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The Use of A Scientific Approach to Improve Argumentation Writing Ability for Middle School Students

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Abstract: This study aimed to determine and describe the improvement of argumentation writing skills through a scientific approach to class VIII students of SMP Negeri 18 Bandar Lampung in the 2018/2019 academic year. The method in this study used a classroom action research design carried out in three cycles. This research was conducted in three cycles. The teacher prepares the lesson plan for each cycle. Each action consists of four stages: planning, action, observation, and reflection. The reflection results are used as the basis for developing a further action plan. Therefore, this research can be called collaborative classroom action research. The results showed that the scientific approach could improve the argumentation writing skills of SMP Negeri 18 Bandar Lampung students. Based on the research results in the first cycle, 49% for classical achievement and 28% for the number of students who got the minimum standard score increased in Cycle II, which reached 63% for classical achievement and 69% for students who finished studying. While Cycle III, which is the implementation of the final action, the results show the learning objectives in general and the research objectives in particular, namely reaching 75% for classical achievement and 85% for students' high argumentative writing skills. The scientific approach used in the learning process can improve the ability to write arguments.
Keywords: argumentation, scientific approach, writing

INTRODUCTION

Language is a means of communication between humans or between members of society. The language used by humans consists of spoken language and written language when viewed in terms of the medium of disclosure. Written language is done indirectly between communicators and communicants because writers and readers do not meet directly (Hastomo, 2016). Spoken language is done directly and can be face to face (face to face) and can be non-face to face, for example, communication by telephone.

There are two forms of communication: direct and indirect communication (Mehrabian, 2017). Direct communication includes

discussions, speeches, and many others. Indirect communication includes writing letters, composing/writing, and others. All these communication activities require language as the primary and most important medium. Therefore, students' language skills must be continuously improved to do all of that.

Each student can determine the variety of language, sentences, and the right choice of words (diction) if he has good writing skills (Sardi, Haryanto & Weda, 2017). However, not all students have good writing skills. Writing can be said to be good if the writing reflects accuracy in word selection and suitability in word selection. Each word chosen can represent the author's thoughts or ideas appropriately. Good writing also demonstrates the ability to convey information clearly, so that the reader can catch the intent well as intended by the author. So, good writing is an activity that readers can easily understand. The reader well understands all ideas and messages conveyed. The reader's interpretation is the same as the author's intent.

Most students still do not understand argumentative writing and often mix it with narration (Ferretti, Lewis, & Weckerly, 2009). In addition, the development of ideas and the appearance of arguments are also still lacking. Sometimes there are no arguments at all. In addition, the teacher has never applied any technique to overcome this. Learning to write, especially statements, is still carried out using a conventional approach. The teacher explains the material, and students are immediately asked to practice writing (Lestari, 2018).

These problems must be addressed with efforts to overcome them. It is necessary to find an effective learning technique to improve students' argumentative writing skills. Several learning methods can improve argumentation writing skills, but each method has a different level of effectiveness. So, it is necessary to find and develop effective strategies for improving students' writing skills. This effective method is expected to make students comfortable in following Indonesian language and literature lessons.

The reality on the ground shows that students tend to like practical and instant things. This fact becomes an obstacle and obstacle for students to carry out writing activities optimally. For this reason, so that students realize that everything that works well must go through processes and stages, writing learning activities must be carried out with the right approach. Writing activities must be carried out with regular and continuous practice because mastery of writing skills is very beneficial for students of higher education levels and can provide social life skills in society and answer future challenges (Lei, 2008).

Based on this fact, it can be interpreted that cultivating writing for the Indonesian people is to improve the quality and quality of Indonesian human

resources. The process toward an intellectual and educated Indonesian society can be started by mastering writing skills by students. Writing is not just writing but an activity that combines academic knowledge and logical thinking, followed by choosing the right and communicative words to be expressed in written form (Mahowald, Dautriche, Gibson, & Piantadosi, 2018).

The development of the 2013 curriculum is a follow-up step in developing the Competency-Based curriculum, which was initiated in 2004, and the 2016 KTSP, which includes attitudes, knowledge, and skills in an integrated manner (Theodora & Marti'ah, 2017). The 2013 curriculum focuses on the learning process using a scientific approach. The scientific method is the keyword that is often searched for in the 2013 curriculum. Although now, not all academic units use the 2013 curriculum, the specter of the scientific approach to the learning process for some teachers is still burdensome. This is influenced by the teacher's lack of knowledge about the scientific notion.

The scientific approach is not a learning method but instead plays a role in the steps in the learning process and can also be combined with learning methods (Hendripides & Hikmah, 2018). Usually, this approach is more suitable to be applied in group work, so before getting to the learning process activities, students have been grouped first. The scientific method can also be referred to as a form of developing students' religious and social attitudes, knowledge, and skills in applying learning materials. Still, it is used as a subject of learning. The teacher is only a facilitator and motivator. The teacher does not need to explain everything about the material.

In the scientific approach, several steps must be applied. The learning process consists of five main learning experience activities: observing, asking questions, collecting data or information/experiments, associating/processing data, and communicating them (Indrilla, 2018). Students' argumentation writing skills need to be improved because students' argumentation writing skills are not maximized. Many students have good ideas in mind due to observation, research, discussion, and reading. Once the concept is reported in writing, the writing feels very dry, less biting, and boring. The focus of the writing is not clear. The language style used is monotonous, the choice of words (diction) is not precise, the variations of words and sentences are dry, and the use of punctuation marks is inappropriate because the learning techniques used are less varied. Students only receive the material in the student workbook.

Finally, after receiving lessons on writing argumentation, students can write arguments using the good and correct language. However, the learning objectives have not been appropriately achieved. There are still many students who have not been able to write arguments using the right choice of words and punctuation. Based on these facts, the researchers carried out a study entitled:

"The Use of Scientific Approach to Improve Argumentation Writing Ability for Middle School Students".

METHOD

Research Setting

This research is conducted to improve students' writing skills through a scientific learning approach. This type of research can be classified as Classroom Action Research (CAR). Classroom action research is carried out in the form of a cycle. According to Wiriaatmadja (2016: 12), classroom action research studies a social situation with possible actions to improve the quality of the social situation. On the other hand, action research is a form of collective self-reflection research carried out by participants in social situations to improve their reasoning and the fairness of their educational and social practices and their understanding of practices and the situations in which they are carried out.

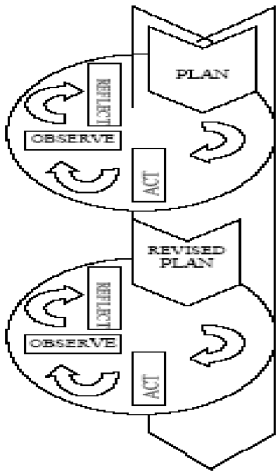

Figure 1. Spiral Model from Kemmis and Taggart

According to Wiriaatmadja (2016), action research applies fact-finding to problem-solving in social situations to improve the quality of the actions taken in it. Action research involves the collaboration and cooperation of researchers, practitioners, and laypeople. Classroom action research has six characteristics, namely: (a) reflective criticism, (b) dialectical criticism, (c) collaborative, (d) risk, (e) plural arrangement, and (f) internalization of theory and practice. To realize the objectives of classroom action research, a cycle assessment process is carried out, consisting of four stages, planning, taking action, observing, and reflecting. According to Wiriaatmadja (2006: 66), the classroom action research used an action design.

Research subject

This research was conducted at the State 18 Bandar Lampung Junior

High School (SMP). This class was chosen based on a recommendation from the Indonesian Language and Literature subject teacher. They assessed that the writing ability of class VIII B students was not as good as that of class VIII A students. The argumentation writing material is part of the competence of even semester VIII students. The subject teacher, a research collaborator, chose to provide argumentation writing material in the middle of the semester so that data collection was carried out in March and April 2019. The subjects of this study were students of class VIII SMP Negeri 18 Bandar Lampung, totaling 288 students spread into ten classes.

Research procedure

At this stage, the researcher designs the actions to be carried out in the study, including pre-survey, determining learning objectives, making lesson plans, designing instruments, and making observation sheets and evaluation tools for each meeting. The steps to be taken are as follows: First, surveys and observations regarding school conditions, classroom conditions, student conditions, facilities, and infrastructure supporting learning and methods used in education. Second, formulate learning objectives to improve argumentative writing skills with a scientific approach. Third, prepare the Learning Implementation Plan (RPP). Fourth, make instrument designs. Fifth, prepare student learning activity observation sheets and field notes.

RESULTS AND DISCUSSION

RESULTS

The tabulation of initial test data for cycles I, II, and III can be seen in the following table.

Table 1. The Result of Class VIII Students' Argumentation Writing Ability Data SMP Negeri 18 Bandar Lampung

NO.	M/F	PRE TEST	CYCLE I	CYCLE II	CYCLE III
1	F	40	41	40	45
2	M	45	40	63	75
3	F	47	75	85	60
4	F	22	35	62	70
5	M	40	63	75	80
6	M	45	44	60	65
7	M	43	60	75	83
8	M	40	46	40	70
9	F	45	65	60	65
10	M	30	53	63	75
11	F	22	50	72	80
12	F	10	48	75	78
13	F	32	52	50	55
14	F	10	30	45	80
15	F	10	30	50	65

16	F	15	45	70	80
17	F	5	30	35	55
18	M	12	35	60	73
19	M	45	68	80	85
20	M	40	68	78	82
21	M	43	57	72	75
22	F	10	30	35	60
23	F	20	51	68	75
24	M	5	31	35	55
25	F	43	60	75	85
26	F	47	70	80	85
27	F	5	31	35	55
28	M	25	50	60	70
29	F	47	75	82	90
30	M	25	50	65	75
31	F	47	75	82	90
32	F	35	55	67	75
33	M	20	50	70	80
34	F	10	32	60	65
35	F	32	51	50	55
36	M	10	35	60	55
37	F	20	51	63	78
38	F	20	51	63	78
Total Score		**1002**	**1099**	**2463**	**2943**
Mean Score		**25,69**	**48,94**	**63,15**	**75,46**

Description:
The assessment (score) used to assess is as follows:
a. 80-100 = very good
b. 66- 79 = good
c. 56- 65 = enough
d. 46- 55 = less
e. 0-45 = very less

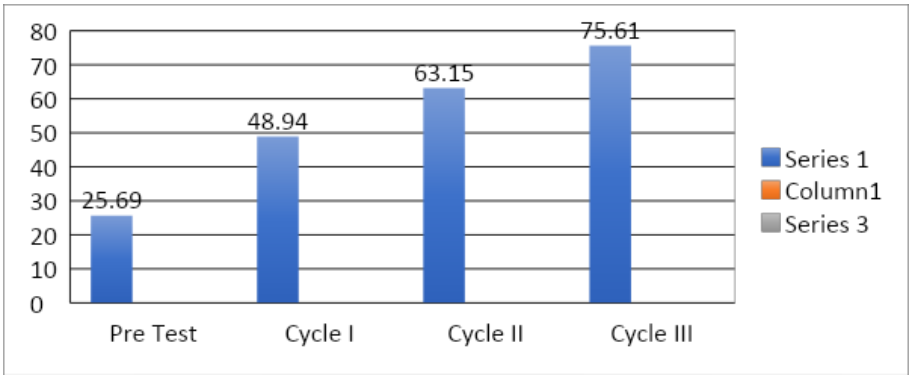

FIGURE 2. THE IMPROVEMENT ARGUMENTATION WRITING ABILITY OF STUDENTS

Based on the initial test results, the average grade value was 25.69 or 26%, and 0% for the number of students who got the minimum standard score. In Cycle I, a score of 48.94 or 49% for the average class achievement and

28.20% or 28% of the total number of students who get a minimum standard score and above can be obtained. At this stage, it is seen that student learning outcomes are not optimal, so further improvements and exceptional guidance are needed. This is done to minimize the lack of students' listening power. In addition, it can be concluded that in the implementation of cycle I, students have not been able to sharpen their ability to write arguments with a scientific approach so that the results obtained are less than optimal.

DISCUSSION

Teacher Activities in Managing Learning

The teacher's activities in managing learning assessed in this study were giving apperception, giving motivation, explaining the material, techniques using learning media, ability to condition the class, ability to evaluate, awarding, concluding material, and closing the lesson. There is an increase in results in each cycle because there are always improvements in each cycle, such as providing motivation and choosing the right and fun media. It can be said that teacher activities in learning using learning methods and media reach high or good criteria.

The Student Activities in Learning

Student activities in learning that were observed and assessed were how students paid attention to the material provided, students' attention to learning media, students' interest in receiving lessons using a scientific approach, student participation and activeness in answering and conveying questions, students' enthusiasm in carrying out conversations and student order. Based on data analysis obtained from the observations of student activities in the learning process can be categorized as high and good.

The implementation of Cycle III showed that the level of argumentation writing ability and students' concentration in the learning process with a scientific approach increased and maximized even though students still obtained low scores. These results show that the achievement of the final value of the learning objectives reaches 75% for an average class achievement of 85% for students who get a minimum standard score. This figure shows that the increase in the results of several previous improvements, namely cycle I was 48.94 or 49%. And in Cycle II, it was 63.15 or 63%.

Based on the description described in the discussion, it is clear that the scientific approach has succeeded in increasing students' argumentative writing skills following the typical indicators, namely if students' learning activities during the learning process reach 65%. If students' interest in learning is subject to action, they gain 65% absorption above during the learning process.

CONCLUSIONS

Based on the research and discussion results, it can be concluded that the scientific approach can improve the argumentation writing skills of SMP Negeri 18 Bandar Lampung students. Based on the research results in the first cycle, 49% for classical achievement and 28% for the number of students who got the minimum standard score increased in Cycle II, which reached 63% for classical achievement and 69% for students who finished studying. While Cycle III is the implementation of the final action, the results show the learning objectives in general and the research objectives in particular, namely reaching 75% for classical achievement and 85% for the high growth of students' argumentative writing skills.

The scientific approach used in the learning process can improve the ability to write arguments. Among the advantages of using this approach in the learning process is that it can describe or create objective reality and clarify abstract things. In line with this, students will also be interested in knowing the process of learning to write arguments with a scientific approach.

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