THE IMPROVEMENT OF CRITICAL THINKING ABILITY AND THE LEARNING INDEPENDENCE OF SDN 067240 STUDENTS MEDAN TEMBUNG THROUGH PROBLEM BASED ON LEARNING MODEL AT CIVICS EDUCATION 2016/2017

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ABSTRACT: *The implementation of conventional learning process is only centered on the teacher; the students 'learning outcomes are limited, the students' opportunity to find their own knowledge is very low because the conventional learning model in Civics that takes place is only transferring the knowledge from the teacher to the student. This is what causes the students to have less active role in the learning process. The situation is also experienced by the students in SDN 067240 Medan Tembung based on the observations made by the researcher and the interview with one of the fourth grade teachers that most students in the school tend to learn depending on the teacher. it can be concluded that the learning strategy of Problem Based Learning is successful in improving the students' Critical Thinking Ability on the subject of Civics in Primary School of 067240 Medan City. There is an increase in the students' Independence Learning by using Problem-Based Learning Model rather than the Students who learned by Conventional Learning. Thus, it can be concluded that the learning strategy of Problem Based Learning is successful in increasing the students' Independence Learning on the subject of Civics in Primary School of 067240 Medan City.*

KEYWORDS: Critical Thingking,Civic Education, Learning Independence

INTRODUCTION

In the advanced era in various fields today, education has a very important role in developing the quality of Human Resources (HR). The improvement of the education quality is a top priority of the government. One of the efforts made by the government in order to achieve these goals is by increasing the human resources. One of increasing the human resources is the improvement in teaching and learning process. Learning process is a system because it can be ascertained that the source of the success of learning in schools related to the number of components involved therein. The components here are curriculum, strategy, teachers, media, methods, models and the students that complement the learning process and education itself.

Civic Education (Civics) which is a compulsory subject from Primary School to University has a very important role in the effort to form citizens who have intelligence, pride, responsibility, and able to participate in the life of society and state. Civic Education is an important subject to provide the students' knowledge and character formation. Critical thinking is a habit of thinking that should be instilled from an early age. Critical thinking can help a person understand how he views himself, how he views the world, and how he deals with others, helps in examining his own behavior, and self-assess. Critical thinking allows someone to analyze his own thinking to ensure that he has made choices and draws conclusions.

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Based on the observations and the interviews with grade 4 teacher of SDN 067240 Medan Tembung, Lenny Sari says that in the implementation process, it still uses the conventional model in delivering the Civics material with the reason that conventional learning model is very often used for the number of 26 students in a class. Teachers have tried to apply various models of cooperative learning such as discussion, and role play in the knowledge and the assignment of students to the activity, but less than 50% of students who want to do well and correctly. The implementation of conventional learning process is only centered on the teacher; the students 'learning outcomes are limited, the students' opportunity to find their own knowledge is very low because the conventional learning model in Civics that takes place is only transferring the knowledge from the teacher to the student. This is what causes the students to have less active role in the learning process. There are still many students whose learning outcomes have not reached the minimum mastery criteria (KKM). This is because there are still many students who do not understand the concept of Civics lesson. The situation is also experienced by the students in SDN 067240 Medan Tembung based on the observations made by the researcher and the interview with one of the fourth grade teachers that most students in the school tend to learn depending on the teacher. The students tend to be passive and only receive the teachers' information and instruction only. The students rarely ask questions about the material presented and they often have doubts in solving problems, because they do not believe in their own ability so that the student self-sufficiency is still low. The ability to think critically and the independence of students' learning is still low due to several factors, one of which is the learning done by the teacher which during this time is still inappropriate to choose and use the learning model in accordance with the delivery of materials and learning objectives. In civic education, most teachers apply conventional learning. Conventional learning is a lesson commonly used to deliver materials in a classroom. Conventional learning is a learning that refers to the teacher or the centered teacher where the teacher is the main character in learning. The use of this learning is considered practical, because it uses only simple methods.

THEORETICAL FRAMEWORK

Understanding of Civic Education (Civics)

Civic education is one of the most important subjects to be taught at Primary School level. Civic education is a subject that focuses on the formation of citizens who understand and are able to exercise their rights and obligations to be good citizens, smart, skilled, and character as mandated by Pancasila and the 1945 Constitution. There are several things to consider in Civics lesson in order to "nation and character building". This is a function of Civics as the nation's character builder (nation and character building) which since the proclamation of independence has been given the priority which needs to be revitalized to match the direction and message of the constitution of the Republic of Indonesia. Therefore, the formation of a strong child character needs mastery of civic learning from an early age.

According to Zamroni in Hamidi J (2010: 76), Citizenship Education is "a democratic education which aimed at preparing citizens in critical thinking and democratic acts through the activity of cultivating the awareness to the new generation that democracy is a form of community life that best ensures the rights of the citizens". In addition, according to Hamidi J and Lufti, M (2010: 76) Civic Education is: a process undertaken by educational institutions in the era of a person studying the orientation, attitude, and political behavior so that the person has political knowledge, awareness, attitude, political efficacy, and political participation as

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well as the ability to make the political decisions rationally and profitable for himself as well as for the society and the nation. According to Setiawan, D. (2016: 2) the term Citizenship Education (Civics) is "to show the efforts that lead how to be a better citizen coaching."

From some of the above opinions the researcher concludes that Civic Education (Civics) is a subject that is used to develop and preserve the noble and the moral values that are rooted in the culture of the Indonesian nation and prepare the citizens to think critically and act democratically through the activity of planting awareness to the new generation that Democracy is a form of community life that best ensures the rights and obligations of the people.

Critical Thinking

Thinking is a series of activities of human brain. Human is not free with the activity of thinking in his life. It is the activity of thinking that distinguishes human beings from other creatures of God. Thinking in covering a lot of mental activity, we think while trying to solve the problem given in the classroom. In all cases, thinking can be considered as a brain language that stores more than one language. There are several ways of thinking that correspond to the flow of sentences that is the first way we seem to hear what is called as proportional thoughts (because expressing the proposals or the demands), other way corresponds to the image, the visual image. This seeing in the mind is called the imaginary mind; the last way is the motor mind that corresponds to the term "mental movement". The ability to think critically is one of the basic capital or intellectual capital that is very important for everyone.

According to Anggelo in Sadeli, H, E & Kartikawati R. (2013): "critical thinking is applying rational, high thinking activities, which includes analyzing, synthesizing, identifying problems and solving the, concluding and evaluating". According to Paul in Nafiah N, Y (2014: 3-4) in the journal *Penerapan model problem based learning untuk meningkatkan keterampilan berpikir kritis dan hasil belajar siswa,* critical thinking is an intellectual process and a full concept of skills that is (1) applying; (2) analyze; (3) synthesize; (4) evaluating where an information is obtained; (5) or generalize the results of the process of observation, experience, reflection, reasoning, or communication as a basis for trust and what to do.

Understanding of Learning Independence

Yamin (2013: 105) states that learning independence is an active and participatory learning process to develop the self and the skills of each students who are not bound by the teacher, face-to-face meetings in the classroom and the presence of school friends. The teachers act only as the facilitators and are not the only source of knowledge, so the students can take advantage of other sources and other media such as textbooks, Internet or learning. Furthermore, according to Sumarmo (2010: 3), the learning independence is a process of designing and monitoring of the thorough and systematic against the cognitive and the affective process in completing a particular academic task or learning objectives. This statement is in line with the opinion of Lilik et al (2014: 158) that learning independence is a learning skill which in individual learning process is driven, controlled, and assessed by the individual self.

Yunika et al (2011: 44) similarly says that learning independence is a process whereby a person has an initiative to learn with or with the help of others and to diagnose the self-learning needs as well as to formulate the own learning objectives, to be able to identify the learning sources that can be used as well as able to choose and apply a learning strategy and evaluate learning outcomes. Furthermore, according to Nur in Bisteri (2010: 12), learning independence is the

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attitude of someone who has knowledge of effective learning strategy and how and time to use the knowledge possessed. Furthermore, someone who has the learning independence is if he is able to regulate his self motivation that comes from outside or from within himself. Meanwhile, according to Masruni (2013: 85) in the journal *Implementasi Kemandirian Belajar dan Prestasi Belajar Mahasiswa* learning independence is an attitude that formed due to a careful study process planning. The attitudes or the independent behaviors that are formed here are deliberately formed and not self-formed.

Meanwhile, Schunk & Zimmermen in the journal of Nasution, R, P (2015: 6) entitled *Perbedaan Peningkatan Kemampuan Berpikir Kreatif Matematis dan Kemandirian Belajar Siswa Pada Pembelajaran Berbasis Masalah dan Pembelajaran Konvensional di SMPN 4 Padang Sidimpuan* illustrates that the learning independence is partly from the influence of building their self-thinking, feelings, strategies and behaviors which are oriented towards the achievement of learning goals. The indicators of learning independence according to Bistari (2010: 18) are as follows (1) choosing the learning objectives; (2) resolving difficulties; (3) utilizing facilities; (4) co-operatives; (5) building meaning and; and self-control.

Meanwhile, according to Sumarmo (2004: 5) the indicators of learning independence are:

(1) learning initiatives; (2) diagnosing the learning needs; (3) setting the learning goals and objectives; (4) monitoring, arranging and controlling the learning progress; (5) viewing the difficulty as a challenge; (6) utilizing and locating the relevant resources; (7) selecting and defining learning strategies; (8) evaluating the process and the learning outcomes and (9) having the self-concept. From the description above it can be concluded that the understanding of learning independence is a skill that must be owned by students to manage their own learning without others' helps. The indicators of learning independence used in this study follow the indicators stated by Sumarno (2004: 5), namely: (1) learning initiatives; (2) diagnosing the learning needs; (3) setting the learning goals and objectives; (4) monitoring, arranging and controlling the learning progress; (5) viewing the difficulty as a challenge; (6) utilizing and locating the relevant resources; (7) selecting and defining learning strategies; (8) evaluating the process and the learning outcomes and (9) having the self-concept.

Understanding of Problem Based Learning

Problem Based Learning in Indonesian is called *Pembelajaran Bersasis Masalah*. Problem Based Learning is the use of the various intelligences needed to conform to real-world challenges, the ability to deal with everything new and complexity. Bereiter & Scardamalia in Santrock, W, J (2011: 31) expresses that Problem Based Learning is a mass-based learning that emphasizes the solving of authentic problems as they occur in everyday life. According to Akinoglu & Tandogan in the journal of Ajai T, J and Imoko, I, B (2015: 47) in *Gender differences in mathematics achievement and retention scores: A case of problem-based learning method* say: Problem based learning (PBL) is an active learning strategy that enables students to recognize and define the problem-solving capabilities and the learning needs of both men and women, in order to be able to make common knowledge and implement group work "in the face of real-life problems". The PBL method requires the students to be responsible for learning. Teachers are just as the facilitators, and the teacher activity is reduced because the students take on their own responsibilities in the learning process. The similar thing is also stated by Wanhar (2015: 28) that Problem Based Learning (PBL) is a centralized learning through the relevant problems. It is centralized because it contains a scenario. A unit theme that puts it back on this lesson is the student's ability to solve the problem, describes the

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problem and revises it when making the presentation so that it will add the information according to its competence. One of the most widely adopted methods to support the Centered Learning (centered student) and which can empower the students is PBL. Meanwhile, according to Setiawan, (2013: 266-267), Problem Based Learning as one of the learning models which is designed in order the learners obtain the important knowledge, which make them proficient in solving the problems, and have their own learning model and have the ability to participate in the team. The learning process uses a systemic approach to solve problems or face the challenges that will be needed in everyday life.

According to Barrows in Amir (2010: 21), Problem Based Learning is the curriculum and the process. In the curriculum, problems are designed that require the students to gain important knowledge, make them adept at solving problems, and have their own learning strategies and have the skills to participate in teams. The learning process uses a systematic approach to solve the problems. According to Dutch in Amir (2010: 21): Problem Based Learning is an instructional method that challenges the students to learn to work together in groups to find the solutions to the real problems of learning. By using problem-based learning models, it teaches the students to think critically and use the appropriate learning resources to solve the problems.

Based on the explanation of some expert opinions above, it can be concluded that the problem-based learning model is a learning that uses real-world problems as a context for students to learn and requires them to think critically to solve the problems in the learning materials.

METHODOLOGY

Place and Time of Research

This research was conducted at SDN 067240 Medan Tembung which is located at Benteng Hulu Street No 40B Tembung ub village, Medan Tembung Sub-district. The reason for choosing this school is due to the heterogeneous level of the stdents' academic ability. In addition, the similar research has never applied the Problem Based Learning. The research activities were conducted in the even semester of the academic year 2016/2017. The implementation is planned from February to April 2017 for 6 meetings for the experimental class and the control class. The schedule of the research was adjusted to the schedule set by the school principal and the fourth grade teacher at the school, where the learning time of the Civics is provided 2 (two) hours each week and one lesson is held for approximately 35 minutes. The material chosen in this study is "Globalization" which is the material being studied in that semester.

Population and Sample of Research

The population of this study is all the grade IV students of SDN 067240 Medan Tembung which consist of 3 classes. The total population of 74 students which consist of 3 classes, the class of IVA, IVB, and IVC were chosen. Rueffendi (2005: 89) says that one way in obtaining a random sample is by giving a population members with the numbers on small papers, then rolled and inserted them into a place and then drawn as many times as necessary. The sampling technique used in this research is the cluster random sampling technique. The subject is taken randomly by 50 people, namely the IVA class as many as 25 students as the experimental class which is taught by applying the Problem Based Learning model and the IVB class as many as 25 students as the control class which is taught with conventional learning model.

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DISCUSSION

This research was conducted at SDN 067240 Medan Tembung which is located at Benteng Hulu Street No 40B Tembung ub village , Medan Tembung Sub-district. This research is a quasi experimental research which involves two classes, each class is given different treatment (learning model). Class IVB is a control class which is treated by using conventional learning, while class IVA which is experimental class is treated by using Problem Based Learning (PBL) model. The samples of the research consist of 25 students in experimental class and 25 students in control class.

Descriptive Pretest and Posttests Values of Critical Thinking Ability

Before the learning is conducted, first the students in the control class and the experimental class do the pretest to know the students' critical thinking ability. After the pretest is conducted then the next two classes will be given the treatment that is in the experimental class by using the model of Problem Based Learning and the control class will be applied by using conventional learning model. After the treatment is conducted then the student will be given the posttest with the instrument of critical thinking ability. Based on the results of the research in the pretest value data and posttes of critical thinking ability of each student in control and experimental class above, it can be summarized in Table 1 and Table 2.

Table.1: Pretest Value Data of Critical Thinking Ability in Control and Experimental Classes

Value	Frequency	
	Control	Experimental
40-46	5	6
47-53	2	1
54-60	10	9
61-67	2	2
68-74	3	3
75-81	3	4
Total	25	25
Average	58,4	58,8
Deviation Standard	12,3	12,6

Table.2:nPosttest Value Data of Critical Thinking Ability in Control and Experiment Classes

Control Class		Experimental Class	
Value	Frequency	Value	Frequency
55-60	7	60-65	4
61-66	1	66-71	1
67-72	3	72-77	5
73-78	5	78-83	6
79-84	3	84-89	4
85-90	6	90-95	5
Total	25	Total	25
Average	73	Average	79
Deviation Standard	11,3	Deviation Standard	9,9

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Descriptive Values of Pretest and Posttest of Learning Independence

Besides being given the pretest of critical thinking, the students in the control class and the experimental class are also given the pretest to know the scale of the students' learning independence. After the pretest is conducted then the next two classes will be treated in the experimental class by using the model of Problem Based Learning and the control class is by using conventional learning model. After the treatment is conducted then the students are also given the posttest with the scale of learning independence. Based on the result of the research in the form of pretest and posttest, the data of learning independence of each student in control and experimental class can be summarized in Table 3 and Table 4.

Table. 3 : Preview Value Data Independence of learning in Class Control and Experiment

Value	Frequency	
	Control	Experimental
51,00-54,99	7	8
55,00-58,99	4	2
59,00-62,99	6	6
63,00-66,99	3	3
67,00-70,99	0	4
71,00-74,99	5	2
Total	25	25
Average	61,31	60,69
Deviation Standard	7,12	7,06

Table. 4: Posttest Value Data the independence of Learning in the Control and Experimental Class

Control Class		Experimental Class	
Value	Frequency	Value	Frequency
65,00-69,99	7	69,00-73,99	5
70,00-74,99	5	74,00-78,99	5
75,00-79,99	5	79,00-83,99	4
80,00-84,99	6	84,00-88,99	5
85,00-89,99	0	89,00-93,99	3
90,00-94,99	2	94,00-98,99	3
Total	25	Total	25
Average	73,16	Average	83,68
Deviation Standard	7,08	Deviation Standard	8,54

Description of Gain Data

From the results of pretest and posttest, it was found that there is a difference in the mean value of critical thinking ability and the learning independence in the students' pretest and posttest data, so it is necessary to determine the improvement of critical thinking ability and the learning independence with normalized gain. Gain is used to see the improvements in critical thinking skills and the students' learning independence from pretest to posttest conducted in the learning

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process. To see the improvement of critical thinking ability and the learning independence obtained with conventional model and Problem Based Learning model, the normalized average gain score is used which is processed by using equation as follows:

$$\langle g \rangle = \frac{\langle S_{post} \rangle - \langle S_{pre} \rangle}{S_{m\ ideal} - \langle S_{pre} \rangle}$$

The level of normalized gain score is shown in the Table 5 below:

Table.5 : Gain Scores Level of Normalized Gain

Gain Score	Interpretation
$\leq$ 0,30	Low
$0{,}30 < g \leq 0{,}70$	Medium
G $\geq$ 0,70	High

Gain Data Description of Critical Thinking Ability in Control Class and Experimental Class

Gain is used to see the improvement in the critical thinking ability of the students' problems from pretest to posttest performed in the learning process. Besides that, this gain analysis is used to see the improvement criteria after being treated with a learning model. Gain is used to simplify the data processing because to use this gain test, the pretest data for experimental class and control class need not to be proved before normality and homogeneity. Based on the research data it is found that the average gain value of critical thinking ability for control class is 0.40 and it is in medium criterion. While the average gain value of critical thinking ability for the experimental class is 0.49 and it is in the medium criterion.

Gain Data Description of Independence learning in Control Class and Experimental Class

Gain is used to see an increase in the students' learning independence from pretest to posttest conducted in the learning process. Based on the research data it is found that the average gain of learning independence for control class is 0.39 and the average value of this gain is in medium criterion. The mean gain of learning independence for the experimental class is 0.59 and the average value of this gain is in the *medium* category.

Gain Analysis of Critical Thinking Ability and Learning Independence in Control Class and Experimental Class

The students' gain values in the control class and experimental class previously have been obtained. For that value, we can determine how the gain category of each student whether the student is in the category *very low*, *low*, *medium*, *high*, and *very high*. The gain category of the students in control and experimental classes for Critical Thinking Ability can be seen in Table 6.

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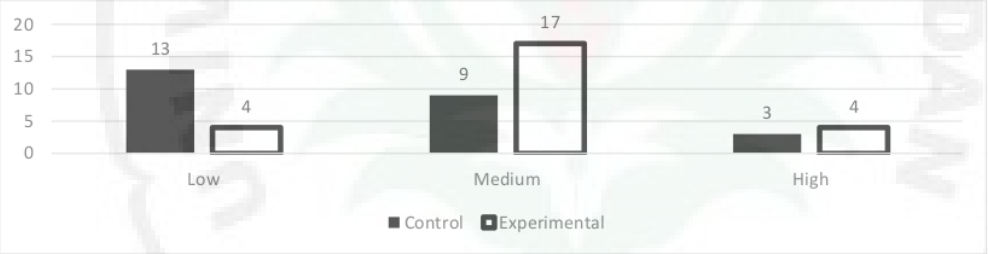
Table. 6 : Students' Gain Category for Critical Thinking Ability

CLASS	CATEGORY	TOTAL
CONTROL	Low	13 Students
	Medium	9 Students
	High	3 Students
EXPERIMENTAL	Low	4 Students
	Medium	17 Students
	High	4 Students

Based on the Table 4.6 above, it can be seen the amount of gain spread of the student Critical Thinking Ability on the students of the control class and the experimental class as shown in Figure.1.

Figure.1

Analysis of the Students' Gain Distribution for Critical Thinking Ability



Based on Figure. 1, it can be concluded that the students' gain on Critical Thinking for the control class and the experimental class is in the *medium* category. For the values, we can decide how the gain category of each students whether the student is in the category of very low, low, medium, high and very high. The students gain category of the control class and the experimental class for the Critical Thinking Ability can be seen in Table 6.

Gain Analysis of Independence Learning on Control Class and Experimental Class

The Students' gain score in control class and experimental class for independence learning was obtained before. The category of the students' gain in control class and experimental class for independence learning can be seen in Table 7.

Table 7: Students' Gain Category for Learning Independence

CLASS	CATEGORY	TOTAL
CONTROL	Low	7 Students
	Medium	17 Students
	High	1 Students
EXPERIMENTAL	Low	2 Students
	Medium	14 Students
	High	9 Students

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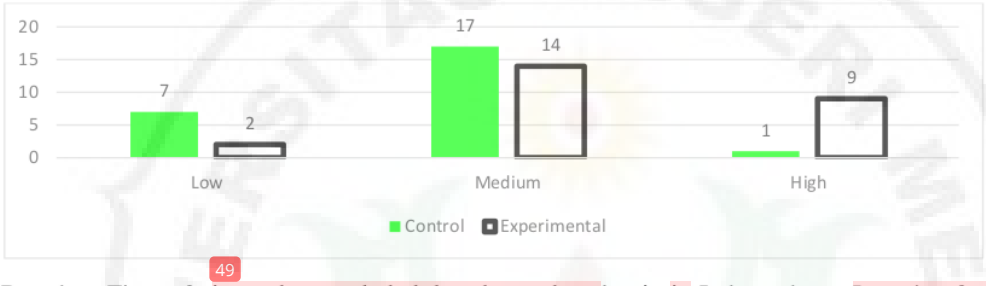
Based on the Table 7, it can be seen the number of gain distribution of the students' independence learning in control class and experimental class as seen in figure 2.

Figure 2

Analysis of the Students' Gain Distribution for Procedural Knowledge



Based on Figure 2, it can be concluded that the students' gain in Independence Learning for the control class and the experimental class is in the *medium* category.

Description of Normality and Homogeneity Tests of Gain Data for Critical Thinking Ability and Learning Independence

The normality test of the gain data is used to determine whether the sample which comes from the population is normally distributed or not from the gain value of each student. The normality of gain data test in control class and experimental class is conducted through Kolmogorov-Smirnov test by using SPSS 17 program with the significance level 0, 05. The result of normality gain test of Critical Thinking Ability can be seen in Table 8.

Table 4.8: Normality Gain Test of Critical Thinking Ability

	Group	Kolmogorov-Smirnov[a]		
		Statistic	df	Sig.
Value	Control Gain	0,159	25	0,105
	Experimental Gain	0,126	25	0,200

Based on Table 8 can be seen the results of the gain normality test in the experimental class is 0,200 and control class is 0.105 where the value > 0.05. Based on the data it can be said that the gain data of Critical Thinking Ability of experimental class and control class is distributed *normal*.

Gain Homogeneity Test for Critical Thinking Ability of Experimental Class and Control Class

The homogeneity tests of two variance of conceptual pretest data between the control class and the experimental class was conducted through Levene test by using SPSS 17.0 program with a significance level of 0.05. The result of homogeneity gain test of Critical Thinking Ability can be seen in Table 9.

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Table 9: Gain Homogeneity Test for Critical Thinking Ability

		Levene Statistic	df1	df2	Sig.
Value	Based on Mean	1,823	1	48	0,183
	Based on Median	1,166	1	48	0,286
	Based on Median and with adjusted df	1,166	1	47,427	0,286

Based on Table 9 the result of variance homogeneity test for the gain of Critical Thinking Ability obtained the value significance of 0.183. This shows that the value of significance is greater than the 0.05 significance level. Then it can be concluded that the students of control class and the experimental class which come from the populations have the same variance, or both classes are homogeneous.

Gain Normality Test of Independence Learning for Experiment Class and Control Class

The test of gain data normality is used to determine whether the sample which comes from the population is normally distributed or not from the gain value of each student. The test of gain data normality in control class and experiment class is conducted through Kolmogorov-Smirnov test by using SPSS 17 program with significance level 0,05.

Table 10: Gain Normality Test for Independence Learning

	Group	Kolmogorov-Smirnov[a]		
		Statistic	df	Sig.
Value	Control Gain	,125	25	,200*
	Experimental Gain	,098	25	,200*

Based on Table 10, it can be seen the results of test of gain data normality in the experimental class is 0.200 and control class is 0.200. Based on the data, it can be said that the gain data for Learning Independence of the experimental class and control classes are distributed normally.

Gain Homogeneity Test for Independence Learning of Experiment Class and Control Class

Testing the homogeneity of two independence variance data between the control class and experimental class is conducted through Levene test by using SPSS 17.0 program with the significance level is 0.05. The result of gain homogeneity test for the students' Learning Independence can be seen in Table 11.

Table.11: Gain Homogeneity Test of the Students' Learning Independence

Based on the Table 4.11, it can be seen the result test of variance homogeneity for the gain of

		Levene Statistic	df1	df2	Sig.
Value	Based on Mean	1,720	1	48	0,196
	Based on Median	1,859	1	48	0,179
	Based on Median and with adjusted df	1,859	1	46,883	0,179

Learning Independence it is obtained the significance value of 0.179. This shows that the value of significance is greater than the 0.05 significance level. Then it can be concluded that the students of control class and the experimental class which come from the populations have the same variance, or both classes are homogeneous.

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Description of Hypothesis Testing for the Students' Critical Thinking Ability and the Learning Independence

The testing of hypothesis is conducted after the requirements of the test of data feasibility is completed and fulfilled, then the further hypothesis testing is conducted by using Independent Sample T-Test with the help of SPSS 17. The data of Critical Thinking Ability also the Independence Learning is obtained then calculated by using t test to see the average difference of posttest result from both sample groups.

Hypothesis

1) First Hypothesis

The first hypothesis test aims to see the difference of posttest result of Critical Thinking Ability between the experimental class students taught by Problem Based Learning model with the control class taught by conventional learning. The formulation of the first hypothesis and the statistical hypotheses tested are as follows:

H_0: $\mu g_1 \leq \mu g_2$: The improvement (gain) of the students' Critical Thinking Ability by using Problem Based Learning model is lower or equal to the students taught by using conventional learning.

H_a : $\mu g_1 > \mu g_2$: The improvement (gain) of the students' Critical Thinking Ability by using Problem Based Learning model is better or equal to the students by using conventional learning.

From the result of SPPS 17 calculation, it is obtained the statistical data of posttest test result for Critical Thinking Ability by using Problem Based Learning model and the result of the students' Critical Thinking Ability by using conventional learning; it is obtained the significant value which is equal to 0,018 where the decision-making criteria are as follows:

• If the value in the column of significance > 0.05, then H0 is accepted

• If the value in the column of significance <0.05, then H0 is rejected

The significance value is 0.029 < 0.05 it can be said that the test results reject the H0 or accept the Ha in the level of 5% alpha, thus it can be concluded that the students' Critical Thinking Ability using Problem Based Learning model is better than the students using the conventional learning. The Problem Based Learning model has an effect on the students' Critical Thinking Ability or there is an increase of the students' Critical Thinking Ability with the Problem Based Learning model. It can be seen in the result of significant research on the students' learning outcomes which follow the Problem Based Learning learning compared to the students who follow learning with conventional learning.

Second Hypothesis

The second hypothesis test aim to see the difference of learning independence between the students of experimental class who are taught with Problem Based Learning model with the the students of control class who are taught by conventional learning. The formulation of the second hypothesis and the statistical hypotheses tested are as follows:

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H_0: $\mu g_1 \leq \mu g_2$: The improvement (gain) of the students' independence learning using Problem Based Learning model is less or the same than the students taught by using conventional learning,

H_a: $\mu g_1 > \mu g_2$: The improvement (gain) of the students' independence learning using Problem Based Learning model is better or the same than the students taught by using conventional learning.

The criteria for decision making are as follows:

• If the value in the column of significance > 0.05, then H0 is accepted

• If the value in the column of significance < 0.05, then H0 is rejected

The result of SPPS 17 calculation, it is obtained the the statistical data of posttest test result for the students' independence learning by using model of Problem Based Learning and the students' independence learning by using conventional learning obtained the significance value is 0,019 < 0,05 and it can be said that the test result reject H0 or accept Ha in 5% alpha level. Thus the students' independence learning by using the Problem Based Learning model is better than students who use conventional learning.

Third Hypothesis

Testing the third hypothesis aims to see the interaction between the experiment class who are taught with Problem Based Learning model and the students' early ability to improve the Critical Thinking Ability. The formulation of the third hypothesis and the statistical hypotheses tested are as follows:

H_0 : $\mu g_1 \leq \mu g_2$: There is no interaction between the Problem Based Learning model and the student's early ability to improve the Critical Thinking Ability.

H_a : $\mu g_1 > \mu g_2$: There is an interaction between the Problem Based Learning model and the student's early ability to improve the Critical Thinking Ability.

The criteria for decision making are as follows:

• If the value in the column of significance > 0.05, then H0 is accepted

• If the value in the column of significance < 0.05, then Ha is accepted

The third hypothesis which proposed Ha is accepted that is there is an interaction between the learning model of Problem Based Learning and the student's early ability in influencing the Critical Thinking Ability because the value is sig. 0,000 < 0, 05.

CONCLUSION

There is an increase in the students' Critical Thinking Ability who learned by using Problem-Based Learning Model Instead of the students who are taught by using Conventional Learning. Thus, it can be concluded that the learning strategy of Problem Based Learning is successful in improving the students' Critical Thinking Ability on the subject of Civics in Primary School

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of 067240 Medan City. There is an increase in the students' Independence Learning by using Problem-Based Learning Model rather than the Students who learned by Conventional Learning. Thus, it can be concluded that the learning strategy of Problem Based Learning is successful in increasing the students' Independence Learning on the subject of Civics in Primary School of 067240 Medan City. There is an interaction between the learning models with the students' early ability to improve the students' Critical Thinking Ability on the subject of Civics at SD Negeri 067240 Medan City.

REFERENCES

Arends, R. 2007 a. *Belajar untuk mengajar edisi ketujuh/buku satu*. Terjemahan oleh Helly Prajitno soetjipto dan sri mulyantini soetjipto 2008. Yogyakarta: pustaka pelajar.

_____. 2007 b. *Belajar untuk mengajar edisi ketujuh/buku dua*. Terjemahan oleh Helly Prajitno Soetjipto dan Sri Mulyantini soetjipto 2008. Yogyakarta : pustaka pelajar.

_____. 2009. *Model-Model Pengajaran edisi kedelapan*. Terjemahan oleh Achmad Fawaid dan Ateilla Mirza 2011. Yogyakarta : pustaka pelajar

Arikunto, S 2002 . *Dasar-dasar Evaluasi Pendidikan* Jakarta. Pustaka Belajar.

_____2009 b. *Manajemen Penelitian PT*. Jakarta : Rineka Cipta.

_____2010. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta : Rineka Cipta.

Asmin dan Mansyur, A. 2012. *Pengukuran dan Penilaian Hasil Belajar dengan Analisis Klasik dan Modern*. Medan : Larispa.

Cahyo, A. N. 2013. *Panduan Apliksi Teori Teori Belajar Mengajar Beraktual dan Terpopuler*. Yokyakarta : Diva press.

Dimyanti dan Mudjiono. 2013. *Belajar dan Pembelajaran*. Jakarta: Rineka Cipta.

Enggen, p dan Kuachak, D, 2012. *Strategio dan Model Pembelajaran Terjemahan Oleh Wahono*. Jakarta: PT. Indeks

Faturrohman, M. 2015. *Model-model Pembelajarn Inovatif*. Jakarta:Ar-ruz zmedia.

Fisher, A, 2009. *Berpikir Kritis Sebuah Pengantar*. Jakarta: Erlangga.

Hamidi, J. Dan lufti, M. 2010. *Civic Eduation antara realitas politik dan implementasi hukumnya*. Jakarta: Gramedia.

Kunandar. 2010. *Guru Profesional*. Jakarta: Rajawali Press.

Kurniasih, I & Sani, B. 2016. *Ragam Pengembangan Model Pembelajaran Untuk Meningkatkan Profesionalisme Guru*. Jakarta: Kata Pena.

Riyanto,Y. 2010. *Paradigma Baru Pembalajaran*. Jakarta : kencana Prenada Media Group.

Rosyada, D.2004. *Paradigma Pendidikan Demokrasi*. Jakarta: kencana.

Ruseffendi, E.T.. 2005. *Dasar-dasar Penelitian Pendidikan dan Bidang Eksakta Lainnya*. Bandung : tarsito.

Rustam. 2011. *Model-Model Pembelajaran Mengembangkan Profesionalisme Guru*. Jakarta: Rajawali Pers.

Sani, A, R. 2014. Pembelajaran Saintifik Untuk Implementasi Kurikulum 2013. Jakarta:Bumi Aksara.

Sanjaya, W. 2007. *Strategi Pembelajaran Berireontasi Standart ProsesPendidikan*. Jakarta: Media Group.

Santrock, W, J. 2008. *Psikologi pendidikan edisi 3/ buku 2*. Terjemah oleh Diana Angelica, 2011. Jakarta: Salemba humanika.

Setiawan, D. 2016.*Kapita Selekta Kewarganegaraan*. Medan: Larispa.

_____2016. *Pendidikan Ilmu pengetahuan sosial*. Medan: Unimed Press.

Print ISSN: ISSN 2054-6297, Online ISSN: ISSN 2054-6300

_____2016. *Ilmu Kewarganegaraan*. Medan: Larispa.
Soedjadi, R.2000. *Kiat Pendidikan matematika di Indonesa*. Jakarta: Depdikbud.
Sudjana. 2009. *Media Pengajaran*. Bandung: Sinar Baru Algasindo.
Sugiyono. 2010. *Metode penelitian kuantitatif, kualitatif dan R & D*. Bandung: Alfabeta.
Sumantri, S.2015.*Strategi Pembelajaran Teori Dan Praktik Di Tngkat Pendidikan Dasar*. Jakarta : PT Raja Grafindo Persada.
Sumarno, U. 2004. *Kemandirian Belajar apa Mengapa dan Bagaimana Pendidikan* Matematika di Jurusan Pendidikan Matematika FMIP universitas negeri Yokyakarta.
Syarbaini, S, dkk. 2006. Membangun karakter dan kepribadian melalui pendidikan kewarganegaraan.yogyakarta : Graha Ilmu.dan UIEU- university Press.
Trianto. 2011. *Mendesain Model Pembelajaran Inovatif-Progresif:Konsep, Landasan, dan ImplementasinyaPada Kurikulum Tinghkat Satuan Pendidikan*. Jakarta:Kencana.
Uno, H.B. 2008. *Perencanaan Pembelajaran*. Jakarta: Pt Bumi Aksara.
Undang-Undang, Republik Indonesia Nomor 20 tahun 2003 tentang Sistem Pendidikan Nasional.
Wahab, A, A. 2009. *Ilmu dan Aplikasi Pendidikan Bagian III: Pendidikan Disiplin Ilmu*. Bandung: Imtima.
Wanhar, F. 2015. *Penggunaan Model Based Learning Dalam Menungkatkan Aktivitas Dan Hasil Belajar Siswa Pada Pembelajaran IPS kelas IV SDN 060790 Medan Area*. Tesis tidak diterbitkan. Medan: UNIMED.
Winataputra, S, U. 2011. *Pembelajaran PKn di SD)*. Jakarta: Universitas Terbuka.
Wuryandani, W. Faturrohman. 2012. *Pembelajaran pendidikan kewarganegaraan di sekolah dasar*. Yogyakarta: ombak
Yamin, M. 2008. *Paradigma Pendidikan Kontruktivistik*. Jakarta :Gaung Persada Press.
_____.2013. *Strategi dan Metode dalam Model Pembelajaran*. Jakarta: Gaung Persada Press.
Sumber dari jurnal
Ajai, J.T. & Imoko, I.I, 2015. Gender differences in mathematics achievement and retention scores: A case of problem-based learning method. Jurnal ijres, (online), Vol. 1. (http://www.ijres.net/article/download/5000077698/5000073933, *diakses 20 Nopember 2016)*.
Bistari, B. 2010. Pengembangan Kemandirin Belajar Berbasis Nilai Untuk Meningkatkan Komunoikasi Matematik. Jurnal Pendidikan Matematika dan IPA, (oneline), Vol, 1No,1 (portalgaruda, org/dowloud article php?article= 33527&val=2343, diakses 18 Agustus 2016.
Fachrurazi. 2011. Penetapan Pembelajaran Berbasis Masalah Untuk Meningkatkan Kemampuan Berpikir Kritis Dan Komunikasi Siswa Sekolah Dasar. Jurnal UPI ,(online), Edisi Khusus No.1 (http://jurnal.upi.edu./file& Eachrurazi.pdf, Diakses 25 Agustus 2016)
Fauzi, A. 2011. *Peningkatan Kemampuan Koneksi Matematis dan Kemandirian Belajar Siswa Dengan Pendekatan Pembelajaran Metakognitif di Sekolah Menengah Pertama*. Makalah Disajikan Dalam Seminar Internasional dan Koifisien Nasional ke-4, Jurusan Pendidikan Matematika UNY, Yokyakarta.
Hake, R. 1998. *Intractive-enggangement versus traditionalmethods : A sixthousand-student survei of mechanies test dan for intruductory physics courses*. Am. Journal phys (online),Vol.66,No.1,http://www.montana.edu/msse/Data_analysis/Hake_1998_Normalized_gain.pdf, diakses 13 september 2016.
Hayati Islamul W, dkk. 2016. *Efektivitas Student Worksheet Berbasis Project Based Learning Dalam Menumbuhkan kemampuan Berpikir Kritis Siswa Pada Mata Pelajaran*

Print ISSN: ISSN 2054-6297, Online ISSN: ISSN 2054-6300

Geografi. Jurnal Pendidikan: teori, penelitian, dan Pengembangan. Vol.1.No.3. (EISSN: 2502-471X, diakses, 02 September 2016).

Ismaimuza, D. 2010. Pengaruh Pembelajaran Berbasis Masalah dengan Strategi Konflik Kognitif terhadap Kemampuan Berpikir Kritis Matematis dan Sikap Siswa SMP. JurnalPendidikanMatematikaUNSRI(Online),Vol.4No.1,(http://eprints.unsri.ac.id/830/1/0_Dasa_Ismaimuza_1-10.pdf, diakses, 02 Septemser 2016).

Latipah, E. 2010. *Strategi Self Regulated Learning dan Prestasi Belajar: Kajian Meta.Analisis* JurnalPsikologi,(Online),Vol.37,No.1(jurnal.psikologi.ugm.ac.id./index.php/fpsi/article/view/43/32/), diakses 06 September 2016.

Lilik, S., Djannah,W., dan Wagimin. 2013. *Tinggat penguasaan Self-Regulated Learning Skills Ditinjau Dari Segi Prestasi Belajar dan Lama Studi pada Mahasiswa FKIP UNS*. Jurnal Conselium, Vil.1 No. 1, (online), (http://jurnal.fkip.uns.ac.id/index.php.counsilium/issue.view/84 diakses 6 September 2016).

Masruri. 2013. *Implementasi Kemandirian Belajar dan Prestasi Belajar Mahasiswa*. Jurnal Cakrawala Pendidikan, (Online), Vol. 14 No.1, (http://dugilip.stkippgri-blitar.ac.id/206/1/MASRUPRI APR 2013.PDF, diakses 6 September 2016).

Nafiah N, Y 2014. *Penerapan model problem based learning untuk meningkatkan keterampilan berpikir kritis dan hasil belajar siswa*. Jurnal Pendidikan Vokasi, Vol 4, No.1. diakses 6 september 2016.

Nasution, R, P. 2015. *Perbedaan Peningkatan Kemampuan Berpikir Kreatif Matematis dan Kemandirian Belajar Siswa Pada Pembelajaran Berbasis Masalah dan Pembelajaran Konvensional di SMPN 4 Padang Sidimpuan*. Jurnal paradigma, Vol. 8, No 3, diakses 10 0ktober 2016.

Permana, Y & Sumarmo, U. 2007. *Mengembangkan Kemampuan Penalaran Dan Koneksi Matematika Siswa SMA Melalui Pembelajaran Berbasis Masalah*. Jurnal Educationist Vol.Ino.2, diakses, 6 september 2016

Puspadewi, dkk. 2014. Peningkatan Kemampuan Berpikir Kritis Melalui Pendekatan Pembelajaran Kooperatif Tipe Student Teams Achievement Division Pada Mata Pelajaran PKn Siswa Kelas V SD N 2 Blahbatuh. e-jurnal mimbar PGSD Universitas Pendidikan Ganesha Jurusan PGSD Vol.2 No.1, diakses 22 Agustus 2016.

Sadeli, H, E & Kartikawati R. 2013. *Peran pembelajaran pendidikan kewarganegaran dalam meningkatkan keterampilan berpikir kritis pada siswa SMP Muhammadiyah 1 Purwokerto*. Artikel: Uversitas Muhammadiyah.

Sugandi, a dan sumarmo, U. 2010. *Pengaruh Pembelajaran Berbasis Masalah Dengan setting Koperatif Jigsaw Terhadap Kemampuan Komunikasi Matematis Serta Kemandirian Belajar Siswa SMA*. Makalah disajikan Dalam Seminar Nasional matematika dan Pendidikan Matematika Jurusan Pendidikan Matematika STKIP Siliwangi Bandung, (Online), Vol. 2 No. 2, (ejournal.stkipsiliwangi.ac.id/index.php.infinity/article/view/31/30, diakses 08 0ktober 2016)

Sugandi, A. 2013.*Pengaruh Pembelajaran Berbasis Masalah Dengan Setting Kooperatif Jigsaw Terhadap Kemandirian Belajar Siswa SMA*. Jurnal Ilmiah Program Studi Matematika STKIP Siliwangi Bandung,(Online),Vol.No.2, (ejournal.stkipsiliwangi.ac.id/index.php/infinity/article/view/31/30, diakses 02 september 2016).

Sukaptiyah, S. 2014. Peningkatan Hasil Belajar PKn Melalui Model Problem Based Learning Pada Siswa Kelas VI SD Negari 1 Mongkrong, Wonosegoro. Jurnal scholaria, Vol.5, No.1., diakses 06 September 2016.

Winarsih, Y, dkk. 2013. *Peningkatan keterampilan berpikir kritis siswa dengan menggunakan model pembelajaran aktif tipe card sort pada kelas VIII B MTS*

Print ISSN: ISSN 2054-6297, Online ISSN: ISSN 2054-6300

Tarbiyatul' ulum tirtomoyo poncowarno. Jurnal radiasi. Vol.4 No.1, diakses 15 September 2016.

Yunika, Y.E, Santoso, S, dan Ariyanto, J. 2011. *Penerapan Pembelajaran Terbaik (Reciplocal Teaching) untuk Meningkatkan Kemandirian Belajar Biologi siswa Kelas VII-G SMP N5 Karanganyar Tahun Pelajaran 2010/2011*. Jurnal pendidikan Biologi, (Online), Vol. 3, No.2 (jurnal.fkip.uns.ac.id), diakses 08 0ktober 2016).

Z Iskandar, A. *Penerapan metode pembelajaran peta konsep untuk meningkatkan kemampuan berpikir kritis dan kemampuan berpikir kreatif*. Jurnal studi masyarakat, (Online), Vol. 7, No.1, diakses 08 0ktober 2016).

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