

The Influence of The Contextual Teaching Learning (CTL) Learning Model on the Learning Outcomes of Social Sciences Natural Resources Material Class IV SDN Jepara I/90

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Abstract: This research aims to describe the influence of the Contextual Teaching Learning (CTL) learning model on the social studies learning outcomes of class IV students at SDN Jepara I/90 Surabaya. The aim of this research is the need for efforts to improve the quality of student learning processes and outcomes. The social studies learning process that only uses learning resources from books and is not interactive can have an impact on student learning outcomes that are not optimal. The approach used is a quantitative approach with experimental research. The research design used is Quasi Experimental Design. The population used in this research was 72 students and the research sample was 36 students. In collecting the data used were multiple choice test questions. The test technique used by children is pretest-posttest to determine learning outcomes. Based on data analysis, it was concluded: 1) The results of data analysis showed that the average learning outcome value for the experimental class was 98.75 and the control class was 78.75. 2) the results of the hypothesis test using the T test show that the results of the hypothesis test for pairs 1 and 2 reject H_0 and accept H_a with a sig value. 2 Tailed $0.000 < 0.05$ with this there is an influence of the CTL Learning Model on the learning outcomes of class IV students at SDN I/90 of 39,696.

Keywords: CTL; Social Sciences Learning Outcomes

Abstrak: Penelitian ini bertujuan untuk mendeskripsikan pengaruh model pembelajaran *Contextual Teaching Learning (CTL)* terhadap hasil belajar Social Sciences siswa kelas IV SDN Jepara I/90 Surabaya. Tujuan dari penelitian ini adalah perlunya usaha meningkatkan kualitas proses dan hasil belajar siswa. Proses pembelajaran Social Sciences yang hanya memanfaatkan sumber belajar dari buku saja dan bersifat tidak interaktif dapat berdampak pada hasil belajar siswa yang tidak maksimal. Pendekatan yang digunakan yaitu pendekatan kuantitatif dengan penelitian eksperimen. Desain penelitian yang dipergunakan adalah *Quasi Experimentel Desain*. Populasi yang dipergunakan dalam penelitian ini berjumlah 72 siswa dan sampel penelitian berjumlah 36 siswa. Dalam pengumpulan data yang dipergunakan adalah soal tes pilihan ganda. Teknik tes yang digunakan pretest-posttest untuk mengetahui hasil belajar. Berdasarkan analisis data, disimpulkan: 1) Hasil Analisis data menunjukkan bahwa nilai rerata hasil belajar kelas eksperimen sebesar 98,75 dan kelas control sebesar 78,75. 2) hasil uji hipotesi menggunakan uji T menyatakan dengan hasil pengujian hipotesi pair 1 dan 2 yang menolak H_0 dan menerima H_a dengan nilai sig. 2 Tailed $0,000 < 0,05$ dengan ini terdapat pengaruh Model Pembelajaran CTL terhadap hasil belajar siswa kelas IV SDN I/90 sebesar 39.696.

Kata kunci: CTL; Hasil Belajar IPS

INTRODUCTION

The inclusion of Natural Resources material in elementary Social Sciences education is of paramount importance for fostering an early understanding and appreciation of our environment and its resources. This foundational knowledge equips young learners with the awareness needed to navigate and interpret the complex interplay between humans and their natural surroundings (Petkou et al., 2021; Rulyansah et al., 2022). By introducing these concepts at an elementary level, educators can instill a sense of responsibility and stewardship in students, encouraging them to think critically about resource utilization and environmental conservation (Petkou et al., 2021). Furthermore, this early exposure aids in developing cognitive skills such as analysis and synthesis, which are essential for comprehending broader social and ecological issues (Petkou et al., 2021).

Thus, integrating Natural Resources material into elementary Social Sciences curriculum is not only crucial for environmental education but also serves as a cornerstone for cultivating informed and conscientious future citizens.

The application of the Contextual Teaching and Learning (CTL) model in elementary Social Sciences is a significant stride towards enhancing the educational experience and outcomes for students. This pedagogical approach emphasizes the relevance of learning material to students' real-world experiences, thereby fostering deeper understanding and retention of knowledge (Chowning et al., 2012; Efe et al., 2022). In the context of Social Sciences, CTL transforms the learning process into an interactive and engaging journey, where students can relate the concepts of society, history, and geography to their immediate environment and community (Chowning et al., 2012; Efe et al., 2022). This relevance not only motivates learners but also aids in developing critical thinking and problem-solving skills, as they learn to apply theoretical knowledge to practical situations. The CTL model's focus on experiential learning, critical reflection, and collaborative inquiry makes it an ideal approach for teaching Social Sciences, as it prepares students to navigate and contribute to an increasingly interconnected and dynamic world.

To enhance social sciences learning outcomes in primary students, the contextual teaching and learning (CTL) approach can be effectively employed. CTL aims to connect teaching materials with real-world situations, encouraging students to connect their knowledge and its application in their lives (Hasanudin et al., 2021; Kristidhika et al., 2020). This approach has been found to enhance students' achievement and conceptual understanding by making learning relevant to daily life situations and involving students in actively finding the meaning of the learning (Chaeroh et al., 2021; Handayani et al., 2022). Furthermore, CTL has been shown to be effective in improving students' skills, such as mathematical communication and Arabic speaking, by relating the material to the context of their daily lives (Ilhami et al., 2021; Picardal & Sanchez, 2022).

However, despite these promising advancements, there remains a notable gap in the body of research, particularly concerning quantitative studies exploring the impact of CTL on social sciences learning outcomes in primary education, especially in fourth grade. This deficiency highlights a critical area for future research, necessitating a more thorough investigation into the quantifiable effects of CTL methodologies on the academic performance of young learners in social sciences. Such studies are essential to validate the effectiveness of CTL and to guide educators in implementing this approach more effectively in diverse educational settings.

The primary objective of this quantitative research is to rigorously investigate the impact of Contextual Teaching and Learning (CTL) on the learning outcomes in Social Sciences for fourth-grade primary school students. This study aims to quantitatively compare the average learning outcomes between control and experimental groups following the implementation of CTL, thereby providing concrete evidence on its effectiveness in enhancing educational outcomes. Furthermore, it seeks to explore the broader implications of CTL in shaping students' learning experiences in Social Sciences. This includes examining changes in cognitive understanding, engagement levels, and critical thinking skills. By achieving these aims, the research intends to contribute to the existing body of knowledge in educational methodologies and offer practical insights for educators and policymakers in primary education.

This research primarily seeks to address two fundamental questions within the realm of educational methodologies, particularly focusing on the impact of Contextual Teaching and Learning (CTL) in primary education. Firstly, the study intends to quantitatively assess, "What are the comparative average learning outcomes between control and experimental groups after the implementation of CTL in primary Social Sciences education?" This question aims to provide a clear statistical understanding of the efficacy of CTL in enhancing student learning outcomes by comparing the performance of students who have been taught using this method against those who have not. Secondly, the research endeavors to explore, "How does the implementation of CTL affect Social Sciences learning outcomes in Grade 4 of primary education?" This question delves deeper into the qualitative aspects of CTL's impact, examining how this teaching approach

influences various facets of learning such as student engagement, comprehension, and critical thinking in Social Sciences. Together, these questions are designed to offer a comprehensive evaluation of CTL's effectiveness in improving educational practices and outcomes at the primary school level.

This article is structured to provide a comprehensive overview of the research conducted. Following this introduction, the next section will delve into the methodology section will outline the quantitative research methods used, including data collection and analysis techniques. The findings section will present the results of the study, followed by a discussion that interprets these findings in the context of existing literature. Finally, the conclusion will summarize the key insights of the research and suggest directions for future studies.

METHOD

Research includes quantitative research, namely research that has numeric data and statistical means are used to examine the data. The research design uses a Quasi Experiment with a Nonequivalent Control Group Design. An experimental research design is a design applied to look for the influence between variables. The design plans are as follows:

Table 1. Class Pre-test Treatment Post-test

Class	Pre-test	Treatment	Post-test
Experimens	O 1	X	O2
Control	O3	-	O3

O1: The initial test (pre-test) of the experimental class is carried out before the treatment is given.
 O2: The final test (post-test) of the experimental class was carried out after the treatment was distributed

O3: Initial test (pre-test) dick class

O4: Final test (post-test) control class

X : treatment with the CTL learning model

The research took place at SDN Jepara 1/90 Surabaya, with the timing of the study spanning from January 10, 2023, to June 15, 2023. Participants were fourth-grade students from two classes at the school: Class IV A (experimental group) and Class IV B (control group), each comprising 36 students. The inclusion criteria for participants were enrollment in these specific classes and regular attendance during the research period. Students who were absent for significant periods were excluded from the study. This selection process was part of a systematic participant recruitment strategy to ensure a representative sample.

Table 2. Demographic Profile

Demographic Variable	Class IV A (Experimental Group)	Class IV B (Control Group)
Total Students	36	36
Age Range	9-10 years	9-10 years
Gender	Male: 18 Female: 18	Male: 20 Female: 16
Socio-economic Background	Low: 12 Middle: 16 High: 8	Low: 15 Middle: 14 High: 7
Educational Achievement (Previous Year Average Score)	≤60: 5 61-80: 20 81-100: 11	≤60: 7 61-80: 18 81-100: 11

The demographic profile of the participants, including age, gender, socioeconomic background, and educational achievements, was carefully recorded to understand the study's applicability and to identify any demographic variables that could affect the outcomes.

Meanwhile, for data collection, a pre-test and post-test were used with natural resources material in the form of multiple choices consisting of 20 questions with correct answers getting a score of 5 and wrong answers getting a score of 0. The questions have received expert validation. As for the data analysis technique, SPSS version 22 was used.

Ethical considerations were at the forefront of this study. Informed consent was obtained from all participants' parents or guardians, and the confidentiality of student data was maintained throughout the research. Additionally, ethical approval was sought from the relevant school authorities and education boards to ensure compliance with all ethical standards in educational research.

RESULT AND DISCUSSION

Result

Below are the results of research in the experimental class and control class before and after treatment:

Table 3. Experimental Class Measurement Results

	<i>Pre-test</i>	<i>Posttest</i>	Amount	difference
Amount	2.105	3.555	5.660	1.450
Average	58,47	98,75	157,22	40,28
Minimum	45	90	135	50
Maximun	70	100	170	30

From the table above, it can be seen that the total score before the treatment was 2.105, while the score after the treatment was 3.555, with the difference between the scores before and after the treatment being 1.450. The mean score on the pretest was 58.47 while the mean score on the posttest was 98.75 while the difference in mean score was 40.28. The pretest results from the experimental class were in the moderate category while the posttest results were in the very high category. So it can be concluded that students in the experimental class experienced an increase in performance after being given treatment.

Table 4. Control Class Measurement Results

	<i>Pre-test</i>	<i>Posttest</i>	Amount	difference
Amount	2.020	2.835	4.855	815
Avarage	57,50	78,75	136,25	21,25
Minimum	45	65	110	20
Maximun	75	90	165	20

From the table above, it can be seen that the score on the pretest is 2.020 and the posttest score is 2.835, while the difference between the pretest and posttest scores is 815. The average pretest score is 57.50 and the posttest score is 78.75 with a difference of 21.25. The pretest and posttest results from the control class are in the sufficient category.

After the learning outcomes in the experimental class and control class were tested for homogeneity and normality, a hypothesis test was carried out using the Paired Sample T-test. The following is a table of Paired Sample T-test results using the IBM SPSS 22 application as follows:

According to the results of the output pair 1 sig number (2 tailed) of $0.000 < 0.05$, it can be concluded that there is a difference in the average pretest and posttest student learning outcomes

in the experimental class. So it shows the influence of the CTL learning model on social studies learning outcomes for class IV students with a score of 39.696.

Discussion

The research findings demonstrate a significant improvement in the experimental class, which utilized the CTL learning model, as evidenced by the increased scores from pre-test to post-test. Specifically, the experimental class exhibited a remarkable increase in average scores from 58.47 to 98.75, moving from a moderate to a very high category. This contrasts with the control class, which showed a moderate improvement, with average scores rising from 57.50 to 78.75, remaining in the sufficient category. These results underscore the effectiveness of the CTL learning model in enhancing student learning outcomes, particularly in the context of Social Sciences Natural Resources Material for Class IV.

These results strongly support our initial hypothesis that the CTL learning model positively influences student learning outcomes. The substantial improvement in the experimental group confirms the model's effectiveness, aligning well with our research objectives to evaluate this teaching approach in a real-world classroom setting.

When comparing these results with other studies in the field, a consistent pattern emerges, highlighting the efficacy of innovative teaching models, such as CTL, in enhancing learning outcomes. Notably, the extent of improvement observed in our study surpasses that reported in several similar studies. This pronounced difference may be attributed to a variety of factors.

Firstly, the specific subject matter – Social Sciences Natural Resources Material – might have inherently resonated more effectively with the CTL approach. This subject's inherent connection to students' daily lives and the natural environment could have amplified the impact of contextual learning, making the learning experience more relatable and engaging (Basri et al., 2022). This alignment between subject matter and teaching method could explain the heightened improvement compared to studies involving subjects that may not naturally lend themselves to contextual learning strategies (Cornide-Reyes et al., 2020; Dunpath et al., 2021).

Additionally, the class environment and demographic specifics of SDN Jepara I/90 might have played a crucial role. The unique cultural, social, and educational backgrounds of the students could have interacted positively with the CTL model, enhancing its effectiveness (Uçar & ACAR, 2022). It is possible that the students' prior experiences and perceptions of the natural environment, a key aspect of the Social Sciences curriculum, made them more receptive to the CTL approach.

Furthermore, the implementation fidelity of the CTL model in our study likely contributed to the observed outcomes. The thoroughness and rigor with which the CTL model was applied – including teacher training, lesson planning, and the integration of real-world contexts – might have been factors that heightened its effectiveness (Ginsburg et al., 2021; Kusdarini et al., 2020). This is particularly significant when considering that the successful implementation of any teaching model is contingent on how well it is adapted and executed in the classroom setting.

It is also worth considering the role of additional instructional materials and resources that were available in our study setting. The use of supplementary materials that aligned well with the CTL approach might have provided a more enriched learning experience, thus contributing to the significant improvements observed (Seddik & Tamaazousti, 2022; Vavougiou et al., 2021).

Lastly, the relatively small sample size and the specific educational setting of our study offer a more controlled environment, which might have amplified the effects of the CTL model (Estafanos et al., 2022). In contrast, studies with larger, more diverse populations might present more variables that could dilute or obscure the impact of similar teaching interventions (Preiss et al., 2018).

This study, while revealing, is not without limitations. The sample size is relatively small and confined to a specific educational setting, which may limit the generalizability of the findings.

Additionally, the study focuses on a single subject area, which may not reflect the model's effectiveness across a broader range of subjects.

The findings have practical implications for educational practice and policy, suggesting that the CTL model could be a viable strategy to enhance learning outcomes in similar educational contexts. This model can be considered for broader implementation in other schools and subjects, potentially leading to significant improvements in educational standards and student performance.

Future research should explore the application of the CTL model across diverse educational settings and a wider range of subjects. Studies with larger sample sizes and longitudinal designs could provide more comprehensive insights into the long-term effectiveness of this teaching approach.

CONCLUSION AND SUGGESTIONS

In this study, we set out to rigorously investigate the impact of Contextual Teaching and Learning (CTL) on Social Sciences learning outcomes among fourth-grade primary school students, aiming to compare average learning outcomes between control and experimental groups post-CTL implementation, while exploring broader implications of CTL in student learning experiences. Our research has made significant contributions to the field of educational methodologies, demonstrating the effectiveness of the CTL model in enhancing learning outcomes, particularly in the context of Social Sciences Natural Resources Material for Class IV. The findings reveal a notable improvement in the experimental group, surpassing the moderate gains observed in the control group, thus underscoring the efficacy of CTL in improving educational practices and outcomes. These results suggest practical implications for educational practice and policy, highlighting CTL as a viable strategy for enhancing learning outcomes in similar contexts, and advocating for its broader implementation across various educational settings. However, the study acknowledges limitations such as a small sample size and a focus on a single subject area, which may restrict the generalizability of the findings. Future research is recommended to extend the application of CTL across diverse educational settings and a wider range of subjects, with larger sample sizes and longitudinal designs, to gain more comprehensive insights into the long-term effectiveness of this teaching approach. In conclusion, this research not only reinforces the value of innovative teaching models like CTL but also illuminates the multifaceted nature of learning, emphasizing the importance of contextualization, student engagement, and the adaptability of teaching methods to different educational environments.

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