoretical basis for examining whether opportunities to explain material to others can contribute to students' understanding and learning outcomes.

Concerns about passive participation and rote learning are not limited to a single educational setting. Studies conducted in different contexts have examined instructional approaches intended to increase student engagement and move learning beyond mechanical memorization (Hemtasin et al., 2026). For example, research on Total Physical Response (TPR) has discussed both its potential to increase engagement and the limitations that may arise when instruction remains teacher-dominated or drill-oriented (Chicaiza & Luna, 2025; Zhao, 2025). Research in Ecuador has similarly suggested that combining TPR with functional training may support motivation and learning outcomes while highlighting the continuing need for approaches that move beyond rote learning (Galán-Cherrez et al., 2023). In a South African higher education context, monotonous slide-based and question-and-answer instruction was associated with student disengagement and an orientation toward merely passing the course (Letuka & Mokhothu, 2025). Although these studies involve different subjects, educational levels, and instructional approaches, they illustrate a broader concern with how teaching practices can encourage more active student participation.

Previous studies have reported positive outcomes associated with SFAE across several learning contexts. Letuka and Mokhothu (2025), for example, reported improvements in student learning outcomes following the implementation of SFAE. The model is also relevant to the development of competencies that require students not only to understand content but also to communicate their ideas effectively (Brata et al., 2023). One of its central features—having students explain material to their peers—provides opportunities for learners to reorganize and articulate their own understanding (Mustikasari et al., 2019). Previous applications have also examined SFAE in science and other subject areas (Ulfa et al., 2024). However, evidence specifically concerning its use in elementary social studies remains comparatively limited. This distinction is important because

social studies includes concepts and social values that may require different forms of student engagement from those involved in more procedural learning tasks.

Recent research on learning through explanation and peer interaction provides additional support for examining this issue. A meta-analysis of 39 experimental studies found that preparing to teach and teaching others can benefit learning, particularly when learners know in advance that they will be expected to explain the material (Kobayashi, 2024). Evidence from other educational contexts points in a similar direction. A quasi-experimental study involving more than 800 first-year medical students in China reported that structured peer-guided learning improved knowledge, motivation, and self-efficacy compared with conventional instruction (Zhang et al., 2025). A meta-analysis of cooperative learning in physical education likewise reported positive effects on student learning outcomes across different settings (Boke et al., 2025). These studies do not examine SFAE in elementary social studies directly, but they provide broader evidence for learning arrangements that involve peer interaction, explanation, and active participation.

Against this background, a more specific question remains regarding the effectiveness of SFAE in elementary social studies. Although interactive and peer-based approaches have been examined across different educational contexts, studies specifically investigating SFAE among elementary school students in social studies remain limited (Mandar & Sihono, 2025). The present study therefore examines the effectiveness of the Student Facilitator and Explaining (SFAE) model in improving social studies learning outcomes among fifth-grade elementary school students. In addition to examining learning outcomes, the study considers students' participation during the learning process to provide further insight into the implementation of SFAE in the classroom. The findings are expected to inform the selection of instructional approaches that encourage students to engage more actively with social studies learning.

METHOD

Research Design and Participants

This study employed a quantitative approach with a quasi-experimental pretest–posttest group design (Creswell & Creswell, 2017). Two groups were involved: an experimental group that received social studies instruction using the Student Facilitator and Explaining (SFAE) model and a control group that received conventional instruction. The effectiveness of the SFAE model was examined by comparing students' learning outcomes following the instructional treatment (Silaban & Hendrawan, 2022). The study was conducted with fifth-grade students at a public elementary school (SDN). All fifth-grade students at the participating school were included and assigned by existing classes to an experimental group and a control group, with relatively similar numbers of students in each group.

Research Variables

The independent variable was the Student Facilitator and Explaining (SFAE) model, which was implemented in the experimental group. The dependent variable was students' social studies learning outcomes, as measured through the learning outcome test. Classroom conditions, instructional time, and subject matter were treated as control variables and were kept as consistent as possible across the two groups to minimize the influence of factors other than the instructional approach.

Research Procedure

The study was conducted in three stages: preparation, implementation, and data analysis. During the preparation stage, the researcher reviewed relevant literature on the SFAE model and social studies learning outcomes, developed the research instruments, and obtained the necessary permission from the school. The instruments prepared at this stage included pretest and posttest questions, a student activity observation sheet, and a short interview guide.

During the implementation stage, both groups first completed a pretest to assess their initial understanding of the social studies material and establish their baseline performance. The

experimental group then received instruction using the SFAE model. The instructional process involved introducing the learning objectives, briefly explaining the material, organizing students into groups, appointing student facilitators, providing opportunities for the facilitators to explain the material to their peers, conducting class discussions, providing teacher clarification, and concluding the lesson with an evaluation. The control group studied the same subject matter through conventional instruction, primarily consisting of lectures and question-and-answer activities.

After the instructional treatment, both groups completed a posttest to assess their learning outcomes. Classroom observations were also conducted during the learning process to document students' engagement, communication, cooperation, and active participation. Short interviews with teachers and selected students provided additional information about the implementation of the SFAE model and participants' experiences during the lessons.

Research Instruments

Three instruments were used to collect the data. First, the learning outcome test consisted of multiple-choice and essay questions developed based on the competency indicators of the fifth-grade social studies curriculum. The test was administered before and after the instructional treatment to assess students' cognitive learning outcomes. Second, a student activity observation sheet was used to document students' engagement, communication, cooperation, and active participation during the learning process. Third, a short interview guide was used with teachers and selected students to obtain additional information about the implementation of SFAE and their experiences and perceptions during the instructional process.

Data Analysis

Quantitative data obtained from the pretest and posttest were analyzed using normality and homogeneity tests as prerequisite analyses. An independent-samples t-test was then used to examine differences in social studies learning outcomes between the experimental and control groups. Data obtained from classroom observations and short interviews were analyzed descriptively to provide additional information for interpreting the quantitative findings.

RESULTS AND DISCUSSION

Results

Student Participation During SFAE Instruction

Classroom observations were conducted throughout the implementation of the Student Facilitator and Explaining (SFAE) model to document students' participation in the learning process. The observed activities included attendance, attention to the teacher's explanations, participation in worksheet activities, help-seeking and peer-support behaviors, confidence in completing tasks, and activities unrelated to the lesson. The results are presented in **Table 1**.

The observational data indicate a generally high level of participation in several classroom activities. Student attendance and active participation in worksheet activities both reached 95.45%, while 88.64% of students attended to the teacher's explanations. By contrast, 22.73% asked the teacher or their peers for clarification when they did not understand the material, and 13.64% provided assistance to peers experiencing difficulties. The proportion of students who lacked confidence when completing tasks was 18.18%, while 9.09% engaged in activities unrelated to the lesson. These findings suggest that most students remained engaged with the main instructional activities, although direct peer interaction and help-seeking were less frequently observed.

Table 1. Student Activities During the Learning Process

No.	Student Activities	Number of Active Students at the Meeting						Average	Percentage (%)
		1	2	3	4	5	6		
1.	Students who are present during the learning process.		21	22	22	19		21	95.45
2.	Students who pay attention to explanations during the learning process.		19	20	20	19	P	19,5	88.64
3.	Students who are actively working on LKS.	P	21	22	22	19	O	21	95.45
4.	Students who ask teachers or friends about material they don't understand.	R	4	7	5	4	S	5	22.73
5.	Students who provide assistance to friends who are experiencing difficulties.	E	3	3	4	2	T	3	13.64
6.	Students who lack confidence in working on questions.	T	3	4	4	5	E	4	18.18
7.	Students who carry out activities outside the learning scenario (not paying attention to the teacher's explanation, being sleepy, disturbing friends, leaving and entering the room without permission).	S	2	3	3	1	T	2	9.09

Students' Social Studies Learning Outcomes

Before the implementation of SFAE, students' social studies achievement was relatively low. As shown in **Tables 2** and **3**, the total pretest score was 745 across 22 students, corresponding to a mean score of 33.86.

Table 2. Distribution of Students' Pretest Scores

No.	Score	Frequency (f)	Percentage (%)
1	65	1	4.54
2	60	1	4.54
3	50	1	4.54
4	45	7	31.82
5	30	8	36.36
6	15	1	4.54
7	0	3	13.64
Total		22	100

Table 3. Calculation of the Mean Pretest Score

X	F	F.X
65	1	65
60	1	60
50	1	50
45	7	315
30	8	240
15	1	15
0	3	0
Total	22	$\sum fx = 745$

The distribution of pretest achievement levels is presented in **Table 4**. Of the 22 students, 20 (90.90%) were classified in the very low category, while one student (4.54%) was classified in the low category and one (4.54%) in the medium category. No students were classified in the high category. Consistent with this distribution, **Table 5** shows that none of the students had reached the minimum mastery criterion at the pretest stage.

Table 4. Distribution of Pretest Achievement Levels

No.	Value Interval	Category	Pretest	
			Frequency	Percentage (%)
1.	0 – 54	Very Low	20	90.90
2.	55 – 64	Low	1	4.54
3.	65 – 74	Medium	1	4.54
4.	75 – 84	High	0	0
	Total		22	100

Table 5. Pretest Mastery Distribution

Category	Frequency (f)	Percentage (%)
Incomplete	22	100
Completed	0	0
Total	22	100

Following the implementation of SFAE, students' scores were higher than their pretest scores. The posttest scores ranged from 65 to 95, with a total score of 1,685 and a mean of 76.59 (Tables 6 and 7).

Table 6. Distribution of Students' Posttest Scores

No.	Score	Frequency (f)	Percentage (%)
1	95	1	4.54
2	85	3	13.64
3	80	5	22.73
4	75	8	36.36
5	70	2	9.09
6	65	3	13.64
Total		22	100

To find the mean (average) posttest score for class V SDN Moncobalang 2, Barombong District, Gowa Regency, you can see Table 7.

Table 7. Calculation of the Mean Posttest Score

X	F	F.X
95	1	95
85	3	255
80	5	400
75	8	600
70	2	140
65	3	195
Total	22	$\Sigma fx = 1.685$

As shown in Table 8, five students (22.73%) were in the medium category, 13 (59.09%) were in the high category, and four (18.18%) were in the very high category. No students were classified in the low or very low categories. In terms of mastery, 19 students (86.36%) met the minimum criterion, whereas three students (13.64%) remained below it (Table 9). Thus, the proportion of students meeting the mastery criterion increased from 0% at pretest to 86.36% at posttest.

Table 8. Distribution of Posttest Achievement Levels

No.	Value Interval	Category	Post test	
			Frequency (f)	Percentage (%)
1.	0 – 54	Very Low	0	0
2.	55 – 64	Low	0	0
3.	65 – 74	Currently	5	22.73
4.	75 – 84	High	13	59.09
5	85 – 100	Total	4	18.18
Total			22	100

Table 9. Posttest Mastery Distribution

Category	Frequency (f)	Percentage (%)
Incomplete	3	13.64
Completed	19	86.36
Total	22	100

Pretest–posttest Analysis

Table 10 presents the paired pretest and posttest scores for the 22 students. The mean difference between the two measurements was reported as 42.95 points. The manuscript further reports a calculated *t* value of 6.98 and concludes that students' scores differed significantly between the pretest and posttest measurements.

Table 10. Analysis of Students' Pretest and Posttest Scores

No.	Pretest	Posttest	$d = X_2 - X_1$	d^2
1	65	95	30	900
2	50	85	35	1225
3	30	65	35	1225
4	45	80	35	1225
5	30	75	45	2025
6	45	75	30	900
7	15	75	60	3600
8	60	85	25	625
9	45	80	35	1225
10	45	80	35	1225
11	0	75	75	5625
12	30	70	40	1600
13	30	75	45	2025
14	0	70	70	4900
15	30	85	55	3025
16	45	75	30	900
17	45	80	35	1225
18	30	85	55	3025
19	30	75	45	2025
20	30	75	45	2025
21	0	65	65	4225
22	45	65	20	400
Total	745	1690	945	45175

Taken together, the descriptive results indicate a substantial increase in students' social studies scores following SFAE instruction. The mean score increased from 33.86 at pretest to 76.59 at posttest, and 86.36% of students met the minimum mastery criterion after the intervention. Classroom observations further indicate that most students attended regularly, paid attention during instruction, and actively completed the assigned learning activities.

Discussion

The findings indicate that students achieved higher social studies scores after learning through the Student Facilitator and Explaining (SFAE) model. The increase in the mean score from 33.86 at pretest to 76.59 at posttest, together with the increase in mastery from 0% to 86.36%, suggests that students demonstrated substantially better performance following the intervention. Classroom observations complement these achievement data by showing high levels of attendance, attention to instruction, and participation in worksheet activities. Nevertheless, the relatively lower percentages of students who asked questions or assisted peers suggest that active participation did not occur equally across all forms of classroom interaction.

One possible explanation for the improvement is the central role that students assume in SFAE. Rather than receiving information only from the teacher, students are given opportunities to organize their understanding and explain the material to their peers. Explaining ideas to others requires students to retrieve, reorganize, and communicate what they have learned, potentially strengthening their own understanding while creating opportunities for interaction. Previous research has similarly associated SFAE with learning processes that support students' confidence and communication (Pramusinta & Dewi, 2023; Yu et al., 2025). This interpretation is also consistent

with constructivist and social perspectives on learning, which emphasize active knowledge construction and the role of interaction in learning (Rigopouli et al., 2025; Wibowo et al., 2025).

The observational findings, however, provide a more nuanced picture of student engagement. Although 95.45% of students actively completed the worksheets and 88.64% attended to the teacher's explanations, only 22.73% asked questions when they encountered difficulties, and 13.64% were observed helping peers. In addition, 18.18% showed a lack of confidence when completing tasks. These patterns suggest that participation in structured classroom activities was stronger than spontaneous communicative or peer-support behaviors. Therefore, while SFAE creates opportunities for active participation, some students may require additional scaffolding to participate confidently in the more interactive aspects of the model.

This interpretation is also relevant to the three students (13.64%) who did not reach the minimum mastery criterion after the intervention. The original study associates differences in achievement with variation in students' initial abilities and learning motivation (Gamuzza et al., 2025; Valenzuela et al., 2024). Although the present data do not independently establish which factors accounted for these students' outcomes, their continued difficulty indicates that the same instructional approach may not benefit all learners to the same extent. Additional teacher support may therefore be needed for students who experience difficulty during peer explanation and collaborative activities.

The findings are broadly consistent with previous studies of SFAE. Novitasari et al. (2023) reported improved student achievement following SFAE implementation at SDN 145 Barru, with a mastery rate of 78.18%. Similarly, Kistian (2023) reported a mean score of 77.25 and 85% mastery among fifth-grade students at Krueng Itam Public Elementary School. Firdianti et al. (2025) also reported improvements in student participation, classroom activity, and learning mastery, with mastery increasing from 55.56% to 81.49%. Although these studies were conducted in different settings, their findings provide supporting evidence that SFAE can be associated with improvements in both learning outcomes and classroom participation.

The potential value of SFAE may also be understood in relation to learning environments that encourage interaction and communication. Junanah et al. (2024) highlighted the contribution of visual media to student motivation, engagement, and learning outcomes in social studies, while Feyza and Seyda (2023) emphasized the role of interactive and collaborative learning environments in developing communication, collaboration, and critical-thinking skills. These studies do not provide direct evidence for the effectiveness of SFAE itself, but they support the broader principle that learning environments that provide opportunities for interaction and active participation can contribute to students' learning experiences. In this respect, the peer-explanation component of SFAE is particularly relevant because it shifts part of the learning process from teacher-led delivery toward student articulation and interaction.

At the same time, the findings should not be interpreted as evidence that SFAE alone caused all of the observed improvements. The study involved a relatively small sample from a single elementary school, which limits the extent to which the findings can be generalized to other student populations and educational settings. More importantly, although the study was described as having an experimental and a control group, the results reported here provide substantially more complete data for the students receiving SFAE than for the control condition. This limits direct evaluation of whether the observed improvement exceeded the change that might have occurred under conventional instruction.

Future studies should therefore report equivalent descriptive and inferential statistics for both experimental and control groups and provide clearer information on group allocation and treatment implementation. Larger samples drawn from multiple schools would also provide a stronger basis for examining whether the findings are consistent across different classroom contexts. Where appropriate, randomization or matching procedures could help reduce baseline differences between groups. Further research should also report evidence concerning the validity and reliability of the instruments and include an effect-size estimate alongside statistical significance. These improvements would allow the effectiveness of SFAE to be evaluated more transparently and provide a stronger basis for understanding its contribution to elementary social studies learning.

CONCLUSION

This study indicates that the Student Facilitator and Explaining (SFAE) model has the potential to support fifth-grade students' social studies learning outcomes. Following the implementation of SFAE, the mean posttest score reached 76.59, with 86.36% of students meeting the minimum mastery criterion. Classroom observations also showed that most students were actively involved in the main learning activities, particularly in attending to instruction and completing assigned tasks. By giving students opportunities to explain learning material to their peers, SFAE can provide a more participatory learning environment in which students take a more active role in the learning process. However, 13.64% of the students did not reach the minimum mastery criterion, indicating that some learners may require additional instructional support.

These findings should be interpreted in light of the study's relatively small sample, its single-school setting, and the limited reporting of comparable data for the control group. Future research should therefore examine SFAE with larger and more diverse samples across multiple schools, provide equivalent reporting for experimental and control groups, and investigate its effects over longer periods and across different subject areas. Further studies should also report evidence of instrument validity and reliability and include effect-size estimates to provide a clearer assessment of the magnitude of the observed effects. Within these limitations, SFAE offers a potentially useful approach for encouraging active participation in elementary social studies, although stronger comparative evidence is needed before broader conclusions about its effectiveness can be drawn.

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