



THE EFFECT OF CONTEXTUAL LEARNING MODELS AND LEARNING STYLES ON PKN LEARNING OUTCOMES FOR FIFTH GRADE STUDENTS AT SD NEGERI 157635 AEK DAKKA 2 BARUS, CENTRAL TAPANULI REGENCY

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Abstract

The implementation of learning will be successful by making improvement efforts through appropriate learning strategies so that it can assist students in improving learning outcomes. The purpose of this study was to determine: (1) differences in Civics learning outcomes of students who were taught using contextual learning models with conventional learning models, (2) differences in Civics learning outcomes of students who had visual, kinesthetic, and auditory learning styles, and (3) interaction between learning models and learning styles on student Civics learning outcomes. The population of this study was the fifth grade students of SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency with a total of 84 people. The sample of this study was determined by the class of SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency = 30 participating in contextual model learning and = 30 participating in learning using conventional models. The research instrument to measure learning outcomes used multiple-choice tests and questionnaires for learning styles. The data analysis technique used two-way ANOVA at a significance level of = 0.05. The findings of the study showed: (1) Civics learning outcomes of students in contextual classes were different from conventional classes, (2) Students' Civics learning outcomes had differences based on learning styles, (3) There was an interaction between learning strategies and learning styles in influencing student

Civics learning outcomes.

Keywords: *Contextual, Conventional, Learning Style, and Learning Outcomes*

A. Introduction

The implementation of Civics learning in general so far is still very far from what is expected. The model used always uses the old habit of conveying learning material orally or in discussion without further elaborating the material being studied and also paying less attention to the characteristics of students that should be considered in learning. Teachers tend to be text oriented and have not emphasized the students' thinking processes independently. The discussions that are discussed are sometimes not in accordance with the context and issues that are developing in society, especially those related to Citizenship Education.

Based on a preliminary study of the implementation of learning at SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency, it was found that students still memorize concepts, so that the student learning process is only rote, considers Civics lessons less important so that students are less enthusiastic in participating in learning activities, students are less active, teachers do not optimize the implementation of learning, lack the ability of teachers to choose and use appropriate learning methods so that implementation of teacher-centered learning, and the lack of opportunities given to students in asking questions so that students are not active during learning activities in class.

Student learning outcomes at SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency have decreased so it is necessary to improve learning that is able to overcome student problems. Teachers need to help activate students in the learning process by guiding and

directing students to be able to improve their learning outcomes.

Based on the explanation of the description of the phenomenon above, it can be understood that to improve Civics learning outcomes, students need to use learning models that are able to help students find concepts and principles in the material being taught. The model used is a contextual learning model.

Contextual learning model or often referred to as Contextual Teaching and Learning (CTL) is a learning model that can assist teachers in teaching or delivering subject matter in accordance with the knowledge and experiences of students in their daily lives. This is in line with the opinion of Ngalimun (2014:162) which states that the contextual learning model is a learning concept that helps teachers relate subject content to real-world situations and motivates students to make connections between knowledge and its application in real life.

The application of contextual learning can contribute to alternative solutions to Civics learning problems, especially in improving student Civics learning outcomes. The application of contextual learning in Civics learning consists of topics taught to students related to everyday life. Slameto (2003:12-13) asserts that elementary school students are in the formal operational stage, their thinking processes are not completely abstract, so they still need real objects in their learning.

Without realizing it, the thinking ability of students with the potential for auditory learning is stronger, this is because the five senses of hearing are constantly capturing and storing audio information. During the learning process students prefer to listen to the subject matter so they often lose their order if they try to take notes. The characteristics that appear in students with an auditory learning style are that their

attention is easily distracted when speaking in a rhythmic pattern, learning by listening and dialogue.

Students with the kinesthetic type access all kinds of motion and emotion. Students with this learning style learn through movement. Students tend to lose focus if there is no movement they are doing. When listening to the teacher, this type of student does not always take notes and when reading they prefer to observe the material first and then pay attention to the details. The characteristics of kinesthetic type students are not being able to stay in place for a long time, learning by doing a job, pointing at writing while reading, enjoying physical activity, remembering while walking and looking.

Learning styles have advantages and disadvantages. The weakness of learning styles is that not all teachers can combine the three learning styles. So that people who are only able to use one learning style only. Students will only be able to capture the material if they use methods that focus more on one learning style if they combine these learning styles.

Based on some of the opinions that have been stated above, there are several studies that are relevant to the research to be carried out including, the research conducted by Hasruddin, Nasution and Rezeqi (2015) entitled "Application of Contextual Learning to Improve Critical Thinking Ability of Students in Biology Teaching and Learning Strategies Class" stated that students' critical thinking skills increased by 18.5% after applying contextual learning in learning.

Nuraini, Dian Armanto, Bornok Sinaga (2017) research entitled "Differences in Students' Mathematical Communication Ability and Metacognition Judging from Learning Styles Applying CTL and Conventional Learning Models at SMPN 2 Dewantara". The results showed that there were differences in mathematical communication skills

between students who were given CTL and conventional learning, while in terms of learning styles (VAK) there were differences in mathematical communication skills between the three learning styles, there were differences in metacognitive abilities between students who were given conventional CTL learning, while when viewed from the learning style (VAK) there is no difference in students' metacognitive abilities.

The results showed that there was no interaction between CTL learning factors and learning styles (VAK) on students' mathematical communication skills; there is no interaction between conventional learning factors and learning styles (VAK) on students' mathematical communication skills; there is no interaction between CTL learning and learning style (VAK) on students' metacognitive abilities; there is an interaction between conventional learning and learning style (VAK) but it is not significant. The level of active activity of students with CTL learning is in the tolerance limit of the ideal percentage of time. The teacher's ability to manage learning with CTL is in good criteria.

B. Method

This type of research is a quasi-experimental research (quasi-experimental). The population in this study were all fifth-grade students of SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency, totaling 84 students divided into 3 classes, namely, class VA as many as 30 students, class VB as many as 30 students and VC as many as 24 students. the acquisition of the sample by drawing randomly from the entire class so that 2 classes were selected from the 3 existing classes, namely class VA with 30 students taught with contextual learning models and class VB with 30 students taught using conventional learning models. This research was conducted at SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli

Regency. The time of the research was carried out in the 2020/2021 Academic Year

The complete research implementation design can be stated in the research flow as follows:

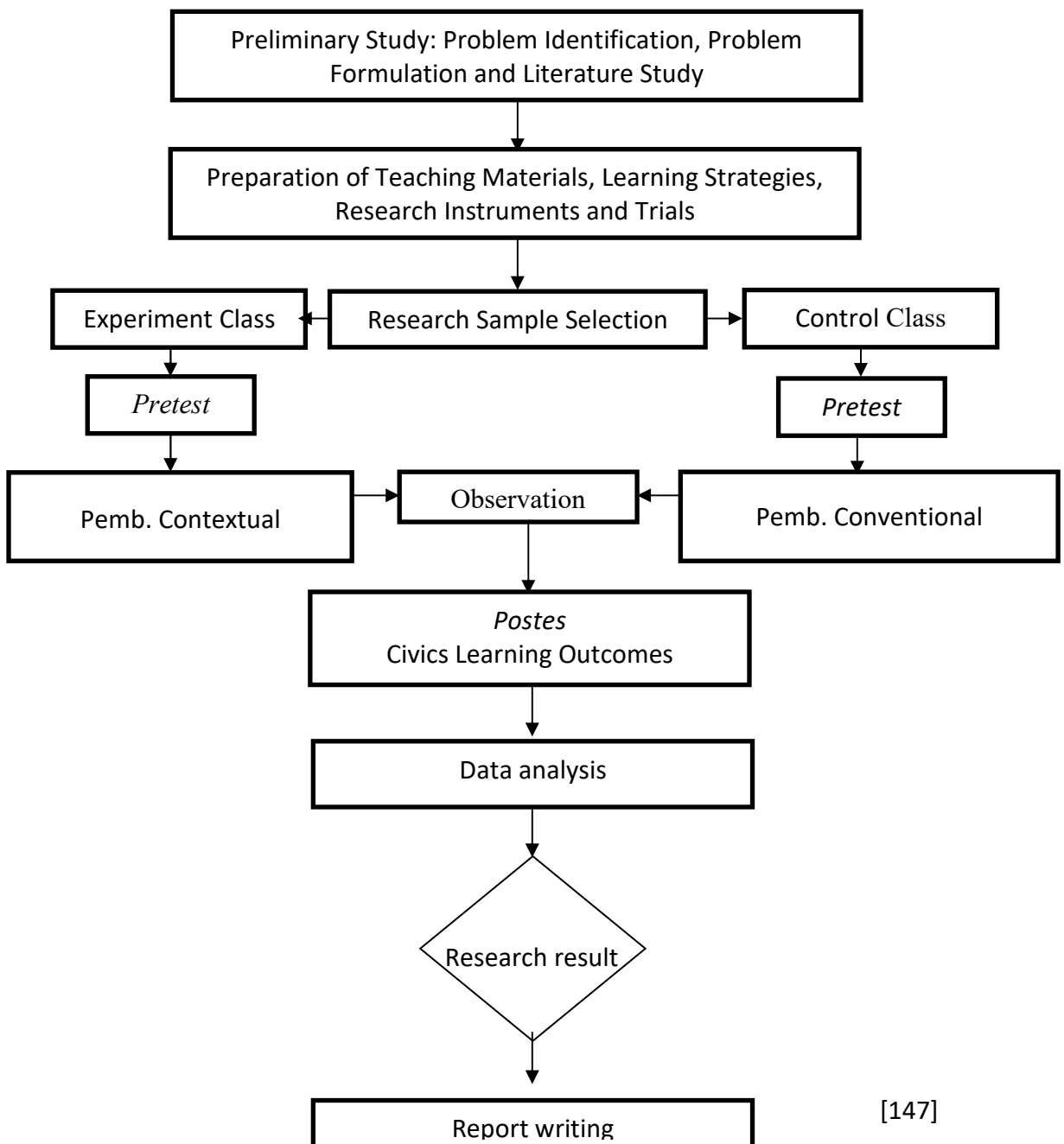


Figure 1. Research Design

Data collection technique

The data collection technique used in the research is a questionnaire technique and a test technique. Questionnaire techniques are used to determine student learning styles, and test techniques are used to determine student success after participating in a series of learning activity programs such as Civics Learning Outcomes Test and Learning Style Questionnaire.

Referring to the theory and characteristics of learning styles according to DePorter & Hernacki (2011: 116-120) as described in the various learning styles, the indicators of each learning style are known as follows: Visual learning style indicator, Auditory learning style indicators and Kinesthetic learning style indicator

Data analysis technique

To perform data analysis used descriptive analysis techniques and inferential analysis techniques. Inferential statistical analysis, to test the hypothesis. Before testing the hypothesis, a requirement test was carried out, namely the normality test of the research data using the Liliefors technique, then continued with the homogeneity test using the Barlet test. To test the hypothesis of this study, the 2x2 ANOVA technique (two-way ANOVA) was used with the F test with a significant level of $\alpha = 0.05$.

C. Finding and Discussion

1. Result

The purpose of this study is to describe that there is an influence of contextual learning models and learning styles on student learning outcomes. In addition, the interaction between contextual learning model factors and student learning styles with visual, kinesthetic, and auditory categories on student Civics learning outcomes was also disclosed. Student learning style factors based on test results on the material of unity and unity.

The data analyzed are the results of student learning tests. The test results provide information about students' abilities after the learning process is carried out, both in the experimental class using the contextual learning model and in the control class using the conventional learning model.

Description of Student Learning Outcomes

To obtain an overview of the post-test results of Civics learning outcomes, the mean and standard deviation were calculated. The complete calculation results can be seen in the appendix, while the summary results are presented in Table 4.1 below:

Table 1. Description of Student Civics Learning Outcomes

By Model Learning						
Class	Ideal Score	N	$x_{\min}$	$x_{\max}$	$\bar{x}$	SD
Contextual Model	100	30	77	100	89,20	5.63
Conventional Model		30	67	97	83.20	9.23

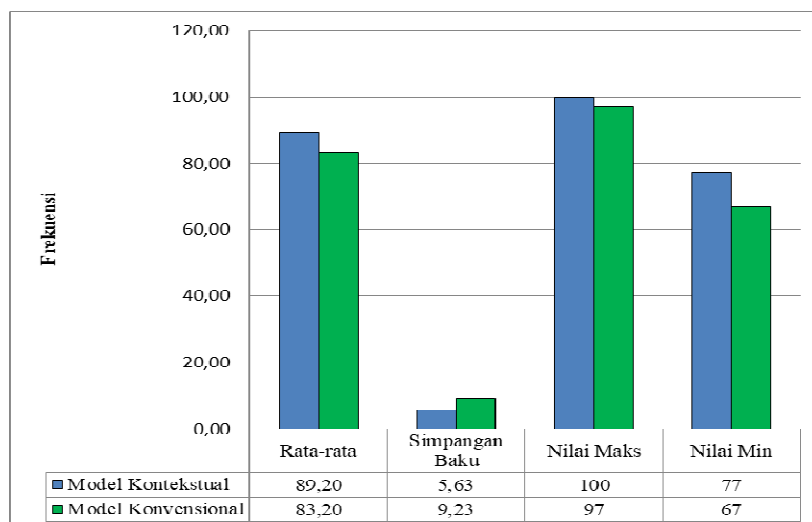


Figure 2. Graph of Student Learning Results

Furthermore, testing will be carried out to determine the equality of learning outcomes scores for the research sample class by analyzing the data distribution normality test and data homogeneity test.

a) Normality Test of Student Learning Outcomes Data

Table 2. Normality Test Results of Student Learning Outcomes

Class	N	D ₀	D _{table}
Contextual Model	30	0.120	0.248
Conventional Model	30	0.100	0.248

From Table 2 it can be seen that the data for the contextual learning class and the conventional learning class have data that are normally distributed.

b) Test the homogeneity of student learning outcomes data

Table 3. Results of Homogeneity Test of Learning Outcome Data Student

Class	Variance (s ²)	F _{count}	F _{table}
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Guided Contextual Model	31,683	0.372	1,882
Conventional Model	85,269		

From Table 3 it can be seen that it shows that the two data groups of contextual learning classes and conventional learning classes have homogeneous data variances.

1. Description of Student Learning Style

Table 4. Average Student Learning Results Based on the Model and Learning Style

Class	Ideal Score	N	$x_{\min}$	$x_{\max}$	$\bar{x}$	SD
Contextual Model	100	30	50	82	69.53	8.46
Conventional Model		30	40	78	62.80	10.71

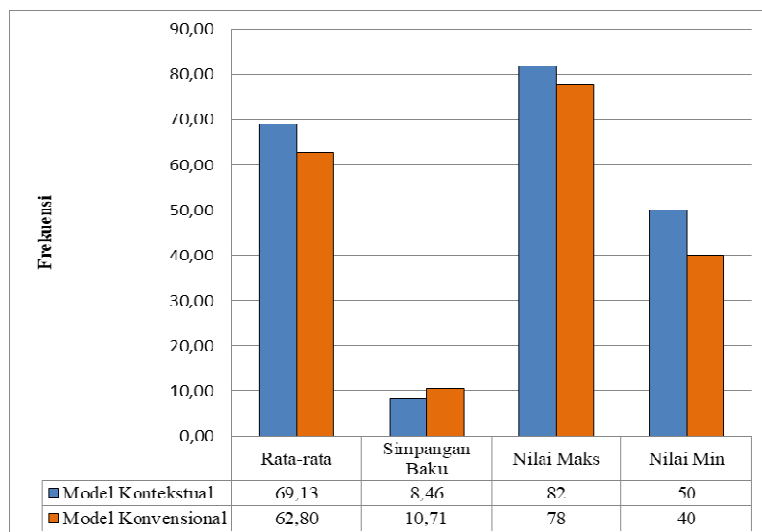


Figure 3. Graph of Learning Outcomes Based on the Model And Student Learning Style

Next, a test will be conducted to determine the equality of the learning style scores of the research sample classes by analyzing the

normality test of the data distribution and the data homogeneity test.

a) Normality Test of Learning Style Data

Table 5. Normality Test Results of Learning Style Data

Class	N	D ₀	D _{table}
Contextual Model	30	0.096	0.248
Conventional Model	30	0.114	0.248

From Table 5 it can be seen that the data for the contextual learning class and the conventional learning class have data that are normally distributed.

b) Test of Homogeneity of Learning Style Data

Table 6. Results of Homogeneity Test of Learning Style Data

Class	Variance (s ²)	F _{count}	F _{table}
Contextual Model	71,637	0.625	1,882
Conventional Model	114.648		

From Table 4.6 it can be seen that the data shows that the two data groups of contextual learning classes and conventional learning classes have homogeneous data variances.

Furthermore, the grouping of students' learning styles (visual, kinesthetic, and auditory) was formed based on their scores.

Table 7. Distribution of Research Samples

Research Sample Class	Category Learning styles		
	Tall	Currently	Low
Contextual Class	7	18	5
Conventional Class	5	20	5
Amount	12	38	10

Description of Analysis Test Results

a) ANOVA Statistical Analysis

Table 8. ANOVA Test Results

Tests of Between-Subjects Effects					
Dependent Variable: Learning Outcomes					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2746,015a	5	549,203	25.015	.000
Intercept	310651,665	1	310651,665	1.41504	.000
Model	411.365	1	411.365	18,737	.000
KBK	2045,447	2	1022,724	46.582	.000
Model * KBK	222.861	2	111.431	5.075	.010
Error	1185.585	54	21,955		
Total	449758.000	60			
Corrected Total	3931,600	59			

a. R Squared = ,698 (Adjusted R Squared = ,671)

b) Hypothesis testing

it can be concluded that there is an interaction between the use of learning models and learning styles in influencing student learning outcomes in Civics subjects on unity and unity in the class of SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency.

2. Discussion

a. The Influence of Contextual Learning Models on Students' Civics Learning Outcomes

The results of calculations and analysis of student learning outcomes taught with contextual learning models are higher or better than student learning outcomes taught using conventional learning models. Students who take lessons using the contextual learning model are used to being active in solving thinking problems individually to get concepts. Because the learning process is not just transferring knowledge

from the teacher to students, but a process that is conditioned or pursued by the teacher, so that students are active in various ways to build their own knowledge.

The results of the above analysis emphasize the importance of student motivation and facilitation by the teacher. In order for children's intellectual development to take place optimally, they need to be motivated and facilitated to build theories that explain the world around them. In the contextual learning model, teachers are required to facilitate and encourage students to be actively involved in the learning process so that they are able to construct knowledge for themselves.

Based on the results of data analysis after the classroom learning that was taught with the contextual learning model and the class taught with the conventional learning model, the post-test scores were obtained for Civics learning outcomes in both classes. The average post-test score for Civics learning outcomes taught using the contextual learning model was higher than the average Civics learning outcome score for students taught using conventional learning models.

The results of the ANOVA calculation on the posttest score of the contextual learning model group and the conventional learning model obtained a learning sig arithmetic value of 0.000 with the provision sig = 0.05. Because the value of sig < Sig = 0.05 means H_0 is rejected so it can be concluded that there are differences in learning outcomes using contextual learning models with student learning outcomes using conventional learning models.

The results of the data analysis above prove the importance of science process skills for students. As emphasized by Mujiono et al (2016:130) that learning outcomes are certainly related to skills which are interpreted as a vehicle and development of facts, concepts and principles [154]

of science for students, obtaining facts, concepts and principles of science that are found and developed, students also play a role. support the development of process skills of students, and the interaction between the development of process skills with facts, concepts and principles of science which will ultimately develop the attitudes and values of scientists from students.

Zulfiani (2015: 51) asserts that skills in Civics learning are skills that scientists usually do to gain knowledge. By using process skills, students will be able to discover and develop their own facts and concepts. In line with Amalia and Ketut who explained that process skills emphasize the facts found in testing activities carried out by a scientist.

One ability in Civics learning has a relationship with other skills. The use of one skill will affect the development of other skills. Each of the mutual process skills possessed by students will certainly support the ability of students to understand and master the material both conceptually and in fact, especially in the subject matter of light and its properties.

The results of this study are also in line with several previous studies, namely the research of Ambarsari et al (2013) confirmed through the Journal of Biology Education entitled Application of Contextual Learning to Basic Science Process Skills in Student Biology Lessons. The results showed that the application of contextual learning had a significant influence on the learning success of students in SMP Negeri 7 Surakarta.

Research Setiowati et al (2015) through the Journal of Chemistry Education entitled Application of Contextual Learning Models Equipped with Worksheets to Improve Student Activities and Learning Achievement on the Main Material Solubility and Solubility Product Class XI MIA SMA

Negeri 1 Banyudono 2014/2015 Academic Year said that the application of contextual learning models Guided inquiry (guided inquiry) equipped with worksheets can increase student learning activities on the material solubility and solubility product (the achievement of learning activities in the first cycle of 52% increased to 80% in the second cycle). The guided contextual model is effective in assisting teachers in motivating students to ask questions which are an important part of inquiry-based learning.

b. The Effect of Learning Style on Student Learning Outcomes

From the results of data analysis, the learning styles of students who are taught using a contextual learning model are higher than the learning styles of students who are taught using a conventional learning model. Students who take lessons using the contextual learning model are used to being active in solving thinking problems individually to get concepts. Because the learning process is not just transferring knowledge from the teacher to students, but a process that is conditioned or pursued by the teacher, so that students are active in various ways to build their own knowledge.

The results of the ANOVA calculation on the posttest score of the contextual learning model group and the conventional learning model obtained the value of $\text{sig} = 0.000$ with the provision of $\text{sig} = 0.05$. Because $\text{sig} = 0.000 < \text{sig} = 0.05$ means H_0 is rejected so it can be concluded that there are differences in student learning styles using contextual learning models with student learning styles using conventional learning models.

Suwarma (2009:11) asserts that learning style is a responsible ability that facilitates good management. Critical thinking is self-introspection that makes people sensitive to a situation and condition. So

that people who think critically consciously and rationally think about their thoughts to be applied to other situations.

Learning style is the ability to participate in activities, processes, or general procedures and to do things correctly at the right time, especially with regard to light material and its properties. Student learning styles also involve a degree of proficiency in carrying out procedures and using them at the right time.

Kholid's research (2018) concludes that the characteristics of students when including learning styles are asking important questions and problems, collecting and assessing relevant information, drawing conclusions with strong reasons, being able to overcome confusion. The students' critical thinking process in solving mathematical problems through stages; clarification, basic support, interpretation, analysis, inference, and explanation.

The results of the research by Wardani et al. (2019) stated that the data were collected through tests and non-tests. The main source of data in this study were all eighth grade students at SMP IT Bina Ilmi Palembang. Twenty-six students from class VIII.B were involved in this study. Class VIII.B students cannot fulfill all indicators of learning style well, so it can be concluded that the learning style of class VIII.B students is still low.

Thus it can be concluded that learning styles are related to collecting various information and then making an evaluative conclusion from this information. The essence of the learning style is actively seeking various information and sources, then the information is analyzed with the basic knowledge that students already have to make conclusions, especially on light material and its properties.

c. There is an interaction between learning models and learning styles on student learning outcomes.

In this study, students' abilities were also obtained based on learning styles. The grouping of students is based on learning styles, namely high, medium and low. The student's ability factor, namely learning style is associated with learning factors. The results of the ANOVA calculation on the post-test scores of the contextual learning model group and the conventional learning model obtained the value of $\text{sig} = 0.010$ with the provision of $\text{sig} = 0.05$. Because the results of the $\text{sig} < \text{sig} = 0.05$, it can be concluded that the grouping of learning styles has an effect on student learning outcomes.

From the results of the analysis conducted on learning with learning styles on student learning outcomes, it indicates that there is an interaction between learning model factors and student learning styles on student learning outcomes. This shows that contextual learning models, conventional learning models and learning styles have an influence on student learning outcomes.

Student Civics learning outcomes are also related to the ability to convey or express ideas/ideas. This ability needs to be developed in Civics learning because through this ability students can convey ideas to clarify situations or problems. This important role makes learning outcomes one of the competency standards for graduate students from primary to secondary education and is also stated as one of the learning objectives of Civics.

One of the learning models that can develop student learning outcomes is the contextual learning model. In contextual learning, students learn in heterogeneous groups consisting of 4-6 people. The learning activity begins with a presentation by the teacher, then the

[158]

students work on their analytical skills with the guidance of the teacher. To see that students have understood and mastered, students are given the ability to conclude the results of their analysis.

If seen in the field during the learning process, the learning styles of students with high and medium categories dominate and benefit more in the learning stage. This is because students easily understand the material being studied, while students with low initial abilities take longer to understand the material and are less actively involved in solving problems with their groups.

D. Conclusion

There are differences in student learning outcomes who are taught using a contextual learning model with conventional learning in class V SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency

There are differences in the learning outcomes of students who have visual, kinesthetic and auditory learning styles in class V SD Negeri 157635 Aek Dakka 2 Barus, Central Tapanuli Regency.

There is an interaction between learning models and learning styles on student learning outcomes. Based on the results of the ANOVA test, the value of $\text{sig} = 0.010 < \text{sig. } 0.05$ was obtained, thus proving the interaction between learning models and learning styles in influencing student learning outcomes.

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