International Journal of Integrated Science and Technology (IJIST)
Vol.1, No.4, 2023: 519-528

The Influence of The Contextual Teaching and Learning (CTL) Learning Model on Student Learning Outcomes in Subtema 3 Animal Growth in Class III UPTD SDN 122365 Pematang Siantar

Dina Ria Christina Sinambela[1*], Dr. Natalina Purba, Sos., M. Pd,
Dr. Lisbet Novianti Sihombing, S. Pd. , M. Pd
Universitas HKBP Nommensen Pematang Siantar, Indonesia
Coresponding author: Dina Ria Christina Sinambela; Dina.sinambela8008@gmail.com

A R Q I CLEINFO

Keywords: Learning outcomes, Contextual Teaching and Learning (CTL), SD Negeri 122365 Rambung Merah Pematang Siantar

Received : 13, August
Revised : 17, September
Accepted: 22, October

ABSTRACT

This research aims to determine the influence of the *contextual teaching and learning (CTL) learning model* on student learning outcomes in subtheme 3 animal growth in class III UPTD SD Negeri 122365 Pematang Siantar. The method in this research is a quantitative experimental type method whose research design is *pre- experimental type one group pretest-posttest* . The population and sample used were saturated sampling with 22 samples, as well as two research variables: the dependent variable (x) in the form of learning outcomes, and the independent variable (y) in the form of the Contextual Teaching and Learning model. The data collection technique is the test technique. The test results using the t-test technique with the help of the spss program, based on the calculation results obtained tcount = 22.894 with a significance level (2-tailed) 0.000, significant probability < 0.005, tcount > ttable = 22.894 > 2.064, so H0 is rejected and Ha is accepted. This explanation shows that there is an influence of the *Contextual Teaching and Learning (CTL)* Model on the learning outcomes of class III students in Subtheme 3 at SD Negeri 122365 Rambung Pematang Siantar.

INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and the skills needed by themselves, society, nation and state (Republic of Indonesia Law No.20 of 2003).

Learning is a systematic effort carried out by the desert to make the learning process run effectively and efficiently starting from implementation planning and evaluation (Aqib, Sumarni 2019: 187) Thematic learning is a model in integrated learning which is a learning system that allows students, both individually and in groups.

the inactivity of students in comprehending the lessons given by educators, when an educator explains the material, some students do not pay attention, and they tell each other stories as if they were busy themselves. Like telling stories to friends, disturbing friends, even inviting friends to make noise in the room. This often happens in every classroom, and can even be detrimental to a class. The disadvantage referred to here is that the teacher becomes distracted in explaining the material because some students are noisy and don't pay attention. Meanwhile, active students who pay attention also feel at a loss because the teacher does not finish explaining the material because their classmates cannot control themselves in the classroom.

UPTD SD Negeri 122365 Pematang Siantar obtained data on learning outcomes as the learning outcomes of class III students in the subjects of Indonesian Language (BI) and Citizenship Education. There are still many who have not reached the KKM (Minimum Completeness Criteria), which is around 68.20%. It can be seen that there are still 15 students who have not completed or have not met the KKM, while 7 students have completed the Indonesian Language and Citizenship subjects.

applying the *Contextual Teaching Learning (CTL) model* to students in creating learning outcomes that achieve the KKM. *Contextual Teaching Learning (CTL)* learning model According to Suyanto (Indriyasari, 2015:43) *Contextual Teaching and Learning (CTL*) is an approach that allows students to strengthen, expand and apply the knowledge they have acquired in various kinds of lessons both at school and outside school.

Contextual Teaching Learning (CTL) is better known as a learning model with various patterns according to learning references, which becomes a guide for teachers and students in creating an interesting learning process, including: With a designed learning process, arranged to influence learning based on situations and conditions, Ongoing learning must be in accordance with the environmental life processes of students and teachers. Not only that, *Contextual Teaching Learning (CTL)* is also a learning model that provides direct concrete experience where students will become more active and want to know more deeply about the material being studied. This is in accordance with the opinion expressed by, Jhonson, (2014:65) According to him, the *Contextual Teaching Learning (CTL)* learning model is a learning model that has learning characteristics to improve students' ability to think critically and be active in learning. This is based on the description of the character stated that students are more able to communicate communicatively in learning to learn by self-regulation to think creatively. , work together and achieve high achievement or in other words students can understand the entire material that has been taught. Specifically on Subtheme 3 Animal growth in Class III UPTD SD Negeri 122365 Pematang Siantar.

THEORETICAL FRAMEWORK

The conceptual framework is a flow of relationships between one concept and other concepts to provide a picture of the variables to be studied. This conceptual framework is useful for making connections about a topic that will be discussed. Based on observations that the author made in class III at UPTD SD Negeri 122365 Pematang Siantar, problems were found that the learning outcomes of students in thematic learning contained Indonesian and PKN subjects. The reason is that the learning process is conventional, such as book-centred lessons, so that students become bored and monotonous. In learning activities, teachers also need to change the way they teach, such as changing teaching methods, which involve interactions between students and teachers so that they become more active.

In this research, the researcher first gives a pretest to students to be able to see the students' initial abilities before implementing the *Contextual Teaching and Learning (CTL) learning model. The pretest* can be in the form of a multiple choice question test. After that, the researcher carries out an assessment of the pretest results. In this way, the researcher collects value data. students according to the pretest results to determine students' abilities related to pretest results that are still low.

Then the researcher carried out a posttest *by* applying the *Contextual Teaching and Learning (CTL) model* in learning activities to be able to see the effect of student learning outcomes after applying the *Contextual Teaching and Learning (CTL) model* . Whether there are changes or not, the posttest assessment is carried out in the form of a multiple choice test given after the lesson/material has been delivered. It can also be said that the posttest is the final evaluation of the material that has been given when the *Contextual Teaching and Learning (CTL)* model has been implemented.

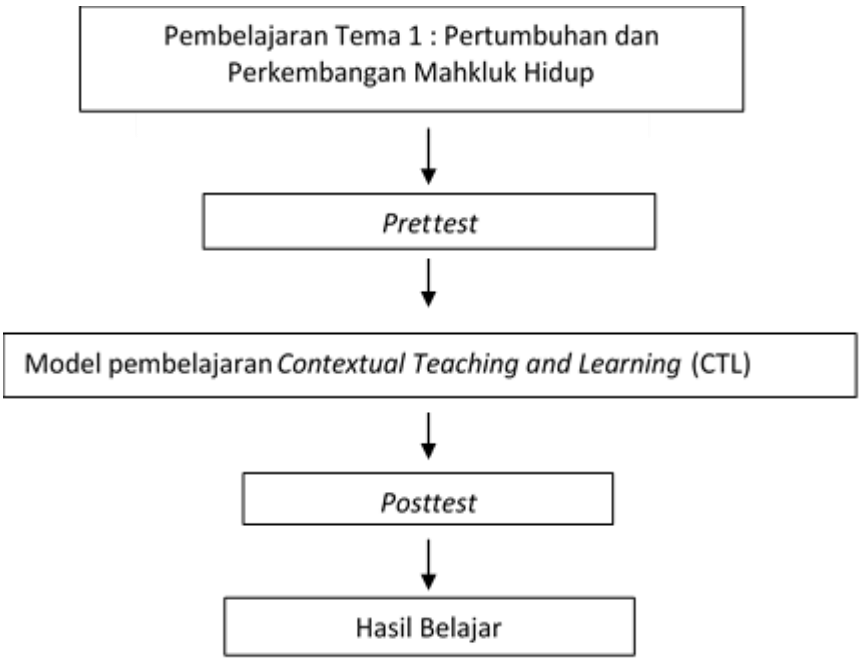

EXHIBIT 1. CONCEPTUAL FRAMEWORK

METHOD

The research used is quantitative research. With a pre- *Experimental Design type* . Where researchers use a *One-group design Pretest-Posttest Design* . According to Sugiyono (2021), quantitative methods are called traditional methods, because this method has been used for a long time so it has become a tradition as a method for research. This method is also called a positivistic method because it is based on the philosophy of positivism.

Table 1
One Group Pretest-posttest design

Subject	Pretest	Treatment	Posttest
Class III SDN 122365 Pematang Siantar	O_1	X	O_2

Description:

O_1 = Initial test *(pretest*) before using the *Contextual Teaching and Learning (* CTL *) model*

X = *Treatment of the Contextual Teaching and Learning (CTL)* model

O_2 = Final test *(posttest*) after using the *Contextual Teaching and Learning (CTL) model*

The population in the research were all students at UPTD SDN 122365 PEMATANG SIANTAR, and the sample taken by class III students was 22 students. This research uses a test instrument in the form of multiple choices with the aim of measuring learning outcomes. Before it is used for data collection, the data testing stage uses validity testing, reliability testing, difficulty level testing, and differentiating data testing. In data analysis, the normality test, homogeneity test, t-test were used.

RESULTS AND DISCUSSION

Results

This research was carried out in Class III UPTD SD 122365 which is located at Jl. Ade Irma Suryani, Siantar Uatara subdistrict, Pematang Siantar city, North Sumatra province. on October 12 2023 to October 24 2023. This research was conducted to find out how much influence the *Contextual Teaching and Learning (CTL*) Learning Model has on student learning outcomes.

This research is a pre-experimental design research with a one group pretest posttest design. Where students are given a pretest and posttest. The pretest is given before treatment, the aim is to determine the initial condition of the students before being given treatment. The posttest is given after the learning material is given using the *Contextual Teaching and Learning (CTL) Model*, the aim is to find out the final condition of the students given the treatment.

TEST INSTRUMENT

1. Validity Test

shows the levels of validity of an instrument. For validity, it is carried out using SPSS Version 26, a question item is said to be valid if the calculated r value is > r table, with a significance level of 5% or 0.05. It can be seen that there are 20 valid questions (question 1, question 5, question 6, question 9, question 10, question 11, question 12, question 13, question 14, question 16, question 17, question 19, question 21 , question 22, question 23, question 24, question 26, question 28, question 29, and question 30.). Valid questions can be used for the next test.

2. Reliability Test

It is known that the Cronbach's Alpha value obtained is 0.872, then this value is compared with the reliability coefficient criteria, namely if the Cronbach's Alpha value is > 0.7 then the question is said to be reliable, so it can be concluded that 0.872 > 0.7, so the questions on this test instrument are very reliable.

3. Difficulty Level Test

Shows that the 30 questions that were tried out belonged to the easy category, with 5 questions, namely (question 1, question 3, question 6, question 6, question 10, and question 15), 22 questions with medium level, namely (question 4). , question 5, question 7, question 8, question 9, question 11, question 12, question 13, question 14, question 16, question 17, question 18, question 19, question 21, question 23, question 24, question 25, question 26, question 27, question 28, question 29, question 30) and a difficult category of 3 questions, namely (question 2, question 20, and question 22).

4. Differentiating Power Test

There are 13 (question 1, question 6, question 9, question 10, question 12, question 14, question 16, question 17, question 19, question 21, question 23, question 24, and question 26) items that are categorized as very good, namely 1 (question 13), categorized as bad, there are 8 questions, namely (question 2, question 3, question 7, question 15, question 18, question 20, question 15, and question 27) categorized as Fair, there are 8 questions, namely (question 4, question 5, question 8, question 11, question 22, question 28, question 29 and question 30).

DATA ANALYSIS

1. Normality Test

The Normality Test is carried out to determine whether the *Pretest* and *Posttest data* from the sample is normally distributed or not. Normality test results using the Kolmogrov-Smimov method in the SPSS Version 26 program obtained the following data:

Table 2 normality test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelas	Statistic	Df	Sig.	Statistic	df	Sig.
Hasil	1	.154	22	.193	.943	22	.228
	2	.154	22	.193	.953	22	.366

a. Lilliefors Significance Correction

Based on the table above in the One Sample Kolmogrov-Smirvow Test Output, it can be seen that there were 22 students. Sig (2- *Tailed*) shows the *Pretest value* in the normality test, namely 0.193. Meanwhile, the *Posttest value* for the Normality test is 0.193. If the probability is > 0.05, it means the data is said to be normal.

2. Homogeneity Test

Knowing whether several population data variants are the same or not. The test was carried out with the help of SPSS version 26 *For Windows* . With the criteria, testing if the significance value is > 0.05 then it can be said that the variance of the two data is the same. The following homogeneity test results can be seen in the following table.

Table 3 homogeneity test

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hasil	Based on Mean	.101	1	42	.752
	Based on Median	.108	1	42	.744
	Based on Median and with adjusted df	.108	1	41.946	.744
	Based on trimmed mean	.101	1	42	.753

Based on the results of the homogeneity test above, it can be seen that the significance value for the Homogeneity test is 0.752. The significance criterion is > 0.05, so it can be concluded that the pretest and posttest scores have the same homogeneous variance.

3. Hypothesis Test (t-test)

Table 4 Hypothesis Test Results

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Results - Class	66,909	19,386	2,923	61,015	72,803	22,894	43	,000

Based on table 4.11 above, tcount = 22.894 with a significance level (2-tailed) of 0.000, significant probability < 0.005, tcount $_{>}$ t $_{table}$ = 22.894 > 2.064, so H0 $_{is}$ rejected and Haa $_{is}$ accepted. This explanation shows that there is an influence of the *Contextual Teaching and Learning (CTL)* Model on the learning outcomes of class III students in Subtheme 3 at SD Negeri 122365 Rambung Pematang Siantar.

Discussion

This research was carried out in class III at SD Negeri 122365 Pematang Siantar for the 2023/2024 academic year from 12 October – 24 October 2023. The population used was all class III students at SD Negeri 122365 Pematang Siantar with a sample of 22 class III students.

In this section, the results found in the research that have been carried out will be described. The intended results are conclusions drawn based on the data collected and data analysis that has been carried out. This research aims to determine the influence of the *Contextual Teaching and Learning (CTL) Model* on Learning Outcomes in Subtheme 3 of class III students at SD 122365 Pematang Siantar, which has 22 students in this study. Before carrying out the research, the research first carried out a trial of the instrument at the same level with a different school, namely at SD Negeri 094125 Boluk. This trial was carried out in order to determine the number of questions out of 30 questions that would be tested in multiple choice form, namely 20 questions.

Based on the Pretest results, the average student learning outcome score was 50.47 with all students scoring below the KKM. Looking at the existing percentages, it can be said that the level of student learning outcomes before using the *Contextual Teaching and Learning (CTL) Model* is relatively low. Furthermore, the average value of the Posttest results is 86.36. So after using the *Contextual Teaching and Learning (CTL) Model* , students have better learning outcomes than before using the *Contextual Teaching and Learning (CTL) Model* . After carrying out the Pretest and Posttest Normality tests, then a Homogeneity test is carried out. Based on the Homogeneity test, a significant value of 0.752 was obtained. Based on predetermined criteria, if the sig value is> 0.05, the data is said to have homogeneous variation. In this case it can be seen that 0.752 > 0.05. So it can be concluded that the data has the same characteristics or is homogeneous.

After the Normality test and Homogeneity test have been fulfilled, proceed to the Hypothesis test. From the student test results, it was calculated that it was 22.894 and the t table was 2.064. Thus, tcount > ttable = 22.894 > 2.064, which means that Ho is rejected and Ha is accepted, which indicates that there is an influence of the *Contextual Teaching*

and Learning (CTL) Model on the learning outcomes of class III students at SD 122365 Pematang Siantar for the 2023/2024 academic year.

CONCLUSION & RECOMMENDATIONS

Based on the results of research conducted on class III students at SD Negeri 122365 Pematangsiantar for the 2023/2024 academic year. The data obtained can be concluded that in general the use of the *Contextual Teaching and Learning (CTL) Model* has a great influence on the learning outcomes of class III students at SD Negeri 122365 Pematang Siantar. The increase in learning outcomes can be seen from the increase in student learning outcomes which were initially measured before going through the learning process through the average Pretest activity, namely 54.47. After going through the learning process using the *Contextual Teaching and Learning (CTL) Model* , another Posttest was given to determine the students' final abilities, the average score increased to 86.36.

Based on hypothesis testing with a significance level = 0.05 and t table of 2.064. Thus tcount > ttable 22.894 > 2.064, it can be concluded that there is an influence of the *Contextual Teaching and Learning (CTL) Model* on learning outcomes in Subtheme 3 Always class III at SD Negeri 122365 Pematang Siantar. So based on the test results, the hypothesis Ho is rejected and Ha is accepted, which indicates that there is a significant influence *of the Contextual Teaching and Learning (CTL) Model on learning outcomes in Subtheme 3 class III of SD Negeri 122365 Pematang Siantar.*

FURTHER STUDY

From the research results, it is known that the influence of the *Contextual Teaching and Learning (CTL) Model* on the learning outcomes of Subtheme 3 class III students at SDN 097805 Rambung Merah for the 2023/2024 academic year, so the researchers provide the following suggestions:

1. For students, they can use the *Contextual Teaching and Learning (CTL) Model* as a way to develop student abilities.
2. For teachers, they can use the *Contextual Teaching and Learning (CTL) Model* in this research as an alternative way of learning to improve student learning outcomes.
3. For researchers, they can apply the model in this research as an effort to improve student learning outcomes when they become teachers.
4. For schools, they can improve the model in this research on different materials or subjects.

REFERENCES

Ahrisya, Ledy. Henry Praherdhiono. Eka. Pramono Adi. 2019. "The Influence of *the Contextual Teaching and Learning (CTL)* Learning Model on the Learning Outcomes of Class V Elementary School Students". JKTP *Journal of Educational Technology Studies.* Vol.2. (4): p.306-314.

Arikunto, S. (2014). *Research Procedures* . Jakarta.

Budiman. 2021. "The Influence of the Contextual Learning Model (CTL) on Science Learning Outcomes for Grade IV Elementary School Students." *Journal of Innovation, Evaluation and Learning Development (JIEPP).* Vol.1.(1):p.19-27.

Idrus, HM 2012. "CTL (Contextual Teaching And Learning) Learning Model". *Logarithm Journal.* Vol.2.(1): p.1-12.

Indriyasari, Septy. 2015." "Improving Achievement in Learning to Write Poetry Using *Contextual Teaching and Learning* Methods in Class III Students of SD 1 Palbapang Bantul in the 2015/2016 Academic Year". *Teacher's Scientific Journal "COPE".* Vol. 10. (02): p. 43.

Johnson, Elaine B. (2014). " *CTL Contextual Teaching and Learning Makes Teaching and Learning Activities Fun and Meaningful*" . Bandung: Kaifa.

Karim, Abdul. 2017. "Analysis of the CTL (Contextual Teaching And Learning) Learning Approach at SMPN 2 Teluk Jambe Timur, Karawang". *Pharmaceutical Journal.* Vol.7.(2):p.144-152.

Khoerunnnisa, Princess. Syifa Masyhuril Aqwal. 2020. "Analysis of Learning Models " . Fondita: *Journal of Elementary Education.* Vol. 4.(1): p.1-27.

Pulungan, Intan and Istarani. (2015). *Encyclopedia of Education.* Medan: Media Parsada.

Qiptiyyah, Mariatul. 2020. "Improving PKN Learning Outcomes on the Position and Function of Pancasila Using the Jigsaw Method for Class VIII F MTs Negeri 5 Demak". *Guidance and counseling journal* . Vol. 5. (1):p.64.

Contextual Teaching and Learning (CTL) Learning Model on Class V Student Learning Outcomes on Simple Plane Material". *Scientific Pen Journal.* Vol.1.(1): p.731-740.

Sepriady, Jeki. 2018. " *Contextual Teaching and Learning* in History Learning". *PGRI Palembang University Journal.* Vol.1. (2): p.108.

Setiawan, Eko 2018. " *Theoretical and Practical Thematic Learning* . " Jakarta: Erlangga.

Sugiono. 2021. Quantitative qualitative research methods and R&D. ed. 2.Yogyakarta: Alphabeta.

Sumarni. 2019. "Efforts to Improve Learning Outcomes Through the Implementation of the Jigsaw Type Cooperative Learning Model to Improve Science Learning Outcomes for Class V of SD Negeri 012 Bulu Rampai Academic Year 2005/2016". *Education Partners Journal (JMP Online).* Vol. 3. (2): p. 187.

Tukyaur, Ema. 2021. "Use of the Mind Mapping Learning Model in Improving the Learning Outcomes of Grade 4 Students in Dobo State, Aru Islands Regency." *Kamboti Journal Off Journal of Education Research and Development (KJERD).* Vol. 2. (1): p. 91-95.

Yulianto, Agus. 2021. "Implementation of the TPS Type Cooperative Model (Thinkpairshare) to Improve Student Learning Outcomes in class VI SDN 42 Kota Bima ". *Journal of Elementary School Education.* Vol. 01. (02):p 7.