THE INFLUENCE OF CULTURALLY RESPONSIVE TEACHING ON THE CRITICAL THINKING ABILITY IN GRADE IV STUDENTS OF MIS YMPI TANJUNG BALAI

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Abstract. This study aims to determine the influence of the culturally responsive teaching (CRT) approach on the critical thinking ability of fourth grade students in theme 8, subtheme 2, lesson 3 at MIS YMPI Tanjung Balai for the 2022/2023 academic year. This research uses a quasi experimental method, divided into an experimental group and a control group. The population and sample consist of 44 students with class IV A as the experimental class (21 students) and clas IV B as the control class (23 students). The data collection technique used is a critical thinking skills test, adapted to the students cognitive level according to Bloom's Taxonomy (C4-C6). The data analysis technique employed is the independent sample t-test to determine whether there is an effect of using the culturally responsive teaching (CRT) approach on students critical thinking ability. Based on the research results, the average score for the experimental class was 81,13 while the control class average 65,40 as evidenced by the students post test results. Hypothesis testing showed a Sig. (2-tailed) result of 0.000 < 0.05, indicating that H_a is accepted, and H_0 is rejected. This means that there is a significant influence of culturally responsive teaching (CRT) on the critical thinking ability of fourth grade students at MIS YMPI Tanjung Balai.

INTRODUCTION

Education plays a significant role in shaping one's future steps and ways of thinking, as it can improve human resource quality (Ernawati et al., 2024). In learning, thinking skills are essential to achieve the desired goals, one of which is critical thinking. Ennis (2011) states that critical thinking emphasizes reflective thinking. Khasanah & Ayu (2018) suggests that critical thinking is an important component in the educational process. Critical thinking is a crucial skill in the 21st century (Widana & Ratnaya, 2021). It develops through learning processes that enhance cognitive abilities (Herzon et al., 2018). Critical thinking enables students to become creative (Kurniawati & Ekayanti, 2020). It helps students make conclusions, consider data and facts in the field, examine opinions, and make decisions (Ramdani et al., 2020; Wihartanti et al., 2019). Elementary school is the right stage to instill critical thinking skills in students.

However, this still contrasts with observations made in a fourth-grade class at an elementary school in Tanjung Balai, North Sumatra, where several students were found to be less active in the learning process. Observational results indicated that students' critical thinking skills were still low. This aligns with some studies suggesting that elementary students' critical thinking skills remain relatively low. Several factors contribute to this low level, one of which was the impact of the COVID-19 pandemic. Online learning became a factor that reduced students' critical thinking abilities (Putra, 2021; Evi Yupani & Widana, 2023). Furthermore, Puspita & Dewi (2021) also noted that students' critical thinking skills are still relatively low. This may be caused by factors such as the limited use of learning approaches by teachers during the learning process, which can negatively impact students' critical thinking skills.

Teachers are key factors in the success of learning activities. Therefore, changes must be made by teachers. The learning process in elementary schools should be connected to the experiences and realities that students encounter in their daily lives. This aligns with the 2013 curriculum, which emphasizes that the learning process should incorporate cultural elements to preserve local culture (Rahmawati et al., 2020). The 2013 curriculum is rooted in the national culture to guide life today and in the future. Thus, this curriculum provides a learning model based on direct learning experiences in line with students' backgrounds.

One way to achieve this is by applying a culturally responsive teaching (CRT) approach. Culturally Responsive Teaching positions educators as mediators tasked with addressing injustices that may arise in the classroom due to students' diverse cultural backgrounds. Gay, in Rahmawati et al. (2020), defines Culturally Responsive Teaching as a way to use cultural knowledge, prior experiences, and students' diverse learning styles to create meaningful learning experiences, allowing students to actively engage in learning (Arif et al., 2020). According to Ladson-Billings in Abadi & Muthohirin (2020), CRT emphasizes cultural diversity and the importance of each student's experiences. CRT helps educators create a learning environment founded on humanism and positions them as facilitators in the learning process (Abadi & Muthohirin, 2020). Cultural responsiveness is a core element of CRT that cannot be separated (Halim, 2021). Thus, it can be concluded that Culturally Responsive Teaching (CRT) emphasizes diverse learning and empowers culture, making learning more meaningful in terms of academic, social knowledge, and attitudes.

Based on these issues, this study aims to investigate the effect of Culturally Responsive Teaching on the critical thinking skills of fourth-grade students at MIS YMPI Tanjung Balai. The material covered in this research is the fourth-grade thematic lesson, Theme 8 (My Place of Residence) Subtheme 2 (The Uniqueness of My Place of Residence), Lesson 3, with content in Pancasila and Civic Education, Indonesian Language, and Social Studies.

METHOD
This study uses a quantitative approach with a quasi-experimental research design. According to Sugiyono (2019), quasi-experimental research is a method that includes a control group but cannot fully function to control external variables that may affect the experiment's implementation. This study was conducted in the fourth grade at MIS YMPI Tanjung Balai, North Sumatra, with a population and sample consisting of 44 students, divided into Class IV A as the experimental group with 21 students and Class IV B as the control group with 23 students. The sampling technique used in this study is Simple Random Sampling. Simple random sampling is a basic type of sampling often used for developing more complex sampling methods (Arieska & Herdiani, 2018). This technique

randomly selects sample members from the population without considering the strata within that population (Sugiyono, 2018).

The data collection technique in this study uses a critical thinking skills test instrument. A test is a method or procedure that involves giving tasks or a series of tasks, such as questions to be answered or instructions to be followed, which produce a score (Magdalena et al., 2020). Tests will be administered before and after the intervention (pre-test and post-test). The test used in this study is a subjective discussion-based test in the form of essay questions. The critical thinking skills test instrument is based on cognitive levels according to Bloom's Taxonomy (C4 - C6). The indicators of critical thinking skills used in creating the questions are based on indicators adapted from Ennis in Wijayanti & Siswanto (2020), as shown in the following table:

Table 1. Critical Thinking Indicators

Indicator	Sub Indicator
Elementary Clarification	Focusing on questions
	Analyzing arguments
	Asking and answering questions
Basic Support	Adjusting to sources
Inference	Inducing and considering induction results
Advanced Clarification	Defining and considering terms
Strategy and Tactics	Determining actions
	Interacting with others

Ennis in Wijayanti & Siswanto (2020)

The test will undergo validity and reliability testing before being administered to the experimental and control groups. Validity testing is conducted to measure whether the test is valid (Djollong, 2014), and reliability testing is conducted to assess whether the test is reliable. Validity and reliability testing aim to measure the accuracy of the test items (Fauziyah & Dari, 2024). Subsequently, prerequisite analysis tests will be performed, including normality and homogeneity tests, followed by hypothesis testing. Hypothesis testing will use an Independent Sample T-test. Data analysis will be conducted using SPSS 20.0 for Windows.

RESULTS AND DISCUSSION

Before administering the pretest and posttest, the researcher will conduct validity and reliability tests to assess the accuracy of the test items. The following are the results of the validity test using Pearson correlation:

Table 2. Validity Test Results

No. of Questions	Sig.(2-tailed)	Pearson Correlation	Description
Question 1	0.000	0.717**	Valid
Question 2	0.016	0.485*	Valid
Question 3	0.001	0.617**	Valid
Question 4	0.043	0.416*	Valid
Question 5	0.298	0.221	Not Valid

No. of Questions	Sig.(2-tailed)	Pearson Correlation	Description
Question 6	0.801	-0.054	Not Valid
Question 7	0.000	0.705**	Valid
Question 8	0.048	0.408*	Valid
Question 9	0.007	0.538**	Valid
Question 10	0.001	0.630**	Valid
Question 11	0.000	0.763**	Valid
Question 12	0.000	0.696**	Valid
Question 13	0.000	0.722**	Valid
Question 14	0.013	0.501*	Valid
Question 15	0.139	0.311	Not Valid
Question 16	0.057	0.394	Not Valid

Based on the table above, it is known that out of the 16 test items, 12 items are valid, so only 12 items will be used in the study. The next step is the reliability test using Cronbach's Alpha formula, as follows:

Table 3. Reliability Test Results

Cronbach's Alpha	N of Items
.819	16

The reliability test results on the critical thinking ability instrument, which was piloted in the study, showed a reliability coefficient of 0.819, categorized as very high. After conducting validity and reliability tests, pre-tests, treatments, and post-tests were administered to the participants. The experimental class students initially obtained an average score of 51.55, which increased to 81.13 after receiving treatment through culturally responsive teaching. Meanwhile, the control class students initially scored an average of 51.41, and their score after treatment was 65.40. Therefore, based on these average scores, it can be observed that the experimental class students scored higher than the control class students. Below is the average score data obtained by students in both the experimental and control classes.

Table 4. Descriptive Data Analysis Results

	N	Mean	Median	Modus	Min	Max
Pre test experiment	21	51.55	50.00	75	19	77
Pre test control	23	51.41	50.00	33	23	83
Post test experiment	21	81.13	83.30	92	58	94
Post test control	23	65.40	67.00	50	46	85

Next, to test the hypothesis, prerequisite tests for analysis were conducted, namely the normality test and homogeneity test. The normality test was performed using the Shapiro-Wilk test because the sample size was less than 50. The normality test was conducted with the help of SPSS. Below are the results of the normality test obtained:

Table 5. Results of the Normality Test

	Shapiro-Wilk		
	Statistic	df	Sig.
Pre test experiment	.933	21	.157
Pre test control	.930	21	.139
Post test experiment	.961	23	.479
Post test control	.927	23	.093

Based on the table above, it is known that the (Sig.) values for all data in the Shapiro-Wilk test are greater than 0.05, which allows us to conclude that the research data is normally distributed. Next, the results of the homogeneity test are as follows:

Table 6. Results of the Homogeneity Test

	Levene Statistic	df1	df2	Sig.
Based on Mean	1.440	1	42	.237

Based on the (Sig.) value of Based on Mean, which is 0.237 > 0.05, it can be concluded that the variance of the post-test data for both the experimental and control classes is the same or homogeneous. After the prerequisite tests have been met, the data is declared normal and homogeneous. The next step is to conduct the hypothesis test using the independent-sample t-test with the help of SPSS version 20.0. The results of the hypothesis test can be seen in the following table:

Table 7. Results of the Hypothesis Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Critical thinking ability	Equal variances assumed	1.440	.237	4.489	42	.000	15.737	3.505	8.663	22.812
	Equal variances not assumed			4.536	41.273	.000	15.737	3.469	8.733	22.742

Based on the table above, it can be seen from the equal variances assumed results that the Sig. (2-tailed) value is 0.000 < 0.05. Therefore, it can be concluded that Ha is accepted and H0 is rejected. This means that there is a significant effect of using Culturally Responsive Teaching (CRT) on the Critical Thinking Ability of 4th-grade students at MIS YMPI Tanjung Balai during the 2022/2023 academic year.

The research results show that the experimental class students, who were treated using culturally responsive teaching (CRT), obtained higher scores compared to the control class

students who were not given the CRT treatment. This indicates that the culturally responsive teaching (CRT) approach can more effectively improve students' critical thinking abilities compared to conventional learning. Culturally responsive teaching (CRT) adjusts the teaching materials to the students' cultural backgrounds, which allows students to feel more valued and connected to the lesson content. However, culturally responsive teaching (CRT) not only enhances students' critical thinking abilities but also develops other skills.

Justi et al. (2023) stated that the culturally responsive teaching (CRT) approach can improve students' learning outcomes in a classical manner. Culturally responsive teaching (CRT), which emphasizes culture, can also enhance students' collaboration skills in science learning. This is because the learning process is more connected to the students' cultural aspects, helping them better understand their own culture (Rahayu, 2023). Culturally responsive teaching (CRT) should be considered for use in the learning process because it affects students' values, attitudes, and behaviors by building and maintaining their cultural competence. Culturally responsive teaching (CRT) can help teachers realize that not only academic achievement is important, but also maintaining students' cultural identity through the integration of cultural values in teaching (Rahmawati, 2020).

CONCLUSION
This study focuses on the application of the culturally responsive teaching (CRT) approach in learning to enhance students' critical thinking abilities. The results of the study show that the culturally responsive teaching (CRT) approach has a significant effect on critical thinking skills. Therefore, it can be concluded that culturally responsive teaching (CRT) can improve critical thinking abilities due to its relevance to students' real-life experiences by connecting the learning material with the students' cultural context, making the learning more relevant and easier to understand. The researcher recommends that educators increasingly consider the use of the culturally responsive teaching (CRT) approach in the learning process, particularly to enhance students' critical thinking skills. Teachers are encouraged to design learning materials and activities that are more relevant to students' cultural backgrounds, making the material easier to understand and more meaningful for students. The next research is suggested to expand the application of the culturally responsive teaching (CRT) approach across various educational levels, different subjects, and multicultural environments to observe its broader effectiveness.

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