

THE EFFECT OF IMPLEMENTING THE CONTEXTUAL TEACHING LEARNING (CTL) MODEL ASSISTED BY POP-UP BOOK MEDIA ON THE SOCIO-CULTURAL SKILLS OF ELEMENTARY SCHOOL STUDENTS

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ABSTRACT

Learning in elementary school is still often focused on cognitive aspects with a teacher-centered process and rarely connects the material to students' real-life context, so students' social and cultural skills tend to not develop optimally. This study aims to determine the effect of the Contextual Teaching and Learning (CTL) model assisted by Pop-Up Book media on elementary students' socio-cultural skills and compare its effectiveness with the Cooperative Learning model. Using a quasi-experimental design with a Non-Equivalent Control Group Design, the research population comprised all fourth-grade students at SDN Karang Asih 08, Bekasi Regency. Purposive sampling selected 30 students for the experimental class (CTL with Pop-Up Books) and 28 for the control class (Cooperative Learning with PowerPoint). Data were collected via an 8-question essay test measuring four socio-cultural skill indicators based on the Ministry of Education and Culture (2020). Descriptive analysis showed the experimental class's mean posttest score (86.47) outperformed the control class (76.89). Simple linear regression yielded an R-Square of 0.299, indicating a significant 29.9% contribution of the CTL model with Pop-Up Books to skill improvement. Furthermore, the N-Gain Score analysis revealed the experimental class achieved 76.26% (effective category), whereas the control class only reached 55.50% (fairly effective category). In conclusion, implementing the CTL model assisted by Pop-Up Book media significantly affects and proves more effective in improving elementary students' socio-cultural skills than the Cooperative Learning model.

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INTRODUCTION

Elementary education plays a crucial role in shaping students' character, knowledge, and social skills. Elementary school serves not only as a place for the transfer of academic knowledge but also as a means of developing the socio-cultural skills students need to live in society. Socio-cultural skills include the ability to interact politely, cooperate, respect cultural differences, and foster attitudes of tolerance and empathy in daily life (Sapriya, 2017). However, in practice, learning in elementary schools often remains focused solely on cognitive aspects, with a *teacher-centered* learning process that fails to connect the material to real-life contexts, resulting in low levels of students' social and cultural skills (Sanjaya, 2016).

Suryani and Agung (2020) state that the development of students' social and cultural skills in elementary school must be carried out continuously through meaningful and contextual learning so that social and cultural values can be instilled optimally. Research by Widiastuti and Sapriya (2018) also indicates that the social skills of fourth-grade elementary school students—such as cooperation, communication, and an attitude of respecting differences—have not developed optimally when instruction remains dominated by lecture-based methods.

The *Contextual Teaching and Learning* (CTL) model is considered relevant for supporting the development of students' socio-cultural skills because it emphasizes the connection between learning materials and students' real-life experiences. Nurhadi and Widodo (2022) argue that the implementation of CTL can create more meaningful learning through activities such as discussions, group work, and problem-solving that encourage students' social interaction. Additionally, the use of innovative learning media such as *pop-up books* contributes to enhancing students' interest in learning, conceptual understanding, and engagement. Rahmawati and Kurniawan (2020) state that *pop-up books* provide concrete, engaging, and interactive learning experiences, thereby potentially strengthening the development of social and cultural skills.

Despite this body of research, prior studies have generally examined the CTL model and Pop-Up Book media as separate interventions rather than as an integrated approach, and few have directly compared their combined effectiveness against the Cooperative Learning model using a structured, indicator-based measure of socio-cultural skills. Rahmawati, Supriatna, and Winataputra (2019) confirmed that CTL improves students' socio-cultural skills, while Putri and Sari (2021) showed that Pop-Up Books supported by CTL improve social skills; however, neither study benchmarked these gains against an active comparison model using indicators grounded in the Ministry of Education and Culture's (2020) Pancasila Student Profile framework. This gap motivates the present study, which integrates the CTL syntax with Pop-Up Book media and evaluates its effect against the Cooperative Learning model across four explicit socio-cultural skill indicators, thereby providing more direct and comparable evidence for practitioners.

Based on this background, this study aims to determine: (1) the effect of implementing the CTL model assisted by *pop-up books* on the sociocultural skills of elementary school students; and (2) a comparison of the effectiveness of the CTL model assisted by *pop-up books* versus the *Cooperative Learning* model in enhancing the sociocultural skills of fourth-grade elementary school students.

METHOD

This study employs a quantitative approach using a quasi-experimental research design with a Non-Equivalent Control Group Design. This design involves two groups, each administered a pretest before the intervention and a posttest after the intervention. The experimental group received an intervention involving the application of the CTL model using a Pop-Up Book as a medium, while the control group utilized the Cooperative Learning model with PowerPoint.

In practice, the experimental class followed the CTL syntax across four stages. In the relating stage, the teacher introduced regional cultural themes using the Pop-Up Book's three-dimensional illustrations (e.g., traditional houses, ceremonies, and clothing) to connect the material to students' everyday cultural surroundings. In the experiencing stage, students worked in small groups to explore the pop-up pages, identify cultural elements, and discuss their meaning, encouraging cooperation and turn-taking around the shared medium. In the applying stage, students presented their findings through simple role plays or simulations that reenacted the cultural practices depicted in the book. Finally, in

the cooperating and reflecting stages, the class held a joint discussion to compare group findings and reflect on the values of tolerance and respect illustrated by the material. The control class, by contrast, followed a standard Cooperative Learning syntax (group formation, material presentation via PowerPoint slides, group worksheet completion, and presentation of results) without the three-dimensional, tactile element provided by the Pop-Up Book; cultural content in the control class was conveyed primarily through static text and images on slides.

The research population consists of all fourth-grade students at SDN Karang Asih 08 in Bekasi Regency. The sample was selected using *purposive sampling* based on the following considerations: (1) fourth-grade students are at the concrete operational stage; (2) there is uniformity in student characteristics due to the zoning admission system; (3) the school uses the Merdeka Curriculum; and (4) the school has two learning groups. The sample consisted of 30 students from Class IV-B (experimental class) and 28 students from Class IV-A (control class).

The data collection instrument consisted of an essay test with 8 questions measuring 4 indicators of socio-cultural skills. The instrument was validated using ANATES Version 26, with 8 out of 11 items deemed valid (correlation coefficients ranging from 0.547 to 0.855). Reliability testing indicated the instrument had good consistency.

Data analysis techniques included: (1) descriptive analysis to describe pretest and posttest scores; (2) prerequisite tests, namely the normality test (*Shapiro-Wilk*) and the homogeneity test (*Levene's Test*); (3) the *Independent Samples T-Test* to compare the means of the two groups; (4) N-Gain Score analysis to measure the effectiveness of improvement; and (5) simple linear regression to determine the effect of independent variables on the dependent variable.

RESULT AND DISCUSSION

Descriptive Analysis

Based on the results of the descriptive analysis, the following overview of the pretest and posttest data was obtained:

Table 1. Descriptive Results of the Pretest and Posttest

Class	Average Pretest	Average Posttest	Improvement
Experiment	56.47	86.47	30,00
Control	48.89	76.89	28,00

(Source: Research Data Analysis Results (2026))

Based on Table 1, the average posttest score for the experimental class was 86.47, which was higher than that of the control class, which only reached 76.89. This difference indicates a positive effect of the treatment given to the experimental class.

N-Gain Score Test Results

N-Gain Score analysis was used to measure the effectiveness of learning outcome improvement between the pretest and posttest for each group.

Table 2. N- Gain Score Test Results for the Experimental and Control Classes

Class	N-Gain Score	Description	N-Gain (%)	Description
Experiment	0,762	High	76,26%	Effective
Control	0,555	Moderate	55,50%	Less Effective

(Source: Research Data 2026)

Table 2 shows that the experimental class achieved an average N-Gain of 76.26%, which falls into the effective category, while the control class achieved only 55.50%, which falls into the moderately effective category. The significant difference in N-Gain between the two groups indicates that the Pop-Up Book-assisted CTL model is superior in improving students' sociocultural skills.

Table 3. N-Gain Scores for each socio-cultural skills indicator

Indicator	Class Experiment al	Criteria	Class Control	Criteria
Retelling information about regional culture	0.90	High	0.81	High
Presenting the result of cultural discusiions orally/in writing	0.88	High	0.79	High
Creating simple works (posters, pictures, cultural projects	0.86	High	0.75	High
Presenting regional culture in simulations/role plays	0.83	High	0.45	High

(Source: Research Data 2026)

According to the Ministry of Education and Culture in 2020, socio-cultural skills are competencies that integrate social abilities and cultural understanding, playing a vital role in shaping pupils into individuals of good character and high moral standards, who are able to live and contribute positively within a diverse society. These competencies form a crucial foundation in the learning process at primary school, preparing pupils to become citizens embodying the values of Pancasila.

Results of the Simple Linear Regression Test

To determine the extent of the influence of the *Pop-Up Book*-assisted CTL model on students' sociocultural skills, a simple linear regression test was conducted.

Table 4. Results of the Coefficient of Determination Test

Model	R	R-Square	Contribution (%)
Contextual Teching Learning (CTL)	0.547	0.299	29.9%

Source: SPSS Data Analysis Results (2026)

Table 3 shows an R-Square value of 0.299, which means that the *Pop-Up Book*-assisted CTL model contributes 29.9% to the improvement of students' sociocultural skills, while the remaining 70.1% is influenced by other factors outside the scope of this study.

DISCUSSION

The results of this study confirm that the implementation of the CTL model assisted by *Pop-Up Book* media has a significant effect on the improvement of fourth-grade elementary school students' sociocultural skills. This finding aligns with the research by Rahmawati, Supriatna, and Winataputra (2019), which revealed that the contextual learning model is capable of significantly improving students' social and cultural skills, particularly in the aspects of cooperation, polite communication, tolerance, and social concern.

The success of the CTL model in this study can be explained by the *learning community* component, which encourages students to learn through cooperation and social interaction (Trianto, 2019). Students in the experimental class were trained to relate learning materials to their real lives, so that socio-cultural values were not only understood cognitively but also internalized in daily behavior (Sanjaya, 2016). This is consistent with Hurlock's (2013) view that fourth-grade students, who are at the concrete operational stage, find it easier to understand socio-cultural values through direct experience and social activities.

The role of *pop-up books* has also proven to be significant in supporting successful learning. The three-

dimensional visualizations presented by this medium are capable of concretely representing social and cultural situations, thereby encouraging discussion, cooperation, and mutual respect among students (Arsyad, 2020). This finding aligns with the research by Lestari and Hidayat (2020), which concluded that the use of *Pop-Up Books* in learning can significantly enhance students' social interaction.

Beyond the aggregate scores, the indicator-level data in Table 4 (originally Table 3) reveal a more nuanced picture of how the Pop-Up Book's physical, three-dimensional design shaped classroom interaction. Because the medium required students to physically lift flaps, unfold layers, and pull tabs to reveal cultural content, students were compelled to negotiate turns, explain mechanisms to peers who had not yet seen a particular page, and coordinate roles before group presentations — behaviors that map directly onto the cooperation and tolerance components of socio-cultural skill. This is most visible in the simulation/role-play indicator, where the experimental class's N-Gain (0.83) far exceeded the control class's (0.45): the tactile, three-dimensional cues embedded in the Pop-Up Book appear to have given students a more concrete reference for how to physically and verbally enact cultural practices, whereas the control class, working only from static PowerPoint slides, had fewer concrete cues to draw on when constructing a role play.

The remaining 70.1% of variance not explained by the CTL-Pop-Up Book model is also worth examining critically rather than treated as unexplained noise. Several plausible contributors fall outside the scope of this study's design: individual differences in students' prior cultural exposure and family background, which shape baseline familiarity with the cultural content presented; group-level dynamics such as peer leadership and friendship composition within the purposively sampled classes, which were not measured by the essay-test instrument; and the inherent limitation of an essay test itself, which captures students' cognitive-verbal articulation of socio-cultural concepts rather than their actual social behavior in daily interaction. Future studies could address this gap by triangulating test scores with classroom observation or peer-rating instruments to capture the behavioral dimension of socio-cultural skill that a written test cannot fully reach.

The comparison of N-Gain between the experimental class (76.26%) and the control class (55.50%) indicates a significant advantage of the CTL model supported by *Pop-Up Books*. This finding supports the research by Putri and Sari (2021), which concluded that the CTL model supported by *Pop-Up Books* has a positive and significant impact on improving students' social skills. Furthermore, the results of this study are also consistent with Suryani, Arifin, and Nugroho (2020), who found that the implementation of the CTL model can improve students' social skills and learning participation more effectively.

CONCLUSION

Based on the research results and discussion, it can be concluded that: (1) The implementation of the *Contextual Teaching and Learning* (CTL) model assisted by *Pop-Up Books* has a significant effect on the sociocultural skills of fourth-grade elementary school students, with a contribution of 29.9% (R Square = 0.299); (2) The CTL model supported by *Pop-Up Books* proved to be more effective in improving students' socio-cultural skills compared to the *Cooperative Learning* model, as indicated by the N-Gain score of 76.26% (effective category) in the experimental class, which is higher than the control class's score of 55.50% (moderately effective category); and (3) The average posttest score of the experimental class (86.47) is significantly higher than that of the control class (76.89).

This study recommends that elementary school teachers adopt the Pop-Up Book-assisted CTL model as a meaningful contextual learning innovation, particularly in the IPAS subject with social and cultural skills content. School principals are advised to support this innovation by implementing inclusive policies and providing regular training for teachers in the creation of interactive learning media. For future research, it is recommended to expand the geographical scope, sample size, and duration of the study so that the long-term effectiveness of this model can be measured more comprehensively.

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