

THE USE OF COOPERATIVE LEARNING AND DISCOVERY LEARNING IN TEACHING WRITING DESCRIPTIVE TEXT

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Abstract: This research aims to investigate significance difference between cooperative learning and discovery learning in writing descriptive text. This research was done by using quantitative method and conducted a quasi-experimental design with two groups study at SMPN 23 Bandung. It was conducted at seventh grade of Junior High School. The instrument used in this researcher were test. The result of data analysis showed that there was significant difference between experimental and control class. In accordance with the result of data were normally distributed, homogeneity, and independent sample t-test the means both groups for equal variances assumed $0.015 < 0.05$. It is indicated that the null hypothesis (H_0) is rejected. Therefore, STAD is more effective than discovery learning in writing descriptive text. The result revealed that the implementation of cooperative learning in writing descriptive text by following the five components of STAD proposed by Slavin (2005). While the implementation of discovery learning by following the five stages proposed by Shah (2004).

Keywords: *Cooperative Learning, STAD, Discovery Learning, Teaching Writing, and Descriptive Text*

INTRODUCTION

Language is a system of communication using a code when people communicate with other in speech (Wardhaugh, 2006). It means important for students to learn language especially English because English is the most important language in the world. Although English is not the language with the largest number or native of 'first' language speakers, it is widely used by many people all over the world as their 'second' language (Harmer, 2001).

However, in the structure of curriculum program in Junior High School, English is the one of the most important subject for Indonesian students. A curriculum is a set of plans and rules about goals, contents, and learning materials as well as the way of using it as guidance for implementation of learning activities that is aimed at a specific goal National Education Standardized Institution (BNSP, 2006). Moreover, nowadays in Indonesia used curriculum 2013. The establishment of curriculum 2013 was based on law No.20, 2003 about National Education Standard. It is arranged by the units of education based on the Content Standard and Graduate Competence Standard (Apsari, 2016). It means that Curriculum 2013 gives teachers a chance to develop teaching materials based on the skills, students' needs and ability. While in curriculum 2013 has four approaches they are Scientific Approach, Problem-Based Learning, Project-Based Learning, Discovery Learning. Therefore Discovery Learning which is suitable for teaching writing skill is called Discovery Learning Method. As the term discovery learning is a new method using in English teaching in Indonesia, it is important to investigate how it is implemented by teachers in the classroom. Discovery Learning is a

method to understand the concepts, meanings, and relationships, through intuitive process to finally come to a conclusion Budiningsih in Mendikbud (2013).

In applying the Discovery Learning method in the classroom, according to shah (2004 cited in Praweti, 2014), there are some procedures that should be implemented in the teaching and learning activities defined namely stimulation problem statement, data collection, data processing, verification, and generalization. In learning English, there are four language skills such as listening, speaking, reading and writing. One of important skills is writing which has to be learned by the students in order to master English well. Writing can also be defined as a process used to express idea without saying or face to face interaction and others can understand the meaning by reading it (Elbow, 2000).

Comparing to other skills – listening, speaking, and reading – writing is perceived as the most difficult skill. Widiati & Cahyono (2006) argued that writing is the most complex skill compared to the other three skills. Writing is considered as the most difficult skill to be mastered by the second language learners (Richards and Renandya, 2002). Writing involves some language components, such as spelling, grammar, vocabulary, and punctuation. Many students encounter difficulties in writing. Teaching writing is not easy. When teaching writing, teachers must be sure to select resources and support materials that not only aid them in teaching how to write, but also help them learn to write. Although the government does not include the writing skill into the final exam, but the syllabus asks the students to write some genre of texts. Descriptive text is one of the text types that were taught for junior high school. Descriptive is a type of text aimed to describe particular person, place, thing (Knapp and Watkins, 2005). Descriptive text is simple, in fact the students were still confused how to write the descriptive text, they were confused how to start to write the paragraph. They also found difficulties on how to translate the sentences and how to make a good paragraph a good text.

In minimizing problems encountered by the students, English teachers should make choices of approaches. Cooperative learning can be used as one of approach to develop students' performance in writing. Cooperative learning promotes higher achievement than competitive and individualistic learning in whole class lecturing method as proved by Slavin (2005). In cooperative learning, there are different kinds of technique that can be used by teacher. They are STAD, Jigsaw, Group Investigation, Structural Approach, TPS, and NHT. In line with Richard (2007). Students Teams Achievement Division (STAD) is one of them which use team works in classroom activities. The students paid attention to the teacher's explanation, and they became more active and creative because of STAD. As far as the definition of cooperative learning concerns by Rizanand Maasum(2007), cooperative learning is a learning approach which has been proven to culminate positive results and outcome. This approach is believed in enchancing students' performance and achievement in various subject and aspect of the language and producing positive social outcomes (Slavin, 2005).

In teaching writing using cooperative learning, teacher finds many specific terms like cooperative writing activities. As stated by Sargent (2004) those are the type of activities in teaching and learning process that combines cooperative learning procedures and writing process. In addition STAD is one of the simplest and most extensively researched forms of all cooperative learning (Slavin, 2005). The main idea behind Student Teams Achievement Divisions (STAD) is to motivate students, encourage, and help each other in understanding the material presented by the teacher. STAD has five major components. Slavin (2005) defines it into class presentation, teams, quizzes, individual improvement score, and team

recognition. In this research, the researcher aims to raise up a research relates with cooperative learning and discovery learning in teaching writing, especially descriptive text. Then, the focus of the research is to investigate significance different between cooperative learning and discovery learning in teaching learning writing descriptive text. Researcher conducts this research under title "*The Use of Cooperative Learning and Discovery Learning in Teaching Writing Descripttive Text*".

LITERATURE REVIEW

Cooperative Learning

Many researchers have their own definitions of cooperative learning. According to Slavin (2005), in cooperative learning, students are expected to help one another to discuss, argue and share information or knowledge to help academic achievement.

Moreover, another definition proposed by Orlich (2007) who defines cooperative learning as learning based on a small group approach in teaching and learning process that holds students accountable for both individual and group achievement. Similarly, Brown (2001) also states that Cooperative Learning involves students working in pairs of groups, and they share information in order to achieve goals successfully.

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The explanation above shows that cooperative learning involves small groups so that individuals work together to maximize their own and each others' achievement. Teachers make lessons cooperatively so that students not only work in groups to accomplish a task but they also have social skills to achieve the team's goal.

In teaching writing using cooperative learning, teacher finds many specific terms like cooperative writing activities. As stated by Sargent (2004), those are the type of activities in teaching and learning process that combines cooperative learning procedures and writing process.

Many advantages of cooperative learning that can improve the students' writing skills. The various techniques can also be applied to improve the students' writing skills. Each technique has its own way of how it is implemented in the teaching-learning process. Writing itself has many subskills that become the problems of the students' writing ability. To solve the problems, it needs different cooperative learning techniques to be implemented.

For example, Student Team Achievement Division (STAD) techniques can be implemented to make the students learning together, discuss and share their idea to each other. Moreover, there are still many cooperative learning techniques that can be used to solve the other problems of the students' writing.

There are some benefits of cooperative learning in teaching learning process. Groups allow the students to work and interact independently without necessary guided of teacher, thus promoting the students' independence. It is relatively quick and easy to organize and group can improve students' achievement (Harmer, 2007). With a high achiever in each group, it can help teachers to introduce a new material. The other ways, the lower achievers may contribute to their group (Slavin, 2005). Harmer (2007) states groups can help students

develop communication skill, leadership skill, and cooperation skill. The last, cooperative learning makes students understand the material better. The students are encouraged and more willing to work in group with their peers because a teacher is not only one source who has knowledge or information (Slavin, 2005). It recognizes the old maximum that 'two heads are better than one' and in promoting cooperation helps the classroom to become a more relaxed and friendly place (Harmer, 2007). Through this activity, students will have a better understanding to gain information, knowledge and material.

The Components of STAD

STAD has five major components as Slavin (2005) defines: 1) class presentation, 2) teams, 3) quizzes, 4) individual improvement score, and 5) team recognition that will be elaborated below

First is class presentation. In this component, the teacher introduces the material to whole group in a class presentation through a lecture, a discussion, and demonstration on the blackboard or whiteboard. The teacher assesses students' understanding by giving them some questions and preparing answers and explanations to students' problem, the distributing assignment for each group (Slavin, 2005).

The second is teams. In this component, the teacher divides the students into teams from different academic levels, sexes and background ethnic (Slavin, 1995). Every group has to discuss the material, do the assignments and make sure all members of group understand the lesson (Slavin, 2005). Most often, the study involves students discussing problems together, comparing answer and correcting any misconceptions if the groups make mistakes.

The next step is quizzes. The purpose of individual quiz is to measure how far the students understand the lesson (Slavin, 2005). Students take individual quizzes during the quizzes that are not allowed to help each other. This is intended to ensure that every student is responsible for knowing the material.

The fourth is Individual improvement score. The students collect points for their group based in the level in which quiz score exceed their starting score (Slavin, 2005). The criteria of improvement point are based on the following table.

Table 1 The Criteria of Improvement Point

Quiz Score	Improvement Point
More than 10 points below starting score	5
10-1 below starting score	10
10 points above starting score	20
More than 10 points above starting score	30
Answer sheet is perfect	30

(Slavin, 2005)

The final step is team recognition. Teacher gives reward for group achievement. Each group gets a team score. Any group which gained the highest team score was awarded a kind of reward (Slavin, 2005). The teacher, in this case, can be creative in how the award are distributed. Three levels of award are given for the groups who got improvement score from improvement score average for each group. The three criteria are below:

Table 2 The Criteria of Reward

Criteria (team average)	Reward
15-19	Good Team
20-24	Great Team
25-30	Super Team

Discovery Learning

As the term discovery learning is a new method using in English teaching in Indonesia. It is important to investigate how it is implemented by teachers in the classroom. Discovery Learning is a method to understand the concepts, meanings, and relationships, through intuitive process to finally come to a conclusion Budiningsih in Mendikbud (2013).

Discovery Learning refers to various instructional design models that engage students in learning through discovery. According to Murphy, Malloy, and O'Brien (2010), discovery learning is a learner centered mode of teaching most widely discussed by John Dewey and Jerome Bruner. In discovery learning students become active participants in learning by exploring concepts and answering their own questions through testing and experience. In line Bruner (1961) that argues that Practice in discovering for oneself teaches one to acquire information in a way that makes that information more readily viable in problem solving.

From the explanation above, the researcher draws the conclusion about the definition of Discovery Learning method the discovery learning is one of learning method that build more actively of students in teaching language especially teaching writing. Discovery means from nothing to get something which they never know before.

Procedure of Discovery Learning

In applying the Discovery Learning method in the classroom, According to shah (2004 cited in Praweti, 2014), there some procedures that should be implemented in the teaching and learning activities in general. First is stimulation. This stage serves to provide the conditions of learning interactions that can develop and assist students in exploring materials. In this case Bruner in Mendikbud (2013) provides stimulation by using questioning technique. Besides, teacher can begin the activity by asking questions to the students can expose students to the internal conditions which encourage their exploration. Thus, a teacher must master the techniques in providing stimulus to the students in order to enable students to explore the destination.

Second is problem statement (Statement/Identify the Problem). The step is giving an opportunity to the student to identify as many agendas as possible which are relevant to lesson material, then one of them is selected and formulated in the form of hypotheses (answers while the question of the problem) (Shah 2004), while the problem chosen then will be formulated in the form of a question, or hypothesis, i.e. statement as a temporary answer to the questions proposed.

Third is data collection. When the exploration is ongoing, the teachers also give the opportunity to the students to gather as much information as possible that is relevant to prove the hypothesis whether it is true or not (Shah, 2004: 244). At this stage, the answer of hypothesis questions will be looked for to prove the truth of the hypothesis itself.

The next is data processing. According to Shah (2004), data processing is the activity of processing the data and information that has been obtained by the students either through interviews, observation, or others.

Fifth is verification (proof). In this stage, the students perform a careful examination to prove whether true or not the hypothesis determined by finding the alternatives and associated with the outcome of data processing (Shah, 2004). Verification intended to make the process of learning will run well and creatively if the teacher provides opportunities for students to find a concept, theory, rule or understanding through examples that the might be encountered in their life.

The last is generalization (interesting conclusions). The generalization stage is that the process of drawing a conclusion which can be used as a general principle and applies to all events or the same problem, with regard to the result of verification (Shah, 2004).

Teaching Writing

Teaching writing is not easy. When teaching writing, teachers must be sure to select resources and support materials that not only aid them in teaching how to write, but also help them learn to write.

Many language researchers have their own definitions of writing. According to Harmer (2004), writing is a form of communication to deliver thought or to express feeling through written form. Moreover, another definition of writing by Pinter (2006) defined writing as a complex skill that grows from the level of copying familiar words and phrases to the level of developing an awareness of text structures, genres, the processes of drafting and editing, and writing for a reader. In summary writing is a thinking process in which the author develops the ideas and puts those into a piece of text.

Teaching writing is a way of conveying message or just to keep a record of what is in our mind. In addition Brown (2007), teaching is guiding and facilitating learning, enabling the learner to learn, setting the conditions for learning. Therefore, as stated by Belden (2007 cited in Maspeke, 2009), teaching writing is important conduct because learning to write well is very essential to improve communication skills, grammars and gives a special contribution to the way of critical thinking.

Regarding to definition above the researcher concluded that teaching writing in an activity that consciously done by human being to help other human being learn how to do

something or transfer knowledge. In summary learning is process from ignorance to knowing or from inability to ability.

The Process of Writing

Writing is a process that involves several steps. Meanwhile, Harmer (2004) suggests that good writing can be achieved through process in writing has four main elements namely planning, drafting, editing, final version.



Harmer (2004)

Figure 1 Process of Writing

Descriptive text

Descriptive text is one of the text types that were taught for junior high school. According to Dirgeyasa (2014) describe descriptive text means to draw, to illustrate or to picture object, place, person in order to have visual appearance of the object described. It means the descriptive text is a text which says what a person or thing is like and the purpose is to tell about the subject by describing.

The generic structure applied in this text, there are two namely identification and description (Larson, 1984). As by Wadirman (2008), the generic structure of the descriptive texts are shown in the following table:

Table 3 Generic Structure of Descriptive Text

Generic Structure	Function
Identification	Identifies the phenomenon to be described
Description	Describes features in order of importance such as Parts/things (physical appearance), Qualities (degree of beauty, excellence, or worth/value) and Other characteristics (prominent aspects that are unique)

Here is an example of descriptive text taken from English in Focus: for grade VII Junior High School (Wardiman, 2008)

<p style="text-align: center;">Mr. Kartolo, the farmer</p> <p>Mr. Kartolo is very happy. The rainy season of this year makes the farm beautiful. It is planting time! Rice fields become fresh and green during this season and by the end of this season Mr. Kartolo is ready to harvest his crops.</p> <p>Mr. Kartolo ploughs the land at the beginning of the rainy season. Then, he usually works early and finishes at noon. Milking the cows, feeding the livestock, and cleaning the barns are among Mr. Kartolo's duties before breakfast. He does most of the hard outdoor work by himself.</p>
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Figure 2 Example of Descriptive Text

C. RESEARCH METHODOLOGY

In carrying out the research, the researcher used quantitative method. Quantitative research is an approach for testing objective theories by examining the relationship among variables (Creswell (2014)). As a consequence, the researcher applied the quantitative research method because the data collection in this research was in the numerical form.

Related to this research, the researcher used a quasi-experimental design with two groups. There were group A for experimental class and group B for control class are selected without random assignment. Both groups took a pre-test and post-test. The application of the treatment of cooperative learning especially STAD method given to the group A and there was discovery learning for group B.

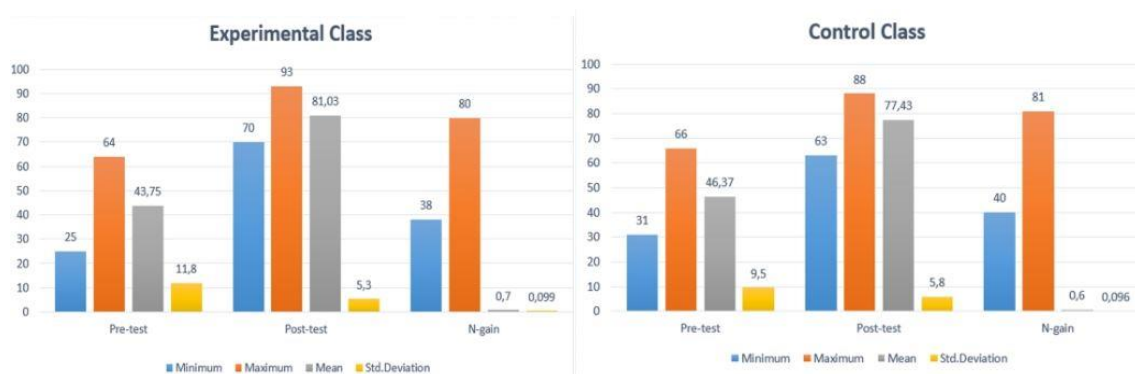
The population in this research were the students seventh grade of SMPN 23 Bandung in the academic 2018/2019. The seventh grade of SMPN 23 Bandung consists of eight classes relatively having same characteristics. The writer chose two classes (VII A and VII H) as the samples. The researcher used test as research instrument.

FINDINGS AND DISCUSSION

Results

In this result, the research used two assessors on assessing of students writing in pre-test and post-test based on scoring system of writing adapted from (Brown, 2007). It focused on the students' ability in writing descriptive text with five aspects of writing. They are content, organization, grammar, vocabulary, and mechanics.

Table 4 Descriptive Statistic



Based on the diagram above, pre-test and post-test score from experimental and control class. It can be seen that the score of 30 students. In the experimental class score of pre-test with the highest score is 64 and the lowest is 25. It is different from the result of the post-test. It can be seen that the highest score is 93 and lowest score is 70. The mean score of Pretest is 43,75. It means that writing ability in descriptive text before treatment using cooperative learning especially STAD is low. After the treatment the score mean score of post-test is 81,03. It means that writing ability descriptive is high.

In the control class score of pre-test with the highest score is 63 and the lowest is 31. It is different from the result of the post-test. It can be seen that the highest score is 88 and lowest score is 66. The mean score of pre-test is 46,37. It means that writing ability in descriptive text before treatment using Discovery Learning is medium. After the treatment, the mean score of post-test is 77,43. It means that writing ability descriptive is medium.

Table 5 Independent Sample Test

Independent Sample Test	Pre-test	Post-test
	0,316	0,015

The result of normality distribution and homogeneity of variance test shows that the data were normally distributed and homogeneous. Furthermore, the independent t-test in order to identify whether or not there was a significance difference between the pre-test score and post-test score both in experimental and control class. Based on the output of pre-test score, it was found that significance of the means by both groups for equal variances assumed $0.316 > 0.05$. It was concluded that the null hypothesis was accepted. It is indicated that there was a not significant difference between the data pre-test of both classes. It means that the experimental and control class were similar in term of their writing ability.

Furthermore, based on the output of post-test score, it was found that significance of the means by both groups for equal variances assumed $0.015 < 0.05$. Therefore, the null hypothesis was rejected. It can be concluded that there was significant difference between experimental and control class after treatment.

In accordance with the result of normality, homogeneity, and independent t-test on post-test score above, it is noticeable that after the treatment, the score of writing test in experimental group had improved. Therefore, Student Team Achievement Division (STAD) is more effective than discovery learning in writing descriptive text.

Discussion

Based on the data, it can be obtained that any significance different between cooperative learning and discovery learning in teaching learning writing descriptive text. From the data descriptive statistic, the mean score of writing in the pre-test of experimental class is 43,75 lower than of control class which is 46,37.

The Pre-test score both experimental and control class showed that data were normally distributed, homogeneity of the data was homogenous and the researcher used Independent Sample T-test in order to analyzed the significant of pre-test score. The calculation of independent sample test the means by both groups for equal variances assumed $0.316 > 0.05$. it is indicated that the null hypothesis (H_0) was not rejected.

In other words, there is no significant difference between experimental and control class. In general, the result of pre-test in both group indicated that individual students learning in writing had no significant effect on their writing ability.

The mean of the students score in post-test. However, had increased to 81,03 in the experimental class, it means writing ability in descriptive text after treatment was higher than that of control class, which was 77,43.

The Post-test score both experimental and control class showed that data were normally distributed, homogeneity of the data was homogenous and the researcher use Independent Sample T-test in order to analyzed the significant of post-test score.

The of independent sample test the means by both groups for equal variances assumed $0.015 < 0.05$. It is indicated that the null hypothesis (H_0) was rejected. It means that there was significant difference between experimental and control class after treatment in writing ability.

It can be concluded that the students who have been thought writing using cooperative learning had better writing than using discovery learning. As Rizan (2007), cooperative learning is a learning approach which has been proven to culminate positive results and outcome.

CONCLUSION

In this section, the conclusions present based on the result and discussion of research. The conclusions presents that there is significant difference between used cooperative learning and discovery learning in teaching learning writing descriptive text. The fact showed that data were normally distributed, homogeneity of the data was homogenous and Independent-Samples t Test calculation in post-test scores, which the means by both groups for equal variances assumed $0.015 < 0.05$, and it means that the null hypothesis (H_0) was rejected. In other words, there was significant difference between experimental class and control class.

REFERENCES

- Apsari, Y. (2010). *English Curriculum Analysis*. Cimahi : STKIP Siliwangi press
- Brown, H. D. (2001). *Teaching by Principles: An Interactive Approach to Language Pedagogy*. (2nd ed.). New York: Longman
- Creswell, J. W. (2014). *Research design qualitative, quantitative and mixed method approaches*. Lincoln : University of Nebraska.
- Elbow, P. (2000). *Everyone can write, Essay toward a hopeful theory of writing and teaching*. New York: Oxford University Press
- Harmer, J. (2001). *The Practice of English Language Teaching. Third Edition*. England: Person Education Limited
- Knapp & Watkins, M. (2005). *Genre, text, grammar: Technologies for teaching and assessing writing*. University of New South Wales Press Ltd.
- Mendikbud. (2013). *Model Pembelajaran Penemuan (Discovery Learning)*. Jurnal Badan Pengembangan Sumber Daya Manusia Pendidikan Dan Kebudayaan Dan Penjaminan Mutu Pendidikan. Jakarta : Dokumen Kemendikbud.
- Richard, I. A. (2007). *Learning to Teach 7th edition*. New York: The McGraw-Hill Companies.
- Rizan, T. & Maasum, M. T. (2007). *The effect of cooperative Learning in Enhancing Writing Performance*. Thesis PHD. Bangi: Universiti Kebangsaan Malaysia
- Sargent, D. 2004. *Using Cooperative Writing Activities to Build Community, Fluency, and Accuracy*. London
- Slavin, R.E. 2005. *Cooperative Learning: Theory, Research and Practice*. London: Allyn and Bacon.