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Influence Cooperative Learning Method and Personality Type to Ability to Write The Scientific Article

(Experiment Study on SMAN 2 Students Ciamis Learning Indonesian Subject)

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Abstract. The purpose of this research was to know the influence of cooperative learning method (Jigsaw and TPS) and personality type (extrovert and introvert) toward students' ability in scientific writing at the SMA Negeri 2 Ciamis class XII. The research used experimental method with 2 x 2 factorial design. The population was the students of class XII which consisted of 150. The sample was 57 students. The results showed that: (1) The ability to write scientific articles of students learning by cooperative learning method jigsaw model (= 65,88) is higher than students who learn by cooperative technique method of TPS (= 59,88), (2) Ability writing scientific articles of students whose extroverted personality (= 65.69) is higher than introverted students (= 60.06); (3) there is interaction between cooperative learning method and personality type to score of writing ability of scientific article (4) ability to write scientific article of extrovert student and studying with technique of Jigsaw (= 77,75) higher than extrovert student learning with cooperative learning method model of TPS (= 53,63) to score of writing ability of scientific article, (5) ability to write introverted student's scientific article and get treatment of cooperative learning method of jigsaw model (= 54,00) lower than introverted student learning TPS technique = 66,13), (6) the ability to write extroverted students' scientific articles studied with jigsaw techniques, and introverted students who studied Jigsaw techniques (= 77.75) were higher than those with introverted personality types studied by the Jigsaw technique (= 54.00), (7) Ability to write scientific articles of students learning by cooperative techniques of TPS technique and have extrovert personality type (= 53.63) lower than introverted students learning TPS techniques (= 66.13).

Keywords**:** Ability; Writing; Scientific Articles; Jigsaw Method; Polling Method; Extrovert; Introvert

I. INTRODUCTION

The language context, especially writing is known as the type of scientific article writing. The ability to write scientific articles is very important owned by students because writing a scientific article is one of the language skills that any time needed when students will publish the results of his writings through the scientific media. Writing articles that are scientific is writing from the results of scientific studies with the aim that the results of research read by others as a study of theory in a scientific research. Language learning, in particular, to train the skills of writing a scientific article, in addition to the method of learning, to note the characteristics of the students.

Writing is a method of representing this language visual or tactile form. The type of personality is one of the things that affects the inner life of the body, as well as the pseudo- learning of language According to Cho and Auger that the study indicates that the nonprofits and information on their own social media sites, or creating content relevant to the nonprofit organizations Correa et al.'s (2010) study and also indicates an antecedent characteristic of the individual - that of extroversion - which has an effect on the contributing , active behavior of the individual in support of the organization's (Moonhee Cho, Giselle A. Auger -Public Relations Review, 2017). Studies show that extroverted people are more willing to be actively involved and they can

participate in social media, sharing information. Contribute to the organization and support individual behavior for the organization.

Further, according to Karsl, and Irem Anl, those extrovert individuals have a tendency to develop an antisocial personality disorder, which may be entitled from problem observed in extroverted individuals in making connections about their behaviors and consequences. (Temel Alper Karsl, Irem Anl- Procedia Social and Behavioral Sciences, 2010). Extroverts even have a tendency to develop their personality, problems can be observed and able to establish connections in behaving. In line with the above opinion, Hewett and Martini also said that extroverts prefer activities requiring dialogue, cooperative study, and discussion. (Beth L. Hewett, Rebecca Hallman Martini, Extraverts prefers having outside activities, requiring dialogue, and discussion. Meanwhile, according to Tisha L.N. Emerson et al that extroverts tend to focus on people, things, and events in their external environment, and are prone to action, understanding life better by experiencing it. They often feel "most energized by the external world. (Tisha L. N. Emerson et al., International Review of Economics Education, 2016), Extroverts has a tendency to focus on the people around them, the events in their environment, and understand well the environment. According to Burtăverde, and Mihăilă that extraversion describe active, sociable and assertive people, people willing to communicate. (Vlad burtăverde, Teodor Mihăilă, International Journal RJEAP, 2011). Which means that Extraversion describes active characters, friendly and assertive people, people who are willing to communicate with people around them. This is also supported by research conducted by Abbasi which shows that the extroverted subject significantly outperformed the introvert group in writing ability. (Abbasi, S. Journal of Applied Linguistics and Language Research-2017).

The level of success of a person in language learning is also influenced by individual differences, including age, trait, attitude, motivation, personality, and cognitive style. Type of personality of the students must be considered by the teacher because the design of the learning is based on the characteristics and potentials of students. The Process or steps of writing well. McCrimmon states there are three steps to decipher in writing activities, namely planning, drafting, and revising. (Mc Crrimmon, James M: 1984). writing that involves compositions and writing that do not involve composition (Grabe, William Robert B. Kaplan 1996. 27) learning model is a conceptual framework that describes a systematic procedure in organizing learning experiences to achieve specific learning goals and serves as a guide for the designers of learning and the teachers in designing learning activities (Trianto: 2007: 5).

According to Nathalie Charlier et.al, the jigsaw was found to improve learning for both low-skilled and high-skilled. (Nathalie Charlier et.al, The Journal Of Emergency Medicine-2015). Jigsaw was found to improve learning for students with low skills and high-skilled students. Further according to Jennifer A. Wilson, et. al that Jigsaw is a cooperative learning strategy requiring students to assume responsibility for learning, and subsequently teaching peers. (Jennifer A. Wilson, et al, Currents In Pharmacy Teaching And Learning- 2017). Jigsaw is a learning strategy in groups so that they can teach each other and have responsibilities respectively. Further, according to Gwendolen T. Buhr MD, et al, that, The jigsaw method is a cooperative learning strategy that is broadly applicable to many educational settings, working well for any material that can be segmented into equal parts among students. The basic procedure for orchestrating the jigsaw method involves dividing the students into 'expert' groups, (Gwendolen T. Buhr md, et al, International Journal JAMDA - 2014). The jigsaw method is a widely applicable learning strategy, students work together in a group, discuss a problem, the jigsaw procedure divides the students in the form of several groups. According to Sare Şengül A, Yasemin Katranci that the jigsaw technique, which focuses on the development of peer cooperation and teamwork through division of tasks among students, takes place through each student's assuming responsibility. (Sare Şengül A, Yasemin Katranci, Procedia - Social And Behavioral Sciences 116-2014). The Jigsaw technique, which focuses on developing cooperation through the division of tasks between students, and each student is responsible for completing the assigned task.

According to Fitzgerald that; The think-pair-share method is a cooperative learning technique created by Frank Lyman (1981) that the author adapted for use in an associate degree nursing course. This learning technique traditionally is implemented by the educator of a student and a student. (Debbie Fitzgerald, Teaching, and Learning in Nursing-2013). The TPS technique is a cooperative learning technique created by Frank Lyman (1981), the author considers it as a traditional technique implemented by educators to ask questions to students, allowing a set amount of student time to think, respond, and direct students to pair with other friends.

According to Scanniello, and Erra that the think-pair-square has been a technique of active discussion of learning, and to solve problems within a group. Furthermore, according to Usman that the think-pair-share strategy is a strategy designed to provide students with ideas to share ideas with other students. (Abdurrahman Hi Usman, Journal of Education and Practice, -2015,). The TPS Strategy is a strategy designed to give students to think about a particular topic given by the teacher and then the

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students in one group can come up with ideas and share ideas with other students.

In line with the above opinion Tint and Nyunt says that using a Think-Pair-Share technique, students think of rules that they share with partners and then with classmates in a group. (San San Tint and Ei Ei Nyunt, Computer Applications: An International Journal (CAIJ) -2015). Using TPS is a group-setting technique in which students can share their knowledge with other friends. While According to M. Dol that, TPS activity for converting the given context-free grammar to Chomsky Normal form consist of Think: In phase of TPS activity, instructor asked the question to student to eliminate null productions, unit productions and useless variable if any from Pair: In pair phase, each student was asked to pair with the partner, shared their thinking with each other and proceeds with the task. Instructor asked the question related the students' understanding of the topic. The students were asked to convert the grammar obtained in 'Think' phase to Chomsky Normal form. Share: In share phase, students shared the solution with the entire class. Instructor discussed the problem of converting context-free grammar to Chomsky Normal form and highlights important points. (Sunita M. Dol, International Journal of Educational Research and Technology, 2014) .TPS activity for converting free grammar context into Chomsky Normal form consists of; think: in the stage of thinking in TPS, the teacher asks the students, pair: in the couples phase, each student is asked to pair with another friend, share: in this phase the students are asked to share the solution. According to Fatimah, Think-Pair-Share is one of the techniques in cooperative learning, giving students the opportunity to think, partner or work with partners, share, and help each other, so as to add variations of learning models that are more interesting, increase activity, and student cooperation. (Nuraini Fatimah, Journal of Humanities Research, 2015).

Even Elhefni also said that think-pair-share or pairs-sharing is a type of cooperative learning designed to influence patterns of student interaction (Elhefni, Journal TA'DIB-2011). Motivational theory of cooperative learning is primarily focused on rewards or objective structures in which students move. (Asma, Nur.2008: 3). Learning method and motivation to learn English speaking skill (Ratna: 2008), influence of learning technique and Personality Type on English Listening skill (Ratminingsih: 2007).

From various opinions of these experts, researchers argue that the success of learning to write a student's scientific article should consider things, among them; (1) the selection of learning methods should be based on student activity, (2) consider the student's personality to make the learning plan, (3) the teacher, as a motivator in student learning.

II. Research Method

The research method used experimental method with 2X2 factorial design and used two way ANOVA data analysis technique at 0.05 and 0.01 significance level. The data were collected using 2 (two) instrument, namely the form of test the ability to write scientific articles and instruments to know the extrovert personality type and know the introvert personality type. a prerequisite test that includes the normality test and homogeneity test.

Table I
Research Design Matrix

Cooperative Learning / Personality Type	JIGSAW	TPS
Ekstrovert	8 students	8 students
Introvert	8 students	8 students

a. The student group has an extroverted personality type that studied a Jigsaw model of 16 people.
b. Student groups have introverted personality types that study with a TPS model of 16 people.
c. The group of students has an extrovert personality type who studied with Jigsaw as many as 16 people.
d. Student groups have introverted personality types that study with a TPS model of 16 people.

III. Result And Discussion

A. *Result*

Test Results Liliefors (Test Normality), Test Barlett (Homogeneity Test) showed that the overall research data is normally distributed and homogeny. For that analysis continued to test the research hypothesis. (1) the first hypothesis; based on the results of two-lane variance analysis between rows of ANOVA shows that the price of Fcount = 5.607 is greater than Ftable = 4.20 at the significance level α = 0.05. This means H0 is rejected and accepts H1. Once the difference tested the difference significantly, then the next step to see which is better the ability to write scientific articles students between the two treatments. Based on the calculation it turns out the average value of the ability to write scientific articles of students who learn with type jigsaw learning method (A1) is 65.88 greater than the ability to write scientific articles with cooperative method type TPS (A2) an average value of 59.88 With so the ability to write scientific articles for students who learn with cooperative type jigsaw method is better than the students who learn cooperatively type method of TPS.

The second hypothesis; based on the result of analysis of variance of two paths between rows of ANOVA show that price Fhitung = 4,928 bigger than Ftabel (0,05; 1:28) = 4,20 at signification level α = 0,05. This means H0 is rejected and accepts H1. Thus

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the second hypothesis that there is a difference in the ability to write scientific articles between students who have extroverted personality and students with introverted personality can be accepted significantly at α = 0.05. Thus, the ability to write scientific articles students who have extrovert personality is better than the students who have introverted personality.

The third hypothesis; based on result of analysis of variance of two lines between lines indicate that price of Fcount = 51,165 bigger than Ftabel (0,01; 1:28) = 7,64 at signification level α = 0,01. This means H0 is rejected and accepts H1. Thus the third hypothesis states that there is interaction between cooperative learning method and personality type accepted significantly at α = 0,01. It can be concluded that there is interaction between the application of cooperative learning method of jigsaw type and cooperative learning method of TPS type with personality type Extrovert and introvert to the ability to write scientific article of student of SMAN 2 Ciamis.

Fourth hypothesis; Further testing using Tukey Test for groups A1B1 and A2B1, th greater than tt or 9.53> 6.20 at α = 0.05. This means H0 is rejected and accepts H1. Thus there are differences in the ability to write scientific articles for students who learn by cooperative learning method jigsaw and extrovert personality type with the method of cooperative learning TPS type and extrovert personality type. The result of the calculation shows that in the students who have the extrovert personality type the average score of writing skill in Indonesian language that studied by cooperative method of jigsaw (A1B1) is 9,53 higher than the average score of writing ability of scientific article of students studying by method TPS learning (A2B1) is 6.20 Thus the fourth hypothesis that the ability to write scientific articles for students who have extroverted personality who studied with jigsaw method is better than students who learn by TPS method is accepted significantly at α = 0.05.

The fifth hypothesis; Further testing using Tukey Test for A1B2 and A2B2 groups; th greater tt or 4.79. > 6.20 at α = 0.05. This means H0 is rejected and accepts H1. This means that in introverted personality students there are differences in the ability to write scientific articles between students who study with jigsaw method and TPS method. The average score of the ability to write an introvert personality that studied with the method of jigsaw (A1B2) is 4.79. In students who have introverted personality who learn by TPS method (A2B2) is 6.20. Thus the fifth hypothesis, the ability to write a student's scientific article has an introverted personality type on students who study the TPS method is better than the ability to write scientific articles of students learning by jigsaw learning method.

The sixth hypothesis; Further testing using Tukey's Test on the sixth hypothesis, for groups A1B1 and A1B2; th greater tt or 9.39> 6.20 at α = 0.05. This means H1 is accepted and reject H0. This means that students who learn with jigsaw method, there is a difference in the ability to write scientific articles between students who have extroverted personality and students with introverted personality. The average score of the ability to write scientific articles of students who studied jigsaw method on extroverted personality (A1B1) was 9.39 while the students who studied by jigsaw method average score of students' writing skill in introverted personality (A1B2) were 6, 20. Thus the sixth hypothesis, the ability to write scientific articles of students who learn with jigsaw method on students who have extroverted personality is better than the ability to write scientific articles students who learn by jigsaw method on students with introverted personality.

The seventh hypothesis; Further testing using Tukey Test group A2B2; th is greater than tt or 6.20> 4.94 at α = 0.05. This means that H1 is received and processed H0. Thus there is a difference in the ability to write scientific articles on students who have extroverted personality types and introverted students. The results show that students who studied by TPS method average score of ability to write scientific articles of students with extroverted personality (A2B1) of 4.94 while students who study by TPS method average score of ability to write scientific articles on students with introverted personality (A2B2) that is 6.20. Thus, the seventh hypothesis which states that the ability to write scientific articles for students with introverted personality with jigsaw learning method is lower than the ability to write scientific articles of students given the method of learning TPS received significantly at α = 0.05. So the ability to write scientific articles students who have introverted personality better by using the method of learning TPS.

B. Discussion

Score Writing Skills Scientific Articles Students Learning through Cooperative Learning Method Jigsaw Model (A1)

Based on the data collected from the respondents as many as 16 students, it is known that the score of the ability to write scientific articles of students learning by cooperative learning method jigsaw model got the highest score of 84; lowest score 43; average score of 65.88; median value 67.0; value of mode 61; variance 179,18; standard deviation 13.39. Further summary of the scores ability to write scientific articles students who learn by cooperative learning method jigsaw model arranged in the frequency distribution table as follows:

Table II
Group Frequency Distribution A1

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No	Interval Class			Limit		Frequency		
				Lower	Upper	Absolute	Cumulative	Relat
1	43	-	51	42,5	51,5	3	3	18,7
2	52	-	60	51,5	60,5	3	6	18,7
3	61	-	69	60,5	69,5	2	8	12,5
4	70	-	78	69,5	78,5	5	13	31,2
5	79	-	87	78,5	87,5	3	16	18,7
						16		100

Frequency distribution of the scores of students' scientific writing skills learning by cooperative learning method of jigsaw model in Table II can be made in the form of the following histogram graphs:

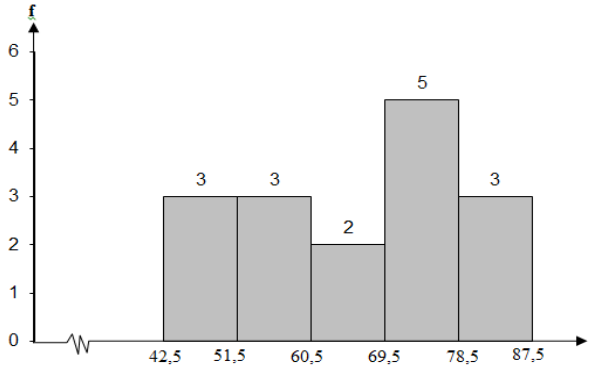

Fig. 1 Histogram Frequency Distribution Group A_1

Score Ability to Write Scientific Articles Students Learning through Cooperative Learning Methods TPS Model (A2)

Based on the data collected from the respondents as many as 16 students, it is known that the score of writing ability of scientific articles of students learning by cooperative learning method of TPS model got the highest score 79; lowest score 42; an average score of 59.88; median value of 60.0; value of mode 53; variance 108,78; standard deviation 10.43. Next summary of the ability to write scientific articles for students who learn by cooperative learning methods model of TPS in stacking in the frequency distribution table as follows:

Table III
Group Frequency Distribution A2

No	Interval Class			Limit		Frequency		
				Lower	Upper	Absolute	Cumulative	Rel
1	42	-	49	41,5	49,5	3	3	18,
2	50	-	57	49,5	57,5	4	7	25,
3	58	-	65	57,5	65,5	4	11	25,
4	66	-	73	65,5	73,5	3	14	18,
5	74	-	81	73,5	81,5	2	16	12,
						16		10

The frequency distribution of scores of students' scientific writing skills that learn by cooperative learning method of TPS model in Table III can be made in the form of the following histogram graph:

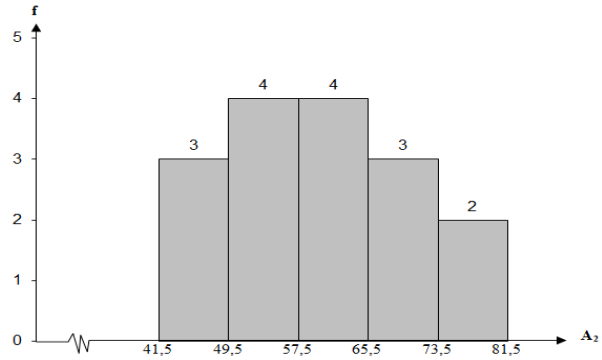

Fig. 2 Histogram Chart of Group Frequency Distribution A2

Score Ability to Write Scientific Articles for Students with Extrovert Personality Type (B1)

Based on the data collected from the respondents as many as 16 students, it is known that the score of writing ability of scientific articles of students who have extroverted personality type got the highest score of 84; lowest score 42; average score of 65.69; median value 67.0; value of mode 61; variance 186,10; standard deviation 13.64. Further summary of the scores of students' scientific writing articles that have extroverted personality types are arranged in the frequency distribution table as follows:

Table IV
Group Frequency Distribution B1

No	Interval Class			Limit		Frequency		
				Lower	Upper	Absolute	Cumulative	Relative
1	42	-	50	41,5	50,5	3	3	18,75%
2	51	-	59	50,5	59,5	3	6	18,75%
3	60	-	68	59,5	68,5	2	8	12,50%
4	69	-	77	68,5	77,5	5	13	31,25%
5	78	-	86	77,5	86,5	3	16	18,75%
						16		100%

Frequency distribution of students' writing scores of scientific articles with extroverted personality types in Table IV can be made in the following histogram charts:

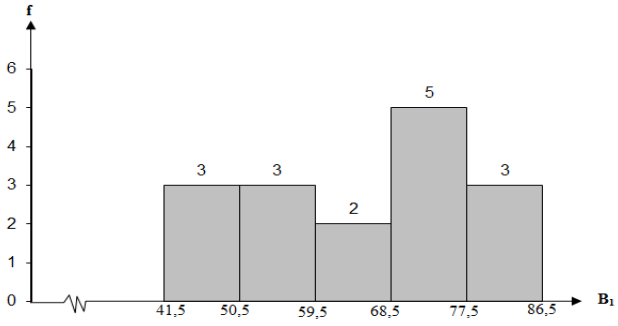

Fig. 3 Histogram Chart of Group Frequency Distribution B1

Score Ability to Write Scientific Articles Students Who Have Introverted Personality Types (B2)

Based on the data collected from the respondents as many as 14 students, it is known that

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the score of students' scientific writing ability with introvert personality type was 79; lowest score 43; average score of 60.06; median value 59.5; value of mode 61; variance 104,20; standard deviation of 10.21. Further summary of the scores of students' scientific writing articles with introverted personality types are arranged in the frequency distribution table as follows:

Table V
Group Frequency Distribution B2

No	Interval Class	Limit		Frequency		
		Lower	Upper	Absolute	Cumulative	Relati
1	43 - 50	42,5	50,5	2	2	12,50
2	51 - 58	50,5	58,5	6	8	37,50
3	59 - 66	58,5	66,5	4	12	25,00
4	67 - 74	66,5	74,5	3	15	18,75
5	75 - 82	74,5	82,5	1	16	6,25
				16		100

The frequency distribution of the students 'writing scores of students' scientific writing articles that have introverted personality types in Table V can be made in the following histogram charts:

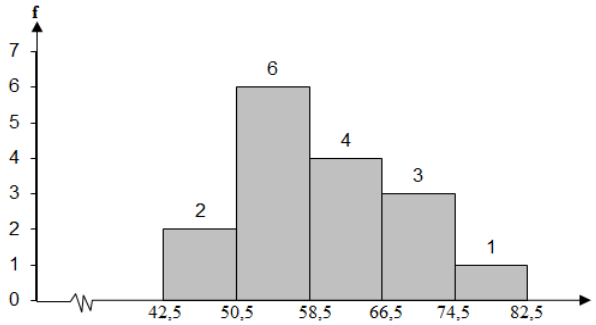

Fig. 4 Histogram Chart of Group Frequency Distribution B2

Score Ability to Write Scientific Articles of Students Learning by Cooperative Learning Methods Jigsaw Model and Having Extrovert Personality Type (A1B1)

Based on the data collected from the respondents as many as 8 students, it is known that the score of the ability to write scientific articles of students who learn by cooperative learning method jigsaw model and have the extrovert personality type got the highest score 84; lowest score 73; average score of 77.75; median value 77.0; value of mode 77; variance 16.21; standard deviation 4.03. Hereinafter summary of score of ability to write scientific article of student who learns by cooperative learning method of jigsaw model and has extrovert personality type arranged in table frequency distribution as follows:

Table VI
Group Frequency Distribution A1B1

No	Interval Class	Limit		Frequency		
		Lower	Upper	Absolute	Cumulative	Relat
1	73 - 75	72,5	75,5	3	3	37,5
2	76 - 78	75,5	78,5	2	5	25,0
3	79 - 81	78,5	81,5	1	6	12,5
4	82 - 84	81,5	84,5	2	8	25,0
				8		100

Frequency distribution of students' scientific writing ability scores that learn by cooperative learning method of jigsaw model and have extrovert personality type in Table VI can be made in the form of the following histogram graph:

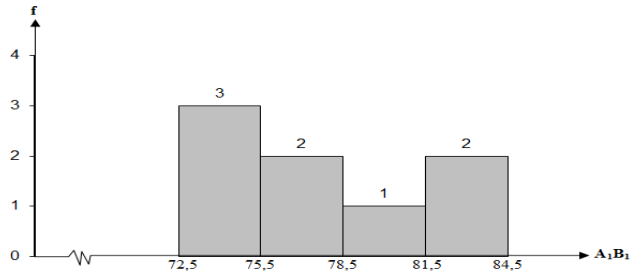

Fig. 5 Histogram Chart of Group Frequency Distribution A1B1

Score Ability to Write Scientific Articles of Students Learning by Cooperative Learning Methods of TPS Model and Having Extrovert Personality Type (A2B1)

Based on the data collected from the respondents as many as 7 students, it is known that the score of the ability to write scientific articles of students learning by cooperative learning method of TPS model and have the extrovert personality type got the highest score 61; lowest score 42; average score 53.63; median value 55,0; value of mode 61; variance 49,98; standard deviation 7.07. Hereinafter summarizing the description of the ability to write scientific articles of students learning by cooperative learning method of TPS model and have extroverted personality type arranged in the frequency distribution table as follows:

Table VII
Group Frequency Distribution A2B1

No	Interval Class	Limit		Frequency		
		Lower	Upper	Absolute	Cumulative	Relative
1	42 - 46	41,5	46,5	1	1	12,50%
2	47 - 51	46,5	51,5	2	3	25,00%
3	52 - 56	51,5	56,5	1	4	12,50%
4	57 - 61	56,5	61,5	4	8	50,00%
				8		100%

Frequency distribution of students' writing scores on scientific writing skills learning by cooperative learning method of TPS model and having extrovert personality type in Table VII can be made in the form of the following histogram graph:

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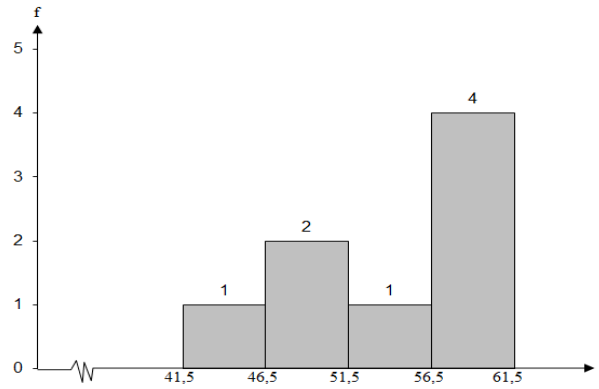

Fig. 6 Histogram Chart of Group Frequency Distribution A2B1

Score Ability to Write Scientific Articles of Students Learning by Cooperative Learning Methods Jigsaw Model and Introvert Personality Type (A1B2)

Based on the data collected from the respondents as many as 7 students, it is known that the score of the ability to write scientific articles of students learning by cooperative learning method jigsaw model and have introvert personality type got the highest score 61; lowest score 43; average score is 54.00; median value of 56.0; value of mode 61; variance 45,43; standard deviation 6.74. Further summary of the scores ability to write scientific articles students who learn through cooperative learning method jigsaw model and have introvert personality type arranged in the frequency distribution table as follows:

Table VIII
Group Frequency Distribution A1B2

No	Interval Class			Limit		Frequency		
				Lower	Upper	Absolute	Cumulative	Relative
1	43	-	47	42,5	47,5	2	2	25,00%
2	48	-	52	47,5	52,5	1	3	12,50%
3	53	-	57	52,5	57,5	2	5	25,00%
4	58	-	62	57,5	62,5	3	8	37,50%
						8		100%

Frequency distribution of students' scientific writing ability scores that learn by cooperative learning method of jigsaw model and have introverted personality type in Table VIII can be made in the form of the following histogram graph:

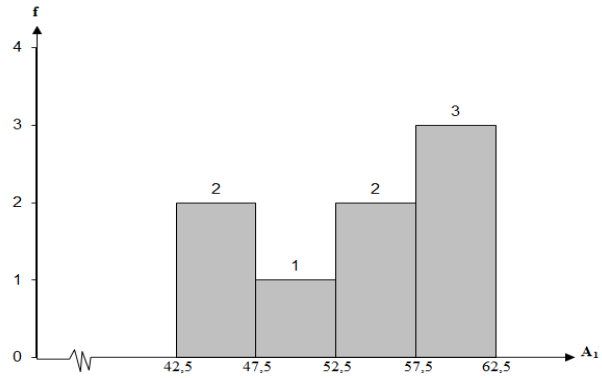

Fig. 7 Histogram Chart of Group Frequency Distribution A1B2

Score Ability to Write Scientific Articles of Students Learning by Cooperative Learning Methods of TPS Models and Introverted Personality Types (A2B2)

Based on the data collected from respondents as many as 7 students, it is known score of ability to write scientific articles of students who learn by cooperative learning method of TPS model and have introvert personality type got highest score 79; lowest score 53; average score of 66.13; median value of 68.5; value of mode 53; variance 93,84; standard deviation of 9.69. Hereinafter summary of score of ability to write scientific article of student who learns by cooperative learning method of TPS model and has introvert personality type arranged in table frequency distribution as follows:

Table IX
Group Frequency Distribution A2B2

No	Interval Class			Limit		Frequency		
				Lower	Upper	Absolute	Cumulative	Relative
1	53	-	59	52,5	59,5	2	2	25,00%
2	60	-	66	59,5	66,5	2	4	25,00%
3	67	-	73	66,5	73,5	2	6	25,00%
4	74	-	80	73,5	80,5	2	8	25,00%
						8		100%

Frequency distribution of students' writing scores on scientific writing skills learning by cooperative learning method of TPS model and having introverted personality type in Table IX can be made in the form of histogram graph as follows:

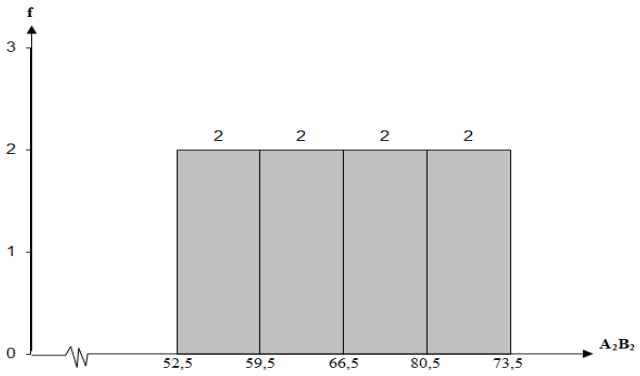

Fig. 8 Histogram Chart of Group Frequency Distribution A2B2

a. Group Normality Test A1
The criterion used in the normality test is that the sample score of the ability to write scientific articles of students learning by cooperative learning method jigsaw model, derived from the population that is normally distributed when L <Ltable. The largest Lhitung value is 0.1406, Ltable for n = 16 with a significant level of 0.05 is 0.213. It can be concluded that A1 data is normally distributed.

b. Group Normality Test A2
The criterion used in the normality test is that the sample score of the ability to write scientific

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articles of students learning by cooperative learning method of TPS model comes from a normally distributed population when L <Ltable. The largest Lhitung value is 0.1442, Ltable for n = 16 with a significant level of 0.05 is 0.213. It can be concluded that A2 data is normally distributed.

c. Group Normality Test B1
The criterion used in the normality test is that the sample score of the students' scientific writing ability with the extrovert personality type comes from the normally distributed population when L<Ltable. The largest Lhitung value is 0.1424, Ltable l for n = 16 with a significant level of 0.05 is 0.213. Thus it can be concluded that data B1 is normally distributed.

d. Group Normality Test B2
The criterion used in the normality test is that the sample score of the students' scientific writing ability with the introverted personality type, comes from the normally distributed population when L< Ltable. The largest Lhitung value is 0.1521, Ltable for n = 16 with a significant level of 0.05 is 0.213. Thus it can be concluded that data B2 is normally distributed.

e. Group Normality Test A1B1
The criteria used in the normality test is that the sample score of the ability to write scientific articles of students learning by cooperative learning method of jigsaw model and having extrovert personality type comes from the normally distributed population when L<Ltable. The largest L value is 0.2004, Ltable for n = 8 with a significant level of 0.05 is 0.285. It can be concluded that A1B1 data is normally distributed.

f. Group Normality Test A2B1
The criteria used in the normality test is that the sample score of the ability to write scientific articles of students learning by cooperative learning method of TPS model and have extrovert personality type comes from a normally distributed population when L<Ltable. The largest Lhitung value is 0.14952, Ltable for n = 8 with a significant level of 0.05 is 0.285. It can be concluded that A2B1 data is normally distributed.

g. Normality Test Score Group A1B2
The criteria used in the normality test is that the sample score of the ability to write scientific articles of students learning by cooperative learning method of jigsaw model and have introverted personality type comes from the normally distributed population when L<Ltabel. The largest Lhitung value is 0.1492, Ltable for n = 8 with a significant level of 0.05 is 0.285. It can be concluded that A1B2 data is normally distributed.

h. Normality Test Score A2B2 Group
The criteria used in the normality test is that the sample score of the ability to write scientific articles of students learning by cooperative learning method of TPS model and has introverted personality type comes from a normally distributed population when L< Ltable l. The largest Lhitung value is 0.1631, Ltable for n = 8 with a significant level of 0.05 is 0.285. It can be concluded that A2B2 data is normally distributed.

Table X
Summary of Normality Test Results

Group	L	L_{table}	Information
A_1	0,1406	0,213	Normally Distributed
A_2	0,1442	0,213	Normally Distributed
B_1	0,1424	0,213	Normally Distributed
B_2	0,1521	0,213	Normally Distributed
A_1B_1	0,2004	0,285	Normally Distributed
A_2B_1	0,1492	0,285	Normally Distributed
A_1B_2	0,1492	0,285	Normally Distributed
A_2B_2	0,1631	0,285	Normally Distributed

Information:
A1 = Score ability to write scientific articles for students who learn by cooperative learning method jigsaw model
A2 = Score ability to write scientific articles of students learning by cooperative learning method of TPS model
B1 = Score ability to write scientific articles for students who have extroverted personality type
B2 = Score ability to write scientific articles for students who have introverted personality types
A1B1 = Score ability to write scientific articles for students who learn by cooperative learning method jigsaw model and have extrovert personality type
A2B1 = Score ability to write scientific articles of students learning by cooperative learning method of TPS model and have extrovert personality type
A1B2 = Score ability to write scientific articles of students learning by cooperative learning method jigsaw model and have introvert personality type
A2B2 = Score ability to write scientific articles of students learning by cooperative learning method of TPS model and have introverted personality type

IV. Conclusion

Ability to write scientific articles of students who learn jigsaw technique (= 65,88) higher than students who learn with TPS technique (= 59,88), Ability to write scientific articles of students whose extroverted personality (= 65,69) introvert (= 60.06); There is an interaction between cooperative learning methods and personality types on the ability to

write scientific articles. The ability to write extroverted students' scientific articles learning Jigsaw technique (= 77.75) is higher than that of extrovert students learning by TPS technique (= 53.63). The ability to write introverted students' scientific articles learning jigsaw technique (= 54.00) was lower than that of introverted students who studied TPS techniques (= 66.13). Ability to write extroverted students' scientific articles studied with jigsaw techniques, with introverted students who studied Jigsaw techniques (= 77.75) higher than introverted students who studied with the Jigsaw technique (= 54.00). The ability to write scientific articles of students learning by extrovert personality TPS technique (= 53.63) is lower than that of introverted students learning TPS techniques (= 66.13).

REFERENCES

Abbasi, S. (2017). The Effect of Using Task-Based Activities on Narrative Writing Performance of EFL Learners with Different Personality Types. *Journal of Applied Linguistics and Language Research*, 4(3), 28-36.

Abdurrahman Hi. Usman, Using the Think-Pair-Share Strategy to Improve Students' Speaking Ability at Stain Ternate, *Journal of Education and Practice*, 2015, pp. 39.

Anderson, Paul. 1967. *Language skills In Elementary Education*. New York: The Macmillan Company.

Arifin, E. Zaenal. 2003. *Dasar-dasar Penulisan Karangan Ilmiah.* Jakarta: Grasindo.

Asma, Nur. 2008. *Model Pembelajaran Kooperatif*. Padang: UNP Press.

Axelrod, Rise B dan Charles R. Cooper. 1998. *The ST Martins Guide to Writing 2nd Edition*. New York: ST Martin's Press.

Brown, H. Doughlas. 2004. *Language Assessment Principles and Classroom Practice*. USA: Longman.

_____. 1997. *Principles of Language Teaching*, Englewood Cliff: Prentice Hall, Inc.

Byrne, Donn. 1995. *Teaching Writing Skills New Edition*. London: Longman.

Cox, Carole. 1999. *Teaching Language Arts*. Boston: Allyn and Bacon.

Crosby, Harry H. dan Duncan A. Carter. 1986. *The Committed Writer: Mastering Nonfiction Genres*. New York: Mc Graw-Hill Book Company.

Daniel, Jose Parera. 1993. *Menulis Tertib dan Sistematis*. Jakarta: Erlangga.

Debbie Fitzgerald, Employing Think–Pair–Share In Associate Degree Nursing Curriculum, *Teaching and Learning in Nursing*, 2013, pp. 1.

Elhefni, Model Pembelajaran Kooperatif *Tipe Think Pair Share* dan hasil belajar di sekolah, *Journal TA'DIB*, 2011, pp. 309.

Ennis, Robert H. 1996. *Critical Thinking*. New Jersey: Prentice Hall, Inc.

Ferguson, George *A.* 1981. *Statistical Analysis in Psychology and Education*. New York: Mc Graw-Hill Book Company.

Finegan, Edward. 2004. *Language Its Structure and Use*. USA: Wadworth-Thomson Corporation.

Fromkin, Victoria dan Robert Rodman. 1998. *An Introduction to Language, Sixth Edition*. Florida: Hercourt Brace College Publisher.

Galko, Francine D. 2002. *Better Writing Right Now, Using Word to Your Advantage*. New York: Learning Express, LLC.

Giuseppe Scanniello, Ugo Erra, Distributed modeling of use case diagrams with a method based on think-pair-square: Results from two controlled experiments, *Journal of Visual Languages and Computing*, 2014, pp. 3.

Grabe, William dan Robert B. Kaplan. 1996. *Theory and Practice of Writing: An Applied Linguistic Perspective*. London: Longman.

Gronlund, Norman E. 1985. *Measurement and Evaluation in Teaching*. USA: Macmillan Publishing Company.

Gwendolen T. Buhr md, *et, al*, Using The Jigsaw Cooperative Learning Method To Teach Medical Students About Long Term And Postacute Care, *International Journal JAMDA* , 2014, pp. 2.

Hadley, Alice Omagio. 1993. *Teaching Language in Context, 2* Edition. Boston: Heinle & Heinle Publisher.

Iskandar. 2009. *Psikologi Pendidikan, Sebuah Orientasi Baru*. Jakarta: Gaung Persada Press.

Jennifer a. Wilson, *et. al*, Traditional Lecture Versus Jigsaw Learning Method For Teaching Medication Therapy Management (MTM) Core Elements, *Currents In Pharmacy Teaching And Learning*, 2017, pp. 1.

Karmsch, Claire. 1998. *Language and Culture*. Oxford: Oxford University Press.

Lauer, Janice M., et al. 1981. *Four Word of Writing*. New York: Harper and Row.

Macdonald, Andrew dan Gina Macdonald. 1996. *Mastering Writing Essentials*. New Jersey: Prentice-Hall Regent.

Mc Crrimmon, James M. 1984. *Writing With a Purpose.*

Nathalie Charlier *et.al*, Peer-Assisted Learning In Cardiopulmonary Resuscitation: The Jigsaw model, *The Journal Of Emergency Medicine*, 2015, pp. 2.

Nuraini Fatimah, Implementasi Cooperative Learning Tipe Think-Pair-Share Dalam Pembelajaran Bercerita Di Sekolah Menengah Pertama, *Jurnal Penelitian Humaniora*, 2015, pp. 92.

Olson, Miles, et al. 1982. *The Writing Process*. Boston: Allyn and Bacon, Inc.

Patrick, J. 1992. *Training: Research and Practice*. London: Harcourt Brace Jovanivich Publishers.

Richard, Jack C dan Willy A. Renandya. 2002. *Methodology in Language Teaching*. London: Cambridge University Press.

San San Tint and Ei Ei Nyunt, Collaborative Learning With Think-Pair-Share Technique, *Computer Applications: An International Journal* (CAIJ), 2015, pp. 4.

Sare Şengül A, Yasemin Katranci, Effects Of Jigsaw Technique On Seventh Grade Primary School Students' Attitude Towards Mathematics, *Procedia - Social And Behavioral Sciences*, 116, 2014, pp. 1.

Semiawan, Cony. 1984. *Memupuk Bakat dan Kreativitas Sekolah Menengah*. Jakarta: Gramedia.

Sudjana. 1989. *Metoda Statistika*. Bandung: Tarsito.

Sunita M. Dol, TPS (Think-Pair-Share): An Active Learning Strategy to Teach Theory of Computation Course, *International Journal of Educational Research and Technology*, 2014, pp. 63.

Suparno dan Mohamad Yunus. 2005. *Keterampilan Dasar Menulis*. Jakarta: Pusat penerbitan UT.

Suriasumantri, Jujun S. 1993. *Filsafat Ilmu Sebuah Pengantar Populer*. Jakarta: Pustaka Sinar Harapan.

Boston:Houghton Mifflin Company.

Tisha L.N. Emerson *et, al*, Cooperative learning and personality types, *International Review of Economics Education*, 2016, pp. 22.

Trianto. 2007. *Model-Model Pembelajaran Inovatif Berorienrasi Konstruktivistik: Konsep, Landasan Teoritis-Praktis dan Implementasinya*. Jakarta: Prestasi Pustaka Publisher.

Ur, Penny. 2009. *Course in Language Teaching. Practice and Theory*. England: Cambridge Univ. Press.

Vlad burtăverde, Teodor Mihăilă, Significant differences between introvert and Extrovert people's simple reaction time in Conflict situations, *International Journal RJEAP*, 2011, pp. 19.

Winkle, W.S. 1984. *Psikologi dan Evaluasi Belajar*. Jakarta: Gramedia.

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