The Effect of Scientific Approach Toward Students' Writing Achievement at Tenth Grade of SMA N 8 Jambi City

Morita Septi Rahayu, Khidayatul Munawwaroh, Nurul Fitri

English Education Study Program, Faculty of Teacher Training and Education, Batanghari University

ABSTRACT

This research was done to find the effect of scientific approach toward students' writing achievement at tenth grade of SMA N 8 Kota Jambi Academic Year 2019/2020. The researcher used a quantitative method and quasi-experimental design as the research methodology with simple random sampling. The purpose of this research is to find out whether there is any significant effect or not of scientific approach toward students' writing achievement. The sample of this research was the tenth of science grade students at SMA N 8 Kota Jambi. The instrument of this research was tests. This study involved 56 students of the tenth grade students at SMA N 8 Kota Jambi academic year 2019/2020 as the object of the study and divided into two classes. Students' writing achievement is effect after treatment using scientific approach learning method which is proven with students writing achievement higher than before treatment. The average pre-test control class 48,6 and post-test control class 78,8. Average pre-test experimental class 53,5 and post-test 90,5. Using scientific approach in teaching writing descriptive text makes learning activity more effective and students can well understand learning material in treatment process. Thus the alternative hypothesis is accepted, the value of t-test higher than the value of t-table (3,93>2,004). Based on the finding above, it can be concluded that using scientific approach as learning method has significant effect of students writing achievement at tenth grade students of SMA N 8 Kota Jambi.

Key Words: *Effect, Writing Achievement, Scientific Approach.*

INTRODUCTION

Writing involves transferring massages from our thoughts to form of flat surface (written form) using language. Powell (2009: 13) stated that writing is hard to see because it governs our thoughts and hard to talk about because of the lack of consistent names for real categories. Writing is a difficult activity for most people, both in mother tongue and in foreign language. Writing is the most complex one compared to the other skills. Not only putting letters, symbols, and numbers, it involves many aspects such as paragraph development, mechanic and organization of content and it demands standard from grammar, syntax, and vocabulary. In writing, the relation between sentences operates at several levels (Byrne, 1994: 4).

In writing skill, there are some kinds of text that will be learned by the students, one of them is descriptive text. Descriptive text is a kind of text that is use to describe something. It is usually used to describe a thing, person, place or event to give explanation for someone.

Therefore, having a good writing skill can help people to express their idea, opinion, and feeling to other parties by means of written language, for example in the form of articles, novels, short stories, journals, and many others. Furthermore, Hosseini et al. (2013) have stated that by having a good writing ability, it will give good impact in life. Through writing activity, people are required to read more from various sources and to think creatively in developing the insight of their knowledge widely. Hence, writing skill is considered an important skill to be mastered, especially by the second language learners (Javed, Juan, & Nazli, 2013).

The effective learning of writing allows the students to learn easily in learning to reach the learning goals. In

consequence, this needs the teacher's roles to assist and guide the students in order to achieve the learning objectives. For instance, the teacher has the roles in choosing and in using an appropriate approach to the learning process of writing. As it is known that an approach is defined as someone's perspective toward the learning process (Rusman, 2014). Therefore, the selection of the right approach is expected that it can affect the process of teaching and learning of writing.

The scientific approach is recommended in the implementation of Curriculum 2013. The scientific approach is an old and a new approach because it has been implemented in science, and it is newly used in all subjects including English. The scientific approach is based on the Bruner's theory which states that the learners study and construct the knowledge through the cognitive process (Hosnan, 2014). Furthermore, this approach emphasizes the students on the learning process to seek the knowledge rather than to transfer it. The learners are seen as the learning subjects who need to be involved actively in the learning process, and the teacher is as a facilitator who guides and coordinates the learning activities. Saefuddin and Berdiati (2014) add that in the scientific approach, the learning process aims to support and to assist the students' learning process in finding and using their knowledge. Therefore, Komariah (2016) says that in implementing this approach, the students are expected to be able to think critically.

The scientific approach can be applied in the teaching and learning process in the English language, especially in writing class. According to Hosnan (2014), the scientific approach aims to train the students in communicating ideas, especially in writing. The scientific approach also develops the students' attitudes, knowledge, and skills. It means that this approach can promote the students' language skills, particularly in writing skill.

The steps of the scientific approach, such as observing, questioning, exploring, associating, and communicating can help the students in the learning process become active learners. Moreover, the scientific approach is one of the effective approaches in the teaching, especially in the teaching of English language, so like Suharyadi (2013), it is revealed that the use of the scientific approach is more effective than that of the traditional approach. Therefore, the use of the scientific approach is expected to be able to affect the students' ability in writing and to make the process of teaching and learning writing becomes the effective learning.

WRITING SKILL

Before going to the concept of writing ability, it is better to know what writing is. Harmer (2001:79) says that writing is a form of communication to deliver through or to express feeling through written form. It means that writing is productive skills that express feeling through written communication.

Writing is considered as an active creation of text involves on the one hand lower-order transcription skills such as handwriting, punctuation and spelling, and on the other hand, higher-order self-regulated thinking processes such as planning, sequencing and expressing the content (Berninger at al, 2002). It requires the writer to express the content of writing into a good composition by considering the aspects of writing to be understood by the readers.

Writing is one of important skills which have to be mastered by the students because writing can help them to think critically and deeply to build a good writing. Writing also necessary component of education, livelihood, and functional basics in our society. By learning writing, the students will get knowledge how to write effectively, how to express ideas, how to share their thoughts with anyone else through

writing. Harmer (2004: 31-33) states that there are some the importance of learning writing. Those can be seen in the following points:

1. Writing is often not time-bound in the way conversation is. It means that in writing activities the students have longer time to think rather than in speaking activities. Thus, the students can choose the appropriate word that will be used to express their ideas. They can also have longer time to check their grammar patterns.
2. Writing encourage students to focus on accurate language use because they think as they write. It may provoke well development as they resolve problems which writing puts in their mind.
3. Writing has always been used as a means of reinforcing language that has been taught. Teacher uses writing skill to make a note about recently learnt grammar in learning process.
4. Writing is frequently useful as preparation for some other activities, in particular when students write sentences. The students are given the time to think the ideas and asked to write sentence.
5. Writing can also be used as an integral part of a larger activity where the focus is on something else such as language practice, acting out, or speaking. The teacher asks students to write short dialogues which they will act out.
6. Writing is also used in questionnaire-type activities. Students may be asked to design a questionnaire by asking questions to their friends.
7. Writing is also used to help students perform a different kind of activity (in this case speaking and listening). Students need to be able to write to do these activities.

Aspects of Writing

To create a good writing, there are several aspects for the writer to pay a close attention to. An effective composition should meet the qualities in some terms proposed by Jacobs at al (1981: 90) below:

1. Content

The substance of writing, the experience of the main idea, i.e., groups of related statements that a writer presents as unit in developing a subject. Content paragraph do the work of conveying ideas rather than fulfilling special function of transition, restatement, and emphasis.

2. Organization

It is scarcely more than an attempt to place together all condition of fact and jumble ideas. Even in early drafts it may still be searching for order, trying to make our pattern in its materials and working to bring particulars of its subject in line with what is still only a half-formed notion of purpose.

3. Vocabulary

The selection of words that is suitable with the content. It begins with the assumption that the writer wants to express the ideas as clearly and directly as he/she can. As a general rule, clarity should be his/her prime objective. Choosing words that express his/her meaning is precise.

4. Language Use

The use of correct grammatical form and synthetic pattern of separating, combining, and grouping ideas in words, phrases, clauses, and sentences to bring out logical relationship in paragraph writing.

5. Mechanic

The use of graphic conventional of the language, i.e., the steps of arranging letters, words paragraphs by using knowledge of structure and some other related to one another.

The Process of Writing

According to Nunan (2003:89), the process of writing includes organizing, drafting, editing, reading, and rereading. This process of writing is often cyclical and sometimes disorder. It can be said as disorder because sometimes after the writers reach the next step, they have to

repeat the previous step. Hyland (2003:11) also has the same ideas that planning, drafting, revising, and editing do not occur in a neat linear sequence, but are recursive, interactive, and potentially simultaneous, and all work can be reviewed, evaluated, and revised, even before any text has been produced at all. This is in line with Tribble (1996: 37- 39) in Harmer (2007: 326) who states that in reality, the writing process is more complex and the stages of writing are done recursively. Thus at the editing stage, sometimes writers may feel to go back at the pre-writing stage and rethink about what they have written.

To sum up, the arrangement of the steps cannot be separated because it works like a wheel. Each stage in the process of writing will work in line to help the students compose the text.

Writing Achievement

Achievement means the students' mastery of a particular syllabus or the material taught in the class (Heaton, 1975: 163). Writing achievement is the result score of writing ability of the students. Writing achievement has a standard score from the teacher to be passed by the students in writing. Writing achievement is measured by a holistically scored writing sample (Shell, Duane F.; Murphy, Carolyn C.; Bruning, Roger H. 1989). The results from students writing ability after being tested is called writing achievement.

DESCRIPTIVE TEXT

Definition of Descriptive Text

According to Anderson and Anderson (2003:26), descriptive text describes particular person, place, or things. It means that descriptive text is designed specially about a person, a place, or things. They also stated descriptive text to tell about subject by describing its feature without including personal opinions.

Wishon and Burks (1980:218) stated that descriptive text provides sense of opinions, for instance smell, sound, feel, look, of things.12 It means that by reading a descriptive text, the reader can get similar ideas when the readers see certain objects directly with their senses.

In addition, according to Pardiyono (2007:33), descriptive text gives descriptions from the living or non-living things to the reader. In other words, the text can tell an object that is still alive and not. Moreover, Barbara (2004:142) added that description gives a significant point of view because it transforms our feeling and extends our experiences.

It means that description is telling about something or someone particularly which bring the reader's perception change and spread the reader's knowledge widely. The researcher chooses descriptive writing because it describes a colorful piece of a person, place, thing, or idea using concrete and also vivid detail

1. Generic Structure of Descriptive Text

According to Bamanti and Oktaviani (2011:50) the generic structure of descriptive text is divided into two parts, there are: 1) Identification It is generic part of paragraph which introduces or identifies the character and 2) Description It is a part of paragraph which describes the character.

2. Language Features of Descriptive Text

There are several Language Features of Descriptive Text, namely; 1) Descriptive often uses adjectives, numbering, and, classifying. For example; is really cool, it has very thick fur, etc. 2) Tense which is often used is simple present tense. However, sometimes it uses past tense if the thing to be described doesn't exist anymore for example; go, fly, cook, etc. 3) Descriptive text uses thinking verbs (believe, think, etc.) and feeling verbs (feel), and 4) Descriptive text also uses adverbs to give information about

character or adjective that explained. Example; it is extremely high, it runs definitely past, etc.

3. The Purpose of Descriptive Text

Fink et al said that the purpose of description is to imagine the reader by using a picture of a person, subject, or setting (1983:41) It is allowed by using picture, so that the reader can visualize it. According to Febriani (2011:17) the purpose of the descriptive text is to get the reader imagine within the story to get pleasure and information. Generally, the purpose of descriptive text is to describe something, someone, a place, animal, or plants specifically.

SCIENTIFIC APPROACH

There are many literatures that elaborate the definition of "scientific approach" in education, particularly in the field of Science. It is defined as a logical orderly approach that involves gathering data, formulating and testing hypothesis, and proposing theories (Wicander & Monroe, 2006). "Scientific method" is also the process of asking questions and making experiments to find the answers (McMurry & Fay, 2008). From a psychology textbook, "scientific method refers to a set of assumptions, attitudes, and procedures that guide researchers in creating questions to investigate, in generating evidence, and making conclusions" (Hockenburry & Hockenburry, 2000).

The definitions of "scientific method" proposed by some experts above can be summarized as a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. Tang et al. (2009) says that scientific approach has the characteristics of "doing science". This approach allows teachers to improve the process of learning by breaking the process down into steps or stages which contains detailed instructions for conducting students learning.

The Ministry of Education (2013) states that the 2013 curriculum can be implemented successfully by using Scientific Approach. Scientific Approach is a new approach in English Language Teaching because the term "scientific" is more familiar with natural science, social science and management (Suharyadi, 2013, p.1). It is claimed that scientific approach is "a more effective learning approach to reinforce students' learning outcomes; learner is an active subject of learning or learner is subject of learning process" (Permendikbud No.68, 2013).

According to Regulation of Ministry of National Education No. 65, Scientific Approach in 2013 curriculum trains the students to: (1) be the center of learning, (2) involve the cognitive processes which is potential in stimulating intellectual development, specifically the high level of student; thinking skill, (3) give opportunities to the student to assimilate and accommodate concepts, laws and principles, (4) find knowledge through scientific process and use it in learning process, (5) learn from various sources, (6) promote acculturation and empowerment of students as lifelong learners, (7) apply values by giving exemplary things, build willingness, and develop creativity of the students in the learning process, (8) implement the principles in which everyone is teacher, everyone is student and everywhere is class.

In accordance with the standard competence of the 2013 curriculum, learning objectives should include the development of the realm of attitudes, knowledge, and skills. Attitudes are acquired through activity: accept, execute, respect, appreciate, and practice. Knowledge was gained through the activity of remember, understand, apply, analyze, evaluate, and create. Skills were acquired through activities of observing, asking, experimenting, reasoning, serving, and creating (Kemdikbud, 2013a). So, the teaching learning process in scientific approach referred to the process of observing, asking, reasoning, experimenting, and establishing network for all subjects.

The Stages of Scientific Approach

The learning process adopts the scientist stages in building the knowledge through the science methods and characteristics (see Alfred De Vito: 1989; Government's file: 2013; Barringer, *et al*., 2010; Abidin, 2014) Kemdikbud (2013) and Hosnan (2014) state that there are five steps of applying scientific approach in teaching learning process, they are observing, questioning, experimenting, associating, and communicating. The activities of each steps can be explain as follows:

1. Observing

The first stage is observing. Observing is "a deliberate and systematic activity to study a social phenomenon or real object through utilization of the five sense" (Hosnan, 2014, p.40) and involving descriptive skill (Halonen, et al., 2003, cited in Mutaqqin, 2015). In this stage teacher contextualizes learning activity for students in the classroom. Observing is to develop student's curiosity, to create meaningful learning process and help students acquire knowledge (Brown, 2001).

The teacher asks the students to observe objects, events, phenomena, concepts and procedures by using all of their senses to see, listen, read and watch, and integrate it with the learning material (Checkovich & Sterling, 2001, p. 32; Government's file, 2015). At the same time, students construct their knowledge and facilitate them to fulfill their need of knowing something. In this activity, the context is also presented to make students connect what they have learned with what they are going to learn (Suharyadi, 2013, p 3). According to Kemendikbud (2013b), the observation is going to be effective if the teacher and students employ tape recorder (to record the conversation), camera (to record visual objects), film or video (to record audio-visual objects) and related equipment

2. Questioning

The second stage is questioning. Questioning is the process of constructing knowledge in form of concepts of social function in particular material, procedure of structure text through group discussion or class discussion (Kemendikbud, 2013; Abidin, 2014; Mulyasa, 2014). The students are required to have a critical thinking to evoke high level of thinking questions. Questioning can be used by both teachers and students in the classroom with several specific purposes. Specifically, by giving questions, the teacher leads the students to give their attention to begin learning and stimulate them to pursue knowledge on their own (Suharyadi, 2013, p. 3-4).

Based on the regulation of Ministry of Education and Culture (Permendikbud No 81a, 2013) in this stage, students pose questions from what have been observed in the previous stage for gaining more information and comprehension about the material. Furthermore, the students can show their active participation in the learning process. In this stage, the teachers have to facilitate the students with scaffolding to stimulate and encourage the students to ask (Government's file, 2013, pp. 34-35).

The question expected in this stage also must requires criteria of good question: (1) compact and clear, (2) inspiring, (3) focus on a particular subject, (4) probing and divergent, (5) valid and reinforced question, (6) increasing cognitive level, and (7) promoting interaction. Thus, in this stage, students pursue their own knowledge to construct a concept, principle, procedure, theory or law of the material learned. It can be obtained through classroom discussion, or group discussion (Abidin, 2014, p.137; Hosnan, 2014, p.40; Kemendikbud, 2013b).

3. Experimenting

The third stage is experimenting. In this stage, students get real or authentic learning, for example they have to do experiments. As stated in the Regulation

of Indonesia Ministry of Education and Culture No. 81/2013, in doing the experiment, the students have to read other sources or collect extra information by several ways such as, doing experiment, observation, and interview, reading texts or books or other sources or functional texts.

The students also experience the skill process to enhance knowledge and employ scientific method to solve the real problem. Experimenting is intended to develop various learning objectives, attitudes, skills and knowledge. It is an activity to internalize knowledge and skills that have been learned. The students practice to express new things that they have learned and try to utilize the skills to reality inside and outside the class through simulation, role play, presentation, discussion and games (Government's file, 2013, p. 35).

The teacher provides learning sources, worksheets, media or experiment tools. Therefore, the roles of teacher in this stage are as director and as the controller who plan and manage the activity of collecting data and its process (Brown, 2001, as cited in Nugraha, 2015). The teacher may give feedback during the process of the activity.

4. Associating

The fourth stage is associating. Associating is to attain the conclusion of knowledge by a logical thinking process and systematic empirical factual statement which is observed. Students must be more active and given more opportunities to learn. Associating refers to grouping ability of various ideas and associating various events to be part of memory.

When the experiences are stored in the brain, they will interact with the previous events or experiences. In this stage, students and teacher are engaged into learning activities, such as text analyzing and categorizing. The information or data that have been collected from the previous activity (observing and experimenting) must be analyzed to draw conclusions. Students will then process the information from the teachers and draw the conclusions out of that information.

As stated on the Policy of Indonesia Ministry of Education and Culture No. 81a/2013, associating process must be conducted through: (1) processing information that has been collected from the result of experimenting and observing activity and, (2) processing the information collected to find solutions from variety of sources that have different opinions to the contrary. Thus, students are expected to be able to relate the result of learning or experimenting to the reality.

5. Communicating

The last stage is communicating. In this stage, students communicate, demonstrate, and publish their learning product as a form of collaborative learning in which they face various changes. In collaborative learning, the learners interact with empathy, mutual respect, and receive a deficiency or excess, respectively in order to create social interaction to gain meaningful learning (Wahyudin, 2015). The teacher gives feedback, suggestions or more information related to students' work. There are interactions between teacher and students and among the students. In this stage, teacher holds role that provides correct information and the reciprocal scaffolding (Brown, 2001, cited at Nugraha, 2015). This can be done through dialogue and discussion between teacher with the students. Thus communicating stage is in which students report or deliver the results of the observing, experimenting and concluding based on the result of the analysis orally or written or in other forms to let others know what learners have learned (Abidin, 2014; Arauz, 2013; Hosnan, 2014, p.77; Mulyasa, 2014).

Scientific Approach Indicator

A learning approach can be regarded as scientific approach if it covers some criteria explained by Ministry of Education and Culture. They are: (1) the

teaching materials come from facts or phenomena that logically can be explained, (2) teacher's explanation, and teacher-student interaction are based on objectivity, (3) teaching materials build students' critical thinking and accuracy in identifying, understanding, and resolving problems, (4) it encourages and inspires students to think hypothetically in looking at difference, congruence and links to each learning material given, (5) it fosters students to understand, apply, and develop pattern of rationale and objective thinking towards learning materials, (6) it should be based on concepts, theories, and empirical facts, and (7) learning objectives are composed in simple, clear and attractive presentation way (Kemendikbud, 2013a).

RESEARCH METHODOLOGY

This research deals with the effect of scientific approach toward students' writing achievement. In conducting the research, quantitative research design applied as the research methodology. Quantitative method, as explained by Creswell (2012), defined as a research that will deal with collecting numeric data from a large number of people using instrument with preset questions and responses.

A quasi-experimental design was used in this study, due to the limited time and cost. A true experimental design will not be practicable because of long time period. Additionally, Hatch & Farhady (1982) assert that quasi-experimental design is a comparison group design. In this research the researcher just takes two class to use pre-test and post-test design to know the result of treatment.

The population on this research used all students at Science Tenth Grade of SMA N 8 Kota Jambi in Academic Year 2019/2020. The number of students is 176 which were divided into 6 classes. Sample is a subgroup of the target population and selected from the individuals who represent the whole population that the researcher plans to study for generalizing about the target population (Creswell, 2012, p. 142). In quantitative research, it is assumed that if the sample is chosen carefully using the right procedure, it will be possible to generalize the results to the entire population (Dawson, 2002).

In this research, researcher used Simple Random Sampling. The sampling method in this research was done Simple Random Sampling for 6 class of population. First, researcher prepare paper, pen, and glass then researcher cut into 6 pieces of paper, next write all the class on 6 pieces of paper, roll it and put into glass, after that removed 2 rolls from the glasss, so 2 rolls of paper are class X IPA 3 and X IPA 6 that the researcher made sample in this research.

The instrument use in this research is tests. Ary et al (2010:201) says that test is a set of stimuli presented to individual in order to elicit responses on the basis of which a numerical score can be assigned. In this research, there are two types of test. They are pre-test and post-test. The researcher use pre-test to measure the student's achievement in writing achievement before the treatment given, and post-test to measure students' writing achievement after the treatment given.

The test in this research is a prompt test to write descriptive text using some criteria which is explained clearly in the paper of student task. There are some criteria for student to write descriptive text such as: content of the text should relevant, organization, grammar, vocabulary and mechanics. The researcher also use scoring rubric to scoring the student's writing achievement.

Table 1. Classification of Student's Scores

Test Score	Classification
91-100	Excellent
81-90	Very good
71-80	Good
61-70	Fair
51-60	Poor
0-50	Very poor

(adapted from Subana, Rahadi, and Sudrajat: 2015)

FINDINGS

In this section, the researcher explain the frequencies, percentages and mean scores of the test based on the results of the test before and after the intervention in both experimental and control class.

Table 2. The Data of Control Class

No	Name	pre-test(x)	post-test(y)	Differences (x)	x2
1	S1	52,5	77,5	25	625
2	S2	52,5	77,5	25	625
3	S3	57,5	91	33,5	1.122
4	S4	54	82,5	28,5	813
5	S5	57,5	91	33,5	1.122
6	S6	57,5	91	33,5	1.122
7	S7	54	82,5	28,5	813
8	S8	45	71	26	676
9	S9	57,5	91	33,5	1.122
10	S10	45	75	30	900
11	S11	52,5	82,5	30	900
12	S12	44	79	35	1.225
13	S13	45	86	41	1.681
14	S14	44	71	27	729
15	S15	49	79	30	900
16	S16	37,5	74	36,5	1.332
17	S17	49	79	30	900
18	S18	52,5	82,5	30	900
19	S19	32,5	66	33,5	1.122
20	S20	45	71	26	676
21	S21	52,5	82,5	30	900
22	S22	49	79	30	900
23	S23	45	70	25	625
24	S24	50	75	25	625
25	S25	52,5	82,5	30	900
26	S26	52,5	82,5	30	900
27	S27	32,5	66	33,5	1.122
28	S28	45	70	25	625
	Total	**1.363**	**2.207,5**	**844,5**	**25.902**
	Means	**48,6**	**78,8**	**30,1**	**925**

Based on the table 2 above, the number of students in control class was 28 students. In pre-test, students who get the highest value of 57,5 were 4 people, 2 students get a value of 54, 7 students get a value of 52, 1 students get a value of 50, 3 students get a value of 49, 6 students get a value of 45, 2 students get a value of 44, 1 students get a value of 37,5 and the lowest with a value of 32,5 were 2 students. With the total overall value was 1.363 The mean of pre-test in control class was 48,6.

In post-test, students who get the highest value of 91 were 4 people, 1 students get a value of 86, 7 students get a value of 82,5, 4 students get a value of 79, 2 students get a value of 77,5, 2 students get a value of 75, 1 students get a value of 74, 3 students get a value of 71, 2 students get a value of 70 and the lowest with a value of 66 were 2 students. With the total overall value was 2.207,5 The mean of pre-test in control class was 78,6.

Table 3. The Data of Experimental Class

No	Name	pre-test(x)	post-test (y)	Differences(x)	x2
1	S1	57,5	100	42,5	1.806
2	S2	52,5	92	39,5	1.560
3	S3	52,5	80	27,5	756
4	S4	54	92	38	1.444
5	S5	52,5	80	27,5	756
6	S6	54	80	26	676
7	S7	45	86	41	1.681
8	S8	52,5	86	33,5	1.122
9	S9	45	80	35	1.225
10	S10	52,5	92	39,5	1.560
11	S11	45	96	51	2.601

12	S12	52,5	92	39,5	1.566
13	S13	57,5	80	22,5	506
14	S14	57,5	100	42,5	1.806
15	S15	57,5	100	42,5	1.806
16	S16	52,5	96	43,5	1.892
17	S17	70	92	22	484
18	S18	54	100	56	3.136
19	S19	57,5	96	38,5	1.482
20	S20	57,5	100	42,5	1.806
21	S21	54	100	56	3.136
22	S22	57,5	80	22,5	506
23	S23	45	80	35	1.225
24	S24	57,5	86	28,5	812
25	S25	52,5	96	43,5	1.892
26	S26	52,5	86	33,5	1.122
27	S27	52,5	92	39,5	1.566
28	S28	54	96	42	1.764
	Total	**1.500**	**2.536**	**1.051**	**41.694**
	Means	**53,5**	**90,5**	**37,5**	**1.489**

Based on the table 8 above, the number of students in experimental class was 28 students. In pre-test, students who get the highest value of 70 were 1 people, 7 students get a value of 57,5, 5 students get a value of 54, 11 students get a value of 52,5, and the lowest with a value of 45 were 4 students. With the total overall value was 1.500 The mean of pre-test in experimental class was 52,5.

In post-test, students who get the highest value of 100 were 6 people, 5 students get a value of 96, 6 students get a value of 92, 4 students get a value of 86, and the lowest with a value of 86 were 7 students. With the total overall value was 2.536 The mean of pre-test in control class was 90,5.

DISCUSSIONS

To know there is significant difference between experimental group score and control group score, t-test was higher than t-table. In order to see the significance between pre-test and post-test before and after treatment of experimental group, the formula would be used analyze the data, the researcher was compared between the score of pre-test and post-test.

The t-test result calculation

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right]\left[\frac{1}{Nx} + \frac{1}{ny}\right]}}$$

$$Mx = \frac{844,5}{28} = 30,1$$

$$\sum x^2 = \sum x^2 - \frac{\sum X^2}{N} Y^2$$

$$= 25.902 - \frac{844,5^2}{28}$$

$$= 25.902 - 25.470,7$$

$$= 431,3$$

$$My = \frac{1.051}{28} = 37,5$$

$$\sum y^2 = \sum Y^2 - \frac{\sum X^2}{N} Y^2$$

$$= 41.694 - \frac{1.051^2}{28}$$

$$= 41.694 - 39.450$$

$$= 2.244$$

$$t = \frac{30,1 - 37,5}{\sqrt{\left[\frac{431,3+2.244}{28+28-2}\right]\left[\frac{1}{28}+\frac{1}{28}\right]}}$$

$$= \frac{+7,4}{\sqrt{\frac{2.675,3}{54}\left[\frac{2}{28}\right]}}$$

$$= \frac{+7,4}{\sqrt{\frac{5.350,6}{1.512}}}$$

$$= \frac{+7,4}{3.53875}$$

$$= \frac{+7.4}{1.8811}$$

$$= 3,93$$

Based on the calculation of the statistical analysis, it is found that the value of t-test is 3.93

Finding t-table :

Number of variables (k) = 2

Number of respondents (n) = 56

Taraf sig. = 5%...0,025

Degree of freedom (df) = (N1+N2)-2

= (28+28)-2

= 56

From the result of the distribution table, it was found that the t-table is 2,004. So, it can be concluded that t (54) = 2,004. Null hypothesis (Ho) is accepted if the value of t-test is the same

or less than the value of t-table (t-test=t-table or t-test<t-table). In the fact, in this research, the null hypothesis is rejected because the value of t-test is higher than the value of t-table (3,93>2,004). Alternative hypothesis (Ha) is accepted if the value of t-test is higher than the value of t-table (t-test > t-table). Thus, the alternative hypothesis is accepted, the value of t-test is higher than the value of t-table (3,93>2,004). Thus, it proved that there is the effect of using scientific approach learning method on students writing ability at first grade of SMA N 8 Kota Jambi.

CONCLUSION AND SUGGESTION

Based on the discussion in the previous chapter, the researcher draws some conclusion of this research.

1. Students writing achievement increased after using scientific approach as a learning method, which is proved with students score is higher than before treatment.
2. Two means score was computed by using T-test formula, the value of t-test was higher than the value of t-table. It is indicated that there was a significant effect of scientific approach towards students writing achievement, it means that the effect of scientific approach towards students writing achievement at the tenth grade students of SMA N 8 Kota Jambi in Academic Year 2019/2020 was accepted

Based on the findings and discussion in previous chapter, the researcher would like to give some suggestion:

1. For the students

The students can improve their English skill especially in writing with scientific approach that using by their English teacher. It can help students to think critically and be more creative with the teacher as guide in learning

2. For the teacher

The teacher can use scientific approach as a learning method with some creativity to provided learning media. And teacher have to stimulate and encourage students to think critical and motivate them to offer question. Besides, the teachers employed the class discussion to make them creating the active, cooperative and collaborative learning. Also, it is recommended that the teacher should improve effort in applying scientific approach to classroom practice by effectively using time management.

3. For the reader

Hopefully, there will be the other researcher who investigates similar topics. So this study will be continued and increase the readers knowledge about scientific approach as a learning method.

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