Discovery learning model in learning writing of environmental exposition text

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Abstract. The purpose of this study is to describe the discovery learning model in exposition text about the environment around students. The type of this study is quantitative research with the experimental method. The design of this study was static to two groups. The sample of this study were 50 people, 26 experimental and 24 control class. The sample was taken by purposive sampling technique. The results showed the following. First, the expository writing skills of the students using the conventional method are at a more than adequate qualification. The average writing ability of the students is still below the learning standards. Second, the skills of writing exposition text using the discovery learning model are in Good qualification. Students’ ability to write environmental exposition text exceeds learning standard. Based on the results of this study concluded that the skills of writing text using discovery learning model is better than using conventional method learning.

1. Introduction

Since the 2013 Curriculum is enacted in Indonesia, Indonesian learning of language is based on the genre (type) [1]. ‘Curriculum 2013’ is one of the curricula that still applied in Indonesia until now. This learning of the text carried out certain stages, including the process of context building, text modeling, the creation of texts together, and the making of texts independently. With these stages, students are expected to achieve a balance of emphasized competencies, namely knowledge, skills, and attitudes.

The learning was followed by students in five types during 7th-grade at junior high school. One of them is the exposition text. The learning of writing expository texts in the 2013 Curriculum consists of four competences, which are try, process, present in the concrete realm (using, parsing, assembling, modifying, and making), and abstract realm (writing, reading, counting, drawing, and fabricate) in accordance with those studied in schools and other sources in the same point of view / theory [2]. This is further elaborated in Basic Competence (KD), which compiles the report text of the observation, descriptive, exposition, explanatory, and short story according to the characteristics of the text which will be made either orally or in writing.

According to the statements "The exposition text is a text that contains arguments or opinions. This text is a text that focuses on the filing of arguments or opinions about a thing ". Based on that understanding, the purpose or function of the expository text is for the reader to be informed with the knowledge as clearly as possible with the expert's opinions, examples, and facts.
In connection with that, the problem of writing exposition texts was still an obstacle for students. Based on the exposure of one of the Indonesian teachers of the seventh grade students, the problems in learning the skills of writing expository texts are: (a) the students difficulties in pouring ideas, due to not only they lack in vocabulary, knowledge and insight, but also they are not used to express their personal opinions or arguments in written form [3]. (b) the written sentences are often ineffective. This case happened because students write whatever they have in mind [4]. (c) in writing text, students have difficulty distinguished between expository text with other text.

Based on these cases, researcher was focus on learning exposition text environment which based on the condition in field. The process of seeing and getting to know the environment students tried to create their own imagination towards the environment. In other words, the environment is the object of a therapist who is very helpful in the power of imagination. The process of observing this environment is in line with natural science subjects where students are given education about the environment first [5]. So, the existence of education about the environment helps students get to know their own environment.

In this learning, students are directed to recognize their environment in a real way. The environment in question is the environment around them. Examples of environmental topics that can be observed by students are in the form of parks, leanliness, river, and even related to environmental problems that occur around them. This is so that students have care and attention to their environment.

In learning to write exposition text about environment, the teacher directed students to write what they witness in the environment and found the right solution in their own opinion. In this study also combines two subjects including the subjects of Indonesian and Natural Sciences. Students are guided to observe the nature around them and write exposition texts that are in accordance with the environmental conditions they observe.

Researchers tried to overcome the problem by applying a learning model that was discovery learning model. Thus, the limitation of the problem in this study was limited to the application of discovering learning model in the expository writing text writing [6]. In This study, student guided by teacher to find the ideas from their environment. Discovery learning was an associated inquiry-based instructional method base on the premise that through the process of finding out for themselves, students engaged in deep learning and remember the facts and issues more readily than if they were given the facts directly, or ‘instructed’. Discovery Learning refers to tasks where the target information must be discovered by the learner. The learner was at the center of the learning process [7] [8]. Discovery and receptive learning are not mutually exclusive as some critics implied, Discovery learning for conceptualizing [9].

Based on literature studies, research relevant to this research has been conducted, they showed the discovery learning model has good effect to develop students’ knowledge about Chemistry. Student become more active after hold the discovery learning model. [10]. Relevant studies have similarities and differences with the research undertaken. The research equations that are relevant to the research are equally quantitative research and equally apply the discovery learning model. The main difference research that the author did this was in terms of variables. The variables of this research lied in the learning of expository text writing skills by using discovery learning model.

2. Methods
The data of this study were collected by using performance test. The performance test was used to measure students’ expository text writing skills using conventional methods and discovery learning models. The sample in this study consists of two groups, namely the experimental class of 26 people and the control class as many as 24 people. Step analysis of data one of them was to perform normality and homogeneity of data. Normality test data have done to determine whether the data group have normally distributed or not, while the homogeneity test data have done to determine whether the data has homogeneity.

This type of research was quantitative research the type of this study was quantitative research with experimental method. The research data was obtained from the final test result of students' exposition
writing skill. The method used in this research was the experimental method. The research design used in this study was a static design of two groups.

During the research process, students were asked to observe the school environment. Pay attention to the problems that occurred in the school environment or even in the environment where he lives. In addition, students were also asked to discuss with friends about the 'environment' theme. From the results of the discussion, students get writing ideas. Students write exposition text based on the results of observations and the results of discussions with their friends.

3. Results and Discussion

In this section, we describe three things. First, the students' writing skills exposed the text using conventional methods on the control class. Second, the skills of writing the environmental exposition text of students using discovery learning model in the experimental class. Third, the effect of using discovery learning model on students' environmental expository writing skill [11]. Students made exposition texts about their environment. Students made exposition texts about their environment. Based on what they have observed and discussed with friends.

3.1. Writing Skill of Exposition Text Using Conventional Method (Control Class)

The conventional method that applied to the control class are included reading material and examples of exposition texts in the student handbook for 10 minutes. After that, students work on the exercises in the book. The learning steps in conventional classes are as follows.

3.1.1. Read

At this stage, students read the sample exposition text contained in the student handbook. The teacher gives instructions to students to read books carefully for 10 minutes. The process of reading the book requires calmer and focus. So, the teacher gives instructions to some students who read books in a loud voice to read books more calmly so that other students are not disturbed.

3.1.2. Exercises

The second process was students working on the exercises in the book. The type of practice questions are done by students are essays. Students analyzed the structure of the exposition text and determine the linguistic characteristics contained in the exposition text.

3.1.3. Write Exposition Text

The last process in control class was written down a new exposition text. The topic was mentioned by teacher before they start to work in their each notebook. They did not allow to make a group discussion while this process. Three activities carried out in the control class became comparative material for the experimental class that applied the discovery learning model. Starting with reading books, doing exercises, and writing exposition texts independently. Learning process continues until the last meeting which students take the test. The test was carried out to see the students' ability to write text expositions after taking the lesson.

Student writing skills in the conventional class (assignment method) that have been applied to students can be explained as follows. First, students who received exposition text writing skills with good qualifications amounted to 9 people (37.50%). Secondly, students who qualify more than enough for 6 people (25.00%). Third, quite a lot of students who meet the requirements are 6 people (25.00%). Fourth, students who got an exposition text score in almost enough qualifications were 3 students (12.50%).

Based on the analysis of data, the average value of expository text writing skills, control class by applying the conventional learning method (assignment) is equal to 68.44 is in the qualification is more than enough. The average score is above the Minimum Exhaustiveness Criterion (KKM), which is 75. So, the average score of writing skills of the expositions of the control class students is still below the KKM.
In the test of text writing skills there are five indicators assessed. Of the three indicators, the highest indicator that the student controls is the indicator 2 (the completeness of the text structure of the exposition with an average score of 71.77 is in good qualification. Most students of the control class have written the exposition text with appropriate with the structure.

3.2. Students’ Writing Skills in The Experimental Class
Unlike the control class, the experimental class was given treatment for treatment. stimulation of student knowledge carried out by the teacher invites students to be actively involved in learning directly [12]. followed by problem statements made by students after understanding what was discussed in the stimulation section. then there are activities carried out by students with small groups in the process of collecting data. after that, students write down information that has been obtained from the activity of collecting data into an exposition writing, the verification stage is needed to strengthen the data that has been obtained by students. the final stage of this learning model is generalization. After all the stages passed by the students, the researcher conducted the final ability test to determine the students’ writing skills.

The skills of writing exposition environmental texts by applying the discovery learning model to the experimental class can be described as follows. First, students who score the skills of writing exposition text with perfect qualifications amounted to 2 students (7.69%). Secondly, the students who get the skill of writing exposition text with good qualification 8 students (30.77%). Third, students who get the value of writing skill exposition text with good qualifications 16 students (61.54%).

Based on the results of data analysis can be known that the average value of text writing exposition applying the discovery learning model is 84.25 and is in good qualification. Differences in learning outcomes between the experimental and control classes occurred because there was a more effective teaching-learning atmosphere in the experimental class.

Table 1. Comparison of writing skills of exposition text using conventional methods and discovery learning model

| Groups          | N  | \(\sum X\) | \(\sum X^2\) | Average |
|-----------------|----|-------------|--------------|---------|
| Control class   | 24 | 1642,5      | 114309,25    | 68.44   |
| Experiment class| 26 | 2190,5      | 185664,75    | 84.25   |

Based on Table 1, it can be seen that the comparison of expository text writing skills using the conventional method is 68.44 and discovery learning model is 84.25. The students’ experimental learning grade is significantly higher than the control class.

Based on the results, the conclusions are, first, a significant influence in using discovery learning model to writing skills exposition of the text. Second, received at a significant level of 95%. Third, the discovery learning model influences the skills of writing exposition texts about the environment.

Based on the explanation, the following are described steps of learning that have been carried out in the control class (conventional) and in the experimental class.

Table 2. Comparison of activities in experiment and control class

| Experiment Class | Control Class |
|------------------|---------------|
| Stimulation      | Reading Book  |
| Problem Statement| Exercise      |
| Data Collection  | Making Text   |
| Data Processing  | -             |
| Verification     | -             |
| Generalization   | -             |

Table 2. illustrates the steps of learning carried out in the control class or called the comparison class (conventional), while in the other classes is the experimental class. in this experimental class, six steps of learning were applied. stimulation, problem statement, collecting data, processing data, verification, and generalization [13].
4. Conclusion
The Summed up of this research are, first, the writing of text of the control class by applying the conventional method is in the qualification is more than enough. The average value of writing skills is in the range of 68.44. These conventional methods have not met the Minimum Exhaustiveness Criteria (KKM) because the students' average score does not reach the predefined KKM or under the score of 75. Second, the skill of students in experiment class by applying the model of discovery learning is in good qualification. The average value of writing exposition text skills using discovery learning is 84.25. It proves that the skills of writing exposition experimental class text by applying the learning model ‘discovery learning’ have fulfilled the criteria score. Students’ ability to write environmental exposition text exceeds learning standard.

Acknowledgment
We would like to say to thank to: Indonesian Endowment Fund for Education for funding this research.

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