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## THE IMPLEMENTATION OF SCIENTIFIC APPROACH IN TEACHING WRITING IN SMAN 7 AND SMAN 4 BANJARMASIN

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### Abstract

Scientific approach is used in the latest curriculum and has five steps such as observing, questioning, exploring, associating, and communicating. Writing skill becomes an important skill for students because writing skill has significance in improving a communicative competence of learning the language. The purpose of the research is to describe the implementation of scientific approach in teaching writing for eleven grade students at SMAN 7 and SMAN 4 Banjarmasin. This research was a descriptive qualitative research. The researcher used purposive sampling for deciding the sample. The sample of this study is an English teacher and students in SMAN 7 and SMAN 4 Banjarmasin. The instruments that were used in this study were observation, interview, and questionnaire. In this research, the data was analyzed qualitatively by using three stages. The findings showed that the teacher has implemented steps of scientific approach in the learning process of writing skills. However, all of these steps cannot be carried out optimally, because writing skills require a long writing process. From five steps of scientific approach, writing process is only seen at associating and communicating. In conclusion, the English teachers of SMAN 7 Banjarmasin and SMAN 4 Banjarmasin have implemented scientific approach in teaching writing skill, although the approach is not applied perfectly. It is suggested that the teachers apply scientific approach more maximally. The teacher could maximize the use of more varied learning methods so that students are more active and use another approach that more appropriate with teaching writing. For further research, this study can be a reference to explore more about how to use the scientific approach or other methods that can be successful for teaching English, especially teaching writing.

**Keywords:** Implementation, Scientific Approach, Teaching, Writing

### INTRODUCTION

Many components are present in the educational process at school. Curriculum is one of the educational factors that influences graduation quality. Because curriculum is the foundation of the teaching-learning process, it should be followed by all teaching-learning activities. In various ways, the 2013 Curriculum differs from the previous one, KTSP. The goal of implementing a scientific approach is to improve quality of education in Indonesia. Based on PERMENDIKBUD Number 65 in 2013, the scientific approach consists of five steps: observing, questioning, exploring, associating, and communicating.

In English learning, students learn how to improve their receptive and productive skills. Writing is one of the productive skills that should be learned, as it is important for enhancing communicative ability while learning a language. Teaching writing is the method by which teachers educate students to write in senior high school. Teachers must utilize the proper teaching method within the scientific approach to address the problem of writing and achieve the goal of teaching writing.

The researcher has not been able to find research about the implementation of scientific approach in schools in Banjarmasin. Therefore, the researcher wants to know about how the teachers implement scientific approach in teaching writing especially at senior high school in Banjarmasin that is in SMAN 7 Banjarmasin and SMAN 4 Banjarmasin.

The researcher chooses SMAN 7 Banjarmasin and SMAN 4 Banjarmasin as the setting of the research because they are the first schools to implement the 2013 Curriculum decided by Dinas

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Pendidikan Banjarmasin. Both schools have been implementing scientific approach for six-years. Through this study, the researcher wants to know about how the teachers implement scientific approach in teaching writing skill to make students more active and more capable of good writing. The problem of this research is formulated as follows: “How is the implementation of scientific approach in teaching writing at SMAN 7 Banjarmasin and SMAN 4 Banjarmasin?”

## REVIEW OF LITERATURE

Scientific Approach is an approach to teach as stated in the 2013 curriculum. The scientific approach is a science process-based approach that is done through the process of observing, questioning, exploring experimenting, associating, and communicating. Accept, execute, respect, appreciate, and practice are all activities that lead to the development of attitudes. Observing, questioning, exploring, associating, and communicating are the five steps of adopting scientific approach in teaching learning process, according to PERMENDIKBUD Number 65 of 2013. Each step's activities can be summarized as follows. First, teachers provide ample opportunities for students to observe. Second, teachers assist students in doing observations and train them to focus on the most significant aspects of the object. Preparing, working, and following up are the processes in experimenting. The ability to assess and associate information occurring inside a group is known as associating. The ability to communicate is the ability to draw conclusions from facts that have been observed and tested.

Writing skill is one of the productive skills that should be mastered in using a language. It is because writing skill has significance in improving a communicative competence of learning the language. The reason for this is that the writing process reflects thoughts that have remained in the mind. We might state that we can present and communicate our ideas to the reader through writing. Writing is a crucial talent to have when studying English, and it requires a significant amount of time and effort on the part of the students. It is not true because good writing can assist students in more efficiently learning other English abilities.

Nowadays, writing is also the key to success in school and university. Writing is a complex set of abilities that is best taught by breaking it down. The writing process entails a set of processes that must be completed in order to produce a final piece of writing. In any case, 5 fundamental stages of the writing process are prewriting, drafting, revising, editing and publishing. The five-step process writing approach as follows; The first step in writing is to organize your thoughts into whatever shape or structure works best for you - pieces, records, sentences, or bunches. Extra considerations and complexities that did not surface during prewriting could be added by the writer (Langan, 2010:25). It could make the writer back to drafting. In a unified paragraph, the writer needs to check for an unmistakable point and proof to help the initial point. In the supporting paragraph, the writer needs to put explicit proof. Generally, students get the teacher's feedback. The writer may impart the work to a friend or normally known as peer writing. In editing, the writer may require other's feedback to check the writing. Publishing is the last stage where students collect their work to the teacher. Ensure the writing report ought to be finished prior to providing for the teacher.

English has become one of the important subjects of education in Indonesia because English is an international language that has been used in many countries although English still a foreign language. Writing is the most difficult and complicated skill to be learned, if compared with other language skills. Dinas Pendidikan Banjarmasin determined the schools to apply the 2013 curriculum. The schools are SMAN 7 Banjarmasin and SMAN 4 Banjarmasin. It is the newest curriculum in Indonesia. The 2013 curriculum uses scientific approach as the new approach in the teaching and learning process. It based on PERMENDIKBUD Number 65 of 2013 about process standard (scientific approach) in while activity of teaching and learning process. It makes English teachers must use the 2013 curriculum, especially the scientific approach in English class, for all skills,

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including teaching writing. As the writer's experience when she had PPL 2 last years in a senior high school in Banjarmasin and also based on the informal interview between the researcher and her friends who had PPL in SMAN 7 Banjarmasin and SMAN 4 Banjarmasin, English teachers gave time for students to write sentences or paragraphs by using English. English teachers asked students to write texts, such as descriptive text, recount text, review text, discussion text, report text, and so on.

## **RESEARCH METHODOLOGY**

### **Research Design**

In this research, the researcher used a descriptive qualitative method. According to Frankel, Wallen, and Hyun, subjective exploration entails investigating the nature of a relationship, exercises, circumstance, or materials (2012:426). This study was also categorized as descriptive because it observed the implementation of scientific approach in teaching writing at SMAN 7 and SMAN 4 Banjarmasin.

### **Population and Sample**

#### ***Population***

The population of the study was the students and English teachers of senior high school in Banjarmasin. The researcher expected the schools to have the experience in implementing scientific approach in teaching English.

#### ***Sample***

In this study, researchers used purposive sampling for deciding the sample. Based on the population above, the researcher chose the eleventh grade students as the sample because the classes use a scientific approach in the teaching writing process which make them the most relevant to this study. As the sample of the study, the researcher took three classes of eleventh grade students with an English teacher of SMAN 7 Banjarmasin and SMAN 4 Banjarmasin as a sample of this research.

### **Instrumentation**

Researcher used observation class, interview and questionnaire to collect data. Observation is used as the main instrument to get more accurate data about teaching learning process using a scientific approach. Whereas, interview and questionnaire are as the supporting data.

### **Validity and Realibility**

In this study, the validity of instrument was an important aspect to infer true results. It guided researcher to administer an appropriate observation sheet and questions of interview to get relevant data. To get valid data, experts were involved during the development of the instruments. The researcher involved the English Language Education Study Program lecturers who are experienced in teaching writing and curriculum subjects. Researcher also compared the data that are obtained from classroom observation, teacher's interview and students' questionnaires. The researcher used a variety of instruments to collect data or called triangulation to enhance the accuracy of the data collected.

### **Data Collection**

Researcher combined observation, interview, and questionnaire techniques to perform this study. In observation, researcher attended class and observed activity of teaching-learning process directly and describing all activity in observation sheet. In interview, researcher gave some questions to English teachers about how they implemented a scientific approach in teaching writing and what problems that are faced by the teacher. In questionnaires, researcher asked some questions to students about their activity during learning writing in English class.

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## Data Analysis

Researcher also used descriptive analysis techniques. The analysis was in the form of words or paragraphs to be stated in the form of a descriptive narrative on real events that occurred in the study site. The first stage was familiarizing and organizing. First, the data from observation class was categorized based on the stages of scientific approach. The last stage was interpreting and representing.

## FINDINGS AND DISCUSSIONS

### Findings of the Observation

Observations were made to see the application of the scientific approach in the teaching-learning process in writing skills. Researcher observed three classes in each school. SMAN 7 Banjarmasin is the first school that observed by researcher. First observation in XI MIPA 4, The topic was narrative text. Teacher directed the students to observe the topic by looking at the picture about Mount Tangkuban Perahu. Teacher asks students several questions to find out their understanding of the lesson and asked student to give questions. teacher directed students to be able to dig deeper into the material by reading a story, then the teacher and the students discussed and analyzed the material together. Teacher asked them to rewrite the story in their own words. Teacher only asked students to collect the results of their writing.

Second observation in XI MIPA 3, they learned about narrative text with writing skills. Teacher started the class by asking students to collectively observe a story. Teacher asked students questions about the story, such as asking what the students knew about the text, what were the characteristics of the text, and what tense was used in the text and guided students to give questions. Next, teacher guided students to analyze the material. Then the teacher divided students into groups to discuss the material. Then, teacher asked students to write narrative text individually according to the material discussed together such as narrative text structure, generic structure, use of tenses, conjunctions, etc. So that in this class observation there is no communication step, because time is running out.

The last observation is in XI IPS 1. The topic was procedure text. Teacher opened the class with a greeting, then played a video. This was done by the teacher as part of fostering student's observation skills. Teacher showed a video about how to make a boat out of wooden sticks. The teacher asked the students "what is the video about?" Then the teacher stimulated students to answer some of the teacher's questions about the text. Then, teacher asked students to write procedure text on the whiteboard together and discuss the ideas for writing procedures together. Next, teacher asked students to form groups. Each group was asked to write a procedure text, given 10 minutes. Finally, teacher chose a group representative to write their writings on the whiteboard. Then, teacher invited students to discuss the results of writing and found out if there were errors in writing the group's text, grammatical errors, punctuation marks, tenses, etc.

Next is observation in SMAN 4 Banjarmasin. The first observation is in XI MIPA 2. Topic was about report text. teacher guided students to observe topics by telling examples, and students were asked to listen. Teacher asked students several questions to find out their understanding and stimulated them to ask. Next, teacher explored the report text by asking students to read textbooks and explained the material directly to the students. Teacher guided students to analyze the material. Next, the teacher asked the students to write the report text individually. Students were allowed to continue writing at home. So that at this stage there was no communicating stage, because time was running out. XI IPS 1 was second class that observed by researcher. The class learned writing skills about Report text. Teacher asked students to observe the Report text topic by reading the text. Teacher asked students whether the students understand or not about the material that had been explained by

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the teacher. Next, teacher asked the students to write reports text individually. Teacher allowed students to continue their writing process at home, because students had not finished. Last observation in XI IPS 3, they learned writing skills about Analytical Exposition text. Teacher guided students to read the Analytical Exposition text and asked several questions to find out students' understanding of the lesson. Teacher guided students to explore. Then, teacher asked students to write an analytical exposition text until the lesson time was up and asked students to collect their writings.

### **Findings of the Interview**

After the researcher did classroom observation, the researcher interviewed teachers about the application of the scientific approach in English classroom with writing skill. There is an English teacher of SMAN 7 and SMAN 4 Banjarmasin as subject of interview. The conclusions drawn from the interview findings are as follows:

#### ***a. Teacher Knowledge***

Two teachers from the two schools have the same answer to this. So that the authors can conclude that the 2013 curriculum is not much different from the previous curriculum. In the 2013 curriculum, there is a Scientific Approach which has 5 steps, namely: observing, questioning, exploring, associating and communicating, this is expected to make students more active.

#### ***b. Teacher View***

Using of scientific approach can make it easier for teachers to teach, especially in writing skills. Because according to her, Teaching and learning will definitely use the scientific approach naturally consciously or unconsciously even though it is not complete using it all. It could make students active, but the teacher at SMAN 4 Banjarmasin said they could not be fully active. A teacher from SMAN 7 Banjarmasin viewed the use of it. a scientific approach makes students more active in learning and required to be active in order to reach out to an understanding of the material. Even more active students will be given added value.

#### ***c. Teacher Attitudes***

Two teachers cannot ensure that they can perfectly implement all the steps in the scientific approach in one meeting. This happened because of the lack of time for English lessons in 1 week. The two teachers both have ways to reduce differences between students by dividing groups. Inviting discussions, and sometimes playing a game so that the learning process is not saturated. The teacher's attitude about implementing learning strategies makes students more active. Teacher A said that varied strategies were the right strategy to make students more active in the learning process. Meanwhile, Teacher B said discussing was the most appropriate strategy.

#### ***d. Teacher Obstacles***

In every teaching-learning process, there are certain obstacles faced by each teacher, including in the application of the scientific approach. Some students still have difficulty carrying out this step, this is usually because they don't master English words. In the measuring step, usually students have a little difficulty understanding the material, and don't ask questions when confused. The obstacle is the instrument, so Teacher do not just observe, then such as the formation of attitudes including the observation process, self-assessment, it is difficult. Sometimes, teachers cannot do all the science approach steps in one meeting. Teacher B also has the same obstacle, namely time.

### **Findings of Questionnaire**

The following is a description of the student questionnaire data that the researcher has collected as supporting data in this study.

#### ***a. Students' background***



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The answers of students from the two schools had almost the same percentage, with more than half of the students saying “yes”. This means that they are taught the teacher's writing skills in English class. Most of the students at SMAN 7 stated that they sometimes enjoy learning to write. Meanwhile, most of the students from SMAN 4 chose the answer yes.

***b. Student Activities in the Learning Process (Using a Scientific Approach)***

The first step is Observing. Most students from SMA 7 and SMA 4, the activities that are often carried out at the observing stage are reading texts or stories, observing them together and listening to the teacher who tells the story. The percentage for this answer is quite high. More than half of the students chose this answer. For question number 6, regarding observing using a short video watch or taking pictures and observing them together, there were differences in answers. Many students from SMA 7 Banjarmasin chose the answer ‘sometimes’, while students from SMA 4 chose the answer ‘rarely’. As well as for questions number 4 (listening to music) and number 5 (carrying props), all students from both schools had the same answers. Most of the students from SMA 7 said it was rare, while the majority of SMA 4 students said they had never.

Next step is questioning. Many students think that the teacher who often asks questions after observing activities, both students of SMAN 7 and SMAN 4 have that opinion. Then for question number 8 about whether students often ask the teacher and all students from the two schools answer together sometimes. Next to question number 10 doing discussion after observing, students from the two schools had different answers. Most of the students from SMAN 7 answered sometimes, while more students from SMAN 4 answered yes to this question.

Exploring is the next step. all the results of the answers of students from the two schools have the same. 11 about the teacher explaining the material directly, most students from the two schools said yes. Next to question number 12 about finding additional material sources and question number 14 about searching for written sources from the internet, they answered in unison ‘sometimes’. Furthermore, for question number 13, the teacher asks students to look for additional material outside the classroom. Most of the students said it was rare. Finally, for question number 15 that students are asked to interview someone before writing. To this question, most students answered ‘never’.

In associating, students from the two schools have some differences. For question number 16 regarding the source of their writing from books, students from SMAN 7 stated ‘sometimes’, while students from SMAN 4 stated ‘yes’. Furthermore, for question number 17, the teacher asks students to get writing resources from outside the classroom. Students from SMAN 7 said sometimes, and students from SMAN 4 said ‘rarely’. In question number 18, all students have the same answer. They said ‘yes’, that they got their writing source from the internet. Next about getting writing sources from interviews, students from SMAN 7 said ‘never’, while students from SMAN 4 answered ‘rarely’.

The last step is communicating. Some activities at the communication stage are almost carried out even though there are still deficiencies. We can see from the questionnaire data that most of the students chose yes and sometimes all the questions at this stage.

## **Discussion**

From the results of the study, it shows that the teacher has implemented the steps of a scientific approach. In the process of learning writing skills, this is appropriate with the Ministry of Education and Culture (Kemendikbud) the 2013 curriculum also requires students to improve their ability to observe, ask questions, reason, and communicate about what they learn or know after acquiring learning materials. (Kemendikbud, 2013: 3-4). Moreover, this is similar to Menteri Pendidikan dan Kebudayaan (2013) in scientific approach there are five stages: observing, questioning, experimenting, associating and communicating. However, all of these steps cannot be carried out optimally, especially learning English in writing skills. Because writing skills require a long writing

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process, according to Richard and Renandya (2012:316) stated that there are four fundamental stages of teaching writing. Planning, drafting, revising, and editing are the steps in the process.

All steps of the scientific approach, namely observing, questioning, exploring, associating and communicating, are applied less than optimally in learning to write. Because from the results of class observations, the writing process is only seen at the associating stage. And some of the writing processes were seen at the communicating stage, but only in 2 meetings the researchers found that there was a writing process at the communicating stage. While at the associating stage, the researcher found a writing process in every observed meeting. At the stage of observing, questioning and exploring, the teacher provides understanding and examples of the material being taught. So it can be concluded that from the five stages of this scientific approach, it is divided into 2 parts. In the first part, namely the observing, questioning and exploring stages, it is more about giving material from the teacher to students and in this section, there is no visible writing process from students or teachers. Then, in the second part, the associating and communicating stage is more about students' writing practice, after the material debriefing in the previous stages. This section shows the process of writing after the teacher gives the task to write the text being taught.

Teachers' efforts in teaching writing skills are also constrained by time constraints so that they cannot be maximized. Considering that writing activities require a long process. This matches the findings of a previous study by Yulaiha (2014), which found that the scientific approach to teaching reading was not fully utilized due to the government's allocation with only 2 hours (2x45) minutes per meeting for English language skills sessions. Indeed, time constraints are still an obstacle in applying a scientific approach to learning, including in learning writing skills. Based on the results of observations that have been made, it can be said that all steps of the scientific approach in learning writing skills cannot be carried out optimally because the lesson time is up. Based on the results of the study, there were three observation classes whose learning time ran out, namely the second observation at SMAN 7 Banjarmasin, the first, second and third observations at SMAN 4 Banjarmasin.

Time constraints can also be caused by learning writing skills because writing is the most difficult skill of all language skills. Writing is not an easy skill either for yourself or teaching it to others. In addition, it teaches writing skills in foreign languages. It could be said that it was a difficult and challenging thing for a teacher. This is in line with Jumariati and Sulisty's (2017:88) assertion that teaching writing is difficult for certain teachers, particularly when teaching English as a Foreign Language. According to the data in the field, a scientific approach can be the teacher's choice in teaching writing skills. However, it must be accompanied by maximum time management and additional teaching time every week.

The application of a scientific approach in teaching writing has also not become a priority for teachers at the high school level. That's from the teacher's interview. English teachers at that level are more focused on teaching reading because in the final exam students are tested to answer questions. Writing skills are assessed only for the value of students' daily skills while the final school exam is not tested. This causes teachers to only teach writing skills once or twice in a semester. But it still has to be in one semester of teaching writing skills, this is supported by the answers to a questionnaire of students who answered "yes" when asked whether writing skills were taught. This is in agreement with Haq's (2014) research, which found that English teachers at SMAN 4 Malang apply a scientific method to learning to write to the fullest extent possible, even if it is not done at every meeting. However, this study is slightly different from previous research. Previous research by Haq (2014) found that the application was optimal, while in this study the application of the scientific approach was not optimal.

Another factor that causes the implementation of all steps in the scientific approach is not optimal is the lack of variety of media, strategies, and methods of teachers when teaching, so that

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students are still not fully active during the learning process. Although the teacher said that he often used discussion to make students more active, based on observations in class it was still not effective enough to make students fully active. Some students were still silent; only a few are active in the discussion. Except for dividing students into groups, this minimizes student passivity even though there are still one or two students who are less active.

Based on the results of the study, among the five steps of the scientific approach, teachers have not been able to apply exploration, associate, and communicate the steps optimally. Meanwhile, in observing and questioning the teacher has applied them well because at the beginning of the lesson the teacher often asks students to observe together both in the form of text and pictures and listen to their teacher when telling stories. Questions between teachers and students also often occur. In the exploration stage, students explore the material in groups by discussing or by listening to the teacher explain the learning material directly. At the associating stage, students get more sources of writing from the internet as inspiration material, this is indeed very helpful because the internet has a lot of reading material, for example students in writing. Then at the communication stage, the teacher more often asks students to collect their writings or students are allowed to write at home. In this discussion, It goes against the findings of a previous study by Zaim (2017: 33), which revealed that among the five elements of the scientific methodology, teachers have yet to master the observing and questioning processes. The teacher has used it effectively in experimenting and associating, and optimally in communicating.

From all these discussions, it can be said that the teacher has implemented a scientific approach in teaching writing skills in the classroom. However, its implementation has not been carried out optimally because the scientific approach is not suitable for language teaching, especially in writing skills. Because in writing skills, there are many processes so that in the end it can produce good writing. In language teaching, it is not easily achieved by teaching using a scientific approach.

## CONCLUSION AND SUGGESTION

### Conclusion

Based on the result of this research, it can be concluded that the English teachers of SMAN 7 Banjarmasin and SMAN 4 Banjarmasin have implemented scientific approach in teaching writing skill. The findings indicated that the teacher have applied steps of the scientific approach in the writing skills learning process. However, not all of the steps of scientific approach can be completed in one meeting. From all steps of scientific approach, only the associating and communicating stage can be seen the writing process. While at the stage of observing, questioning and exploring there is no writing process. there is only the provision of materials and examples to students.

There are some factors that influence it. First is the lack of time that becomes an obstacle in implementing the scientific approach in learning, including learning writing skills. Next, the application of the scientific approach to teaching writing is also not a priority for teachers at the high school level. Then, the other factors that cause the application of all steps in the scientific approach has not been maximized are the lack of variations in the media, strategies, and methods of the teacher when teaching, so that students are still not entirely active during the learning process. Finally, the implementation has not been carried out optimally because the scientific approach is not suitable for language teaching, especially in writing skills. Because in writing skills, there are many processes so that in the end it can produce good writing.

### Suggestion



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The implementation of scientific approach that has been implemented needs to be maximized by considering the lesson time of 90 minutes in 1 week. Teachers need to find solutions to be able to carry out these steps more optimally. The teacher can maximize the use of more varied learning method so that the students more actively participate in learning process. Teacher can use another approach that more appropriate with teaching English, particularly teaching writing skill. The next researcher can explore this research in order to find out how to use the scientific approach or other methods that can be successful for teaching English, especially teaching writing.

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