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The Effect of The Contextual Teaching And Learning (CTL) Model on The Reading Literacy Ability of Grade V at State Elementary School 1 Arjawinangun

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A B S T R A C T

Reading literacy is a fundamental competency that supports students' success in elementary education. Nevertheless, international studies such as PISA and PIRLS consistently report that Indonesian students' reading literacy levels are still low. This condition highlights the need for innovative learning models that connect material with students' real-life contexts, making the learning process more meaningful. One suitable approach is the Contextual Teaching and Learning (CTL) model. This study aimed to examine the effect of implementing the CTL model, supported by the Enuma School application, on the reading literacy skills of fifth-grade students at State Elementary School 1 Arjawinangun. The research employed a quantitative approach with a One Group Pretest-Posttest design involving 39 students. Instruments included a reading literacy test, observation sheets, and student questionnaires. Data were analyzed through validity and reliability testing, paired-sample t-tests, and effect size calculations. The findings revealed a significant improvement in students' reading literacy after the implementation of CTL. Posttest scores were notably higher than pretest scores, with a large effect size. Observation and questionnaire results also indicated that students became more engaged, motivated, and showed positive attitudes toward reading. Thus, the CTL model, supported by digital applications, proves effective in enhancing elementary students' reading literacy.

1. Introduction

Literacy is a fundamental competency that plays a crucial role in improving the quality of a nation's human resources. Literacy, particularly reading literacy, is not merely the technical ability to recognize letters and words, but also the skill of understanding, interpreting, and critically evaluating information (Jannah, Rahayu, & Nursahid, 2024). In the era of globalization and the rapid development of digital technology, reading literacy is the primary foundation for students to compete in

acquiring knowledge, developing critical thinking skills, and building character that adapts to changing times (Nur, Sholihat, & Agustin, 2025).

The state of reading literacy in Indonesia remains concerning. The 2018 PISA results ranked Indonesia 74th out of 79 countries, indicating the low reading literacy skills of Indonesian students (Prastiwi, Anafiah, & Daniar, 2024). Similarly, a UNESCO survey showed that Indonesians only have a reading interest of around 0.001%, meaning only one out of every 1,000 people has a strong interest in reading (Desiwidiaadee & Nelisa, 2021). This data demonstrates a serious gap between the demands of 21st-century competencies and the basic abilities of Indonesian students.

At the elementary education level, reading literacy issues are evident. The PIRLS study also showed that fifth-grade Indonesian students ranked 41st out of 45 participating countries in reading ability, highlighting the low reading literacy skills of elementary school children (Nur, Sholihat, & Agustin, 2025). This low achievement is caused by various factors, both internal and external. Internal factors include low motivation to learn, a lack of interest in reading, and limited text comprehension skills (Pramesti, 2018).

External factors include minimal parental support, the influence of digital media, a social environment that does not support a culture of literacy, and limited learning strategies implemented by teachers (Hanikah, Darmini, & Sidik, 2025). Efforts to improve reading literacy require learning innovations that are relevant to the context of students' lives. One model believed to be able to address these challenges is Contextual Teaching and Learning (CTL). The CTL model is a learning approach that emphasizes the connection between subject matter and students' real-life contexts, so that knowledge is not only received abstractly but can also be internalized through direct experience (Putri, 2022). According to the Ministry of National Education, CTL aims to build meaningful learning by linking the material studied to real-life situations.

Various previous studies have demonstrated the effectiveness of CTL in improving reading skills (Hoiyati, Imansyah, & Riyanti, 2022), found that implementing CTL with word cards significantly improved the beginning reading skills of second-grade elementary school students. (Sumarno, 2020) also reported that the CTL model can increase the interest and beginning reading skills of first-grade elementary school students. Another study by (Aini & Hardini, 2023) compared the effectiveness of CTL with CIRC (Cooperative Integrated Reading and Composition), and the results showed that CTL was superior in improving the reading skills of second-grade elementary school students.

However, most of these studies focused on beginning reading and were conducted in lower grades (grades I–II). This leaves a research gap, as there is still limited research examining the effectiveness of CTL on advanced reading literacy in upper grades of elementary school, particularly fifth grade. At this level, students are faced with more complex texts, requiring more applicable and contextual learning

strategies to enable them to understand the deeper meaning of the reading (Iswahyudi, Syamlan, Pramitasari, & Tuharea, 2023).

Furthermore, current reading literacy challenges relate not only to the technical aspects of reading, but also to critical thinking skills, linking information to real-life experiences, and solving problems based on reading (Nababan, 2023). In this context, CTL has advantages because it is based on the philosophy of constructivism, emphasizing meaningful learning through students' real-life experiences (Nababan, 2023). Through inquiry strategies, group discussions, reflection, and authentic assessment, CTL can foster motivation while strengthening students' reading literacy skills (Mardiati & Rani, 2018).

This research was conducted specifically in fifth-grade students at State Elementary School 1 Arjawinangun using a one-group pretest-posttest design. Initial observations indicated that students experienced difficulty comprehending reading material due to low motivation, minimal interest in reading, and a lack of support from their environment. Teachers also had not optimally implemented the CTL model in reading literacy instruction. Therefore, this study aims to provide an empirical contribution regarding the application of Contextual Teaching and Learning (CTL) to improve reading literacy skills in upper elementary school grades, as well as to strengthen theoretical evidence that Contextual Teaching and Learning (CTL) is not only relevant for beginning reading instruction but also effective for advanced reading literacy.

Therefore, this study differs significantly from previous research, both in terms of the subjects (fifth grade, not grades I–II), the dependent variable (reading literacy, not just beginning reading), and the learning media used. These differences make this study relevant for further study in an effort to enrich the literature on the effectiveness of CTL in the context of elementary education in Indonesia. Based on the description, the purpose of this study is to analyze the influence of the Contextual Teaching and Learning (CTL) learning model on the reading literacy skills of fifth-grade students at State Elementary School 1 Arjawinangun. This study is expected to provide theoretical contributions in the development of literacy learning models, as well as practical benefits for teachers and schools in their efforts to build a strong literacy culture in elementary education environments.

2. Methodology

This study employed a quantitative experimental approach using the one-group pretest posttest design. According to (Sugiyono, 2013), the experimental method is a research method used to find the influence of one variable on another variable with certain treatments and control of other conditions under controlled conditions. This design allows researchers to measure students' performance before and after the intervention to determine the effect of the applied treatment. In this research, the treatment was the application of the Contextual Teaching and Learning (CTL) model in Indonesian language classes focusing on reading literacy. The research was conducted at State Elementary School 1 Arjawinangun, Cirebon Regency,

West Java, Indonesia, during the academic year 2024/2025. The study involved all 39 fifth-grade students (19 males and 20 females), selected through purposive sampling since they represented the upper elementary group targeted for literacy development. The study was carried out over one semester (December 2024 – June 2025).

Intruments

According to (Salma & Aini, 2023) , research instruments are tools used to obtain or collect data to solve research problems or achieve research objectives. If the data obtained is inaccurate (valid), then the decisions taken will also be inappropriate. This is done to facilitate processing of activities. This study used three main instruments: a reading literacy test, an observation sheet, and a questionnaire. The reading literacy test was designed to measure students' ability to comprehend reading material, identify main ideas, and reconstruct text content. The test was administered in the form of narrative reading questions accompanied by comprehension questions tailored to the fifth-grade level of elementary school.

Observations were used to monitor teacher and student activities during the implementation of the Contextual Teaching and Learning (CTL) model. This instrument contained indicators regarding the implementation of CTL steps and student engagement in the learning process. A questionnaire was used to determine students' responses to the implementation of CTL. The questionnaire was structured on a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," covering indicators of interest, motivation, and perceptions toward reading learning.

Data Collection

Data were collected through several stages. First, a pretest was conducted to measure students' initial reading literacy skills before the implementation of Contextual Teaching and Learning (CTL). Second, students participated in learning activities using the Contextual Teaching and Learning (CTL) model with the following steps: introduction, linking material to real-life experiences, inquiry activities, group discussions, reflection, and assessment. During the activities, teachers and researchers observed student engagement. Third, after the treatment, a posttest was administered with questions equivalent to the pretest to determine improvements in reading ability. Additionally, questionnaires were distributed to students to obtain data on their responses to the implementation of Contextual Teaching and Learning (CTL).

Data Analysis

The data were analyzed through several stages. First, validity and reliability tests were conducted to ensure the quality of the instrument. Next, pretest and posttest scores were analyzed to determine improvements in students' reading literacy skills. Normality and homogeneity tests were used to ensure the validity of the data before hypothesis testing. Hypothesis testing was conducted using a paired sample t-test to determine the significance of differences before and after treatment. Observation

data were analyzed descriptively to illustrate the implementation of the Contextual Teaching and Learning (CTL) model, while questionnaire data were analyzed using frequency distributions and percentages to assess student response trends. All analyses were conducted using IBM SPSS Statistics version 22 software.

3. Results and Discussion

Results

This study aims to determine the effect of the Contextual Teaching and Learning (CTL) learning model on the reading literacy skills of fifth-grade students at State Elementary School 1 Arjawinangun. The results are presented through pretest, posttest, observation, and student response questionnaire data.

Pretest and Posttest Results of Reading Literacy Skills

Before being treated using the Contextual Teaching and Learning (CTL) model, students were given a pretest to measure their reading literacy skills. After implementing CTL, a posttest was administered. A summary of the average pretest and posttest scores is shown in Table 1.

Table 1. Comparison of Students' Reading Literacy Ability in Pretest and Posttest

Test	Mean Score	Std. Deviation	Minimum	Maximun	N	Category
Pre-test	63.41	8.52	48	78	39	Moderate
Post-test	82.15	7.94	68	96	39	Good

Table 1 shows a significant increase in the average score from moderate to good–very good. This improvement indicates that Contextual Teaching and Learning (CTL) is effective in helping students understand reading more deeply, in line with research by (Hoiyati, Imansyah, & Riyanti, 2022) which found that CTL can improve initial reading comprehension.

Student Activity Observation Results

Observations of student engagement during learning indicate that the CTL model is able to increase student activity, particularly in the aspects of active questioning, group discussions, and learning reflection. The high level of student engagement during the implementation of the CTL model can be observed in more detail as presented in Table 2, which outlines student activities in various aspects of learning.

Table 2. Student Engagement During CTL Implementation

Indicator	Pre-CTL (%)	During CTL (%)
Asking Questions	42.50	76.80
Participation in Group Discussion	48.20	81.50
Reflection on Learning	40.10	73.90

Based on Table 2, student engagement indicators increased by more than 30% in each aspect after the implementation of CTL. This demonstrates that CTL encourages students to actively construct knowledge through real-world experiences, in line with the constructivist philosophy (Nababan, 2023).

Student Responses to CTL Learning

Student responses were measured using a questionnaire covering aspects of motivation, interest, and comfort in learning. The results can be seen in Table 3.

Table 3. Student Responses to CTL Implementation

Response Aspect	Positive (%)	Neutral (%)	Negative (%)
Motivation	84.20	12.80	3.00
Interest	86.50	10.50	3.00
Comfort	82.00	15.20	2.80

Table 3 shows that more than 80% of students responded positively to learning with CTL. This finding supports Yildiz's opinion in (Iswahyudi, Syamlan, Pramitasari, & Tuharea, 2023) that CTL fosters learning motivation because it is relevant to students' real-life experiences.

Observation and Interview Results

The research instruments used included student activity observation sheets, student response questionnaires to gauge perceptions of the learning, and pretest and posttest questions to measure the improvement in reading literacy. These instruments were validated by experts before being used in the study to ensure their reliability and suitability for the research objectives. Based on observations during six CTL-based learning sessions supported by the Enuma School application, it was observed that student activity consistently increased from session to session.

This trend was captured using the student activity observation sheet. Initially, students appeared hesitant and lacked confidence in operating the application, but as the learning progressed, they became more active, more willing to ask questions, and more enthusiastic in completing reading assignments. Teachers were also increasingly involved in guiding and providing feedback, making the teaching and learning process more interactive.

Furthermore, interviews with classroom teachers indicated that the application of CTL helped students better understand the context of the readings because it connected them to real-life experiences. The use of the Enuma School application also made it easier for teachers to facilitate varied and engaging learning. Teachers emphasized that the key to success lies in the consistent application of this method and the support of adequate facilities. In more detail, the development of student activities in each CTL learning indicator can be seen in Table 4.

Table 4. CTL Learning Observation Sheet

No	Indicator	Yes	No
1	Have you implemented the CTL model in your learning process?		
2	Does the CTL model benefit students' reading literacy?		
3	Can the CTL model help increase students' interest and motivation in reading?		
4	Do you find it easier to teach reading and comprehend texts when using the CTL model?		
5	Does the CTL model help students understand reading texts?		
6	Do students feel more confident in reading after using the CTL model?		
7	Do students enjoy reading more with the CTL model?		
8	Does the CTL model increase your knowledge?		
9	Do you think the CTL model is beneficial in connecting learning to the real world?		
10	After learning about the CTL model, do you prefer using the CTL model to teach reading?		

Discussion

Research results indicate that the reading literacy skills of fifth-grade students at State Elementary School 1 Arjawinangun before the implementation of the Contextual Teaching and Learning (CTL) model were still relatively low. Most students were only able to answer questions in the "adequate" category and needed improvement. This was influenced by a lack of interest in reading, low motivation to learn, and a learning method that tended to be conventional, resulting in passive students (Antara, Ujianti, & Patissera, 2019).

After implementing the CTL model, there was a significant improvement in students' reading skills. The majority of students achieved the "good" category, marked by improved skills in understanding reading content, identifying characters, and reconstructing text information. The CTL learning process, which involves inquiry, learning communities, reflection, and authentic assessment, has been proven to provide a fun and meaningful learning experience (Furroyda, Ibda, & Wijanarko, 2022). Thus, students not only read mechanically but also construct the meaning of the text and relate it to real life.

The discussion of the research results indicates that CTL has a positive influence on improving reading literacy through three main aspects. First, the cognitive aspect, where students find it easier to understand and process reading information. Second, the affective aspect, namely increasing students' interest, motivation, and confidence in reading. Third, the social aspect, where collaboration and communication skills are developed through group discussions and presentations (Ester, et al., 2023). Furthermore, this study confirms that CTL impacts not only academic abilities but also attitudes and learning habits. The contextual approach enables students to relate learning to everyday life, thus making knowledge more functional and critical (Rohimah, Putri, Tiara, & Sari, 2025). This aligns with the findings of (Susanti & Hanafi, 2024) that CTL can improve reading skills while narrowing the ability gap between students. Thus, CTL can be recommended as an effective learning strategy for building a culture of literacy in elementary schools.

4. Conclusion

This research concludes that the application of the Contextual Teaching and Learning (CTL) approach has a significant contribution to improving students' reading literacy. The implementation of CTL encourages students to be actively engaged in the learning process through meaningful connections between the material and their real-life experiences. Such an approach not only strengthens comprehension but also fosters critical thinking, reflection, and problem-solving abilities, which are essential components of 21st-century literacy. Throughout the learning process, students in the experimental class showed more enthusiasm, participation, and responsibility in accomplishing the given tasks. The integration of contextual elements, such as group discussions, problem-based activities, and interactive learning, made the classroom atmosphere more dynamic and inclusive. This indicates that CTL can create a more student-centered environment that supports deeper understanding rather than rote learning.

The research objectives have been successfully achieved by demonstrating that CTL is an effective instructional model to enhance reading literacy. The findings emphasize the importance of designing learning activities that connect academic content with real-life situations so that students perceive reading as both purposeful and beneficial. This also provides a valuable insight for teachers to adopt innovative strategies in their daily practice to build literacy competencies more effectively. For future research, it is recommended to expand the scope by applying CTL in other subject areas or at different educational levels to test its broader applicability. Additionally, exploring the integration of digital tools with CTL could offer new opportunities to optimize students' literacy skills in line with the demands of the digital era.

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