THE EFFECT OF APPLYING FISHBONE DIAGRAM STRATEGY ON THE STUDENTS' ACHIEVEMENT IN WRITING PROCEDURE TEXT

SKRIPSI

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ABSTRACT

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This research deals with The Effect of Applying Fishbone Diagram Strategy on the Students' Achievement in writing Procedure Text. The objective of this research were to find out the effect of applying Fishbone Diagram Strategy on the Students' Achievement in Writing Procedure Text and to find out the students difficulties of applying Fishbone Diagram Strategy on the students achievement in writing Procedure text. The population of this study was the eighth grade students' of SMP Satria Nusantara Binjai academic year 2016/2017 on Jln. Sukarno Hatta KM 19,2 Binjai which consisted of two parallel classes namely: class VIII-1 and class VIII-2. The total number of population was 60 students and the researcher took all the students as the sample. This research used experimental design. The sample were devided into two groups, the first group (VIII-1) which consist of 30 students was experimental group which given treatment by applying fishbone diagram strategy and the second group (VIII-2) which consist of 30 students was control group which given treatment by applying free writing strategy. The instrument of this research was a written test in the form of writing procedure text. The test given to students aimed to collect the data supporting the students' achievement in writing procedure text. The data was analyzed by using t-test formula. After analyzing the data, the result showed that t-observed were 6.37 and t-table were 2.00. the fact showed $t_{observed}$ higher than t_{table}. Therefore, H_a hypothesis was accepted and the H_o hypothesis was rejected and the students' difficulties in writing procedure text by applying Fishbone Diagram Strategy from the result of analysis stated that from language use there were 60% students that got the difficulties.

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This study entitled *"The Effect of Applying Fishbone Diagram Strategy On The Students' Achievement In Writing Procedure Text".* It was not easy for the researcher in finishing this study. There were many difficulties and problem faced by her, physically and mentally. Therefore, she would like to thanks especially to her dearest and lovely great parents, **AyahandaSami Yusti**and **IbundaErliani**, and also to my lovely sister Nurul Natasyafor their million greatful words would never be enough to endless love, care, attention, pray, encouragement and hearth they have given. The researcher also would like to express her gratitude and appreciation to:

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CHAPTER I

INTRODUCTION

A. The Background of the Study

English language teaching includes four skills such as listening,speaking, reading, and writing. One of the langguage skill which is very difficult to study is writing. Writing is a subject that learners about how express our idea in written form.

Writing is also a process, it should be learned by stage, from a simple to a complex, from a sentence to a composition. The very basic of writing ability is making a sentence, because a sentence is a smallest unit to express thought idea, opinion, and feeling. For many students, it's because they still do not understand the rules in writing simple sentences. They usually translated from Indonesia into English, it could be understood, it has been that English writing is different from Indonesian writing, consequently the differences make it difficult for the students to develop their skill in writing because indonesia grammar influence in arranging the sentence in english.

There are many types of genre of writing such as procedure, descriptive, narrative, recount, expository and etc. Procedureis a piece of text that give us instructions for doing something.The function to tell the reader how to do or make something through a sequence of actions or steps it is important for the students master it. In producing a good writing, students also have to pay attention to three main aspects namely the grammatical and linguistic competence and the signals.

These aspects are essential to be mastered in order to be able: (a) to govern elements of writing into meaningful organized sentences and phonology, (b) to connect the sentences together and (c) to provide coherence to the writing.

Based on the researcher experience in teaching at SMP Satria Nusantara Binjai academic year 2016/2017, students attend the class without any preparation. They enter the class and take a seat, during the teaching learning process; students are just receiving information and memorizing it. Most students do not enjoy writing. They find teachers' way of teaching is boring and uninteresting. Students lack confidence in writing on their own. Many students do not have good control over their speech and languages. They make a lot of errors in grammar, usage, punctuation and spelling. The students find it difficult to write aprocedure text because they don't know the generic structure.

The problems faced by learners in English language must be solved by using appropriate and interesting media in the process of teaching and learning English at class, it is expected learners will be in receiving writing materials from teachers. The researcher in this research is interested to use Fishbone DiagramStrategy. The Fishbone DiagramStrategy is anStrategy that provides a systematic way of looking at effects and the causes that create or contribute to those effects. Because of the function of the fishbone diagram, it may be referred to as a cause-and-effect diagram. The design of the diagram looks much like the skeleton of a fish. Therefore, it is often referred to as the fishbone diagram. Dr. Kouru Ishikawa By using fishbone diagramStrategyin teaching learning process students will develop more understanding of a procedure text. And then, the

students should comprehend theproceduretext by answering the question about the procedure text.

B. The Identification of the Problem

The problem of this research were identified as follows:

1. Most students do not enjoy in writing.
2. They find teachers' way of teaching is boring and uninteresting.
3. Students lack confidence in writing on their own.
4. Many students do not have good control over their speech and languages.
5. They make a lot of errors in grammar, usage, punctuation and spelling.
6. The students find it difficult to write a Procedure text paragraph because they don't know the generic structure

C. TheScope and Limitation

This study aim focused inWritng. The limitation of the study is on the students' writing Procedure text at the eighth grades of SMP Satria Nusantara Binjai at academic year 2016/2017 by using Fishbone Diagram Strategy.

D. The Formulation Of the Study

Based on the background of the study, the formulation of this study were formulated as follow:

1. Is there are any significant effect of Applying Fishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text?

2. What are students' difficulties of applying Fishbone Diagram Strategyon theStudents' Achievement in Writing Procedure Text?

E. The Objective of the Study

The objectives of this study were expected as follows:

1. to find out of the effect of applying Fishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text.
2. to find out the students difficulties of applying Fishbone Diagram Strategyon the students achievement in writing Procedure text.

F. The Significances of the Study

a. Theoretically

This study can be useful for further research and can provide a good influence to learners in learning about Fishbone Diagram Strategy in writing achievement.

b. Practically

The findings of the study are expected to be significant for :

1. The researcher, to help her encourage and prepare herself to be a qualified and competent teacher of English in the future
2. The teacher of English, as a reference to help them improve the quality of teaching writing effectively
3. Other researcher who are interested in conducting a much deeper research on writing and Fishbone.

CHAPTER II

REVIEW OF LITERATURE

A. Theoretical Framework

As a result of an action or other cause. The effect is a change that happens and produces a result Inconducting a research, theories need to explain some concepts or terms apply in research concern. The terms must be clarified to avoid confusion. So the researcher and the reader may have the same perception of them.

1. The Description of Effect

Effect can be defined because there is a cause. The effect is a change that results when something is done. The effect is very essential in deciding and looking for a way out. If the effect is positive, the result can be positive as well as the expectation of the research.

Other and otherwise. In English, writing is a significant skill that students have to comprehend and master. By giving a teaching model to the students of Applying usingFishbone Diagram Strategy, the researcher wishes the students achieving their goal to write a Proceduretext. Based on the research was done by the researcher, the effect is the causal relationship between variables. In this case, of Applying Fishbone Diagram Strategy was give effect of students' writing Procedure text.

2. The Description of Students' Achivement

The word " achievement" derives from a verb "achieve" which mean:

a. The act of accomplishing or finishing
b. Something accomplished successfully especiallyby means of skill, practice or perseverance.

Bloom's (2006 : 61) say that taxonomy is devided into three domains : the cognition, the affection, and the psychomotor. Cognition is having basis in or reducible to empirical factual knowledge. Cognition consist of knowledge, comprehension, application, analysis, syntactic, and evaluation. Affection is the changingofbehavior that effect someone lies to do something. There are sign with acceptance by using their sense and respond. Psychomotor is the skill to do something, ready to do it basedon physic and emotion, self-control and become a habit. Therefor it is concluded achievement is a success in reaching particular goal statuse or standard especially by effort skill, courage etc.

It can be assumed that achievement is a process of developing skills or knowledge. The most common type of achievement is a standardized process in developing the measureable skills and knowledge learn in a giving grade level, usually through plan instruction. Achievement is a thing do successfully, especially with effort and skill or the action or process of a achieving something. Evaluation of the students achievement in necessary, teacher must given scores to the student's work in order know success in teaching and student's achievement but also the development and the progress of the student.

3. The description of Approach, Strategy, Method, Technique.

To be successfully in teaching and learning process, there are some important points to be considered. Some of them are presented bellow:

3.1 Approach

The approach can be interpered as a starting point or view of the learning process. Teacher-centered approach lowers the learning strategy directly (direct instruction), deductive learning or expository. Meanwhile, the learning approach to lower students-centered learning strategies of inquiry and discovery and inductive learning strategies(Sanjaya,2008 :127).

3.2 Strategy

Learning strategies can be defined as the planning that contains a series of activities designed to achieve specific educational objectives (JR David in Sanjaya, 2008: 126). Further described is a learning strategy learning activities that must be done so that the teacher and student learning objective can be achieved effectively and efficiently (Kemp in Sanjaya, 2008:126). The terms strategy is often used in many contexts with meaning is always the same. In the context of teaching strategies can be interpered as a general pattern of teacher-student action in the menifestation of the teaching activity (Rohani Ahmad,2014).

3.3 Method

One approach can be translated into a variety of method. According to FaturrahmanPupuh in WijaSanjaya (2007) methods means the way. The method is a procedure that is focused on the achievement of learning objectives. Techniques and tactics taught the elaboration of learning methods.

3.4 Technique

Brown (2006:14) states that "technique is the specific activities manifested in the classroom that are consistent with a method and therefore were harmony with an approach as well". More clearly stated that technique as a super ordinate term to refer various activities that either teacher or learners in the classroom. In this case technique is helped someone to improve the students' achievement in mastering the language. So it ill very usefully to be applied in the classroom , with the technique teaching process will be facilitated and enjoyable to study.

In fact technique is a kind of strategy to make a lesson more understands able by the students in other word, the teacher device a kind of activity then simulated the curiously of the students when the learning process occurred. It is a particular trick, strategy or contrivance use to accomplish andimmediate objective technique to be consistent with aa method and therefore in harmony with an approach as well. Further,technique depends on the teachers, his individual art and on the composition of the class particular problem must be track equally successful by the different technique

4. The Definition of FishboneDiagram Strategy.

Dr. Kaoru Ishikawa, a Japanese quality control statistician, invented the fishbone diagram. Therefore, it may be referred to as the Ishikawadiagram. The fishbone diagram is an analysis tool that provides a systematic way of looking at effects and the causes that create or contribute to those effects. Because of the

function of the fishbone diagram, it may be referred to as a cause-and-effect diagram and a fishbone diagram is useful in brainstorming sessions to focus in writing. After the group has brainstormed all the possible causes for a problem, the facilitator helps the group to rate the potential causes according to their level of importance and diagram a hierarchy. The design of the diagram looks much like a skeleton of a fish. Fishbone diagrams are typically worked right to left, with each large "bone" of the fish branching out to include smaller bones containing more detail. it is often referred to as the fishbone diagram. (Office Organizational excellence)

Steps for the fishbone namely: (1) Draw the fishbone diagram (2) List the problem/issue to be studied in the "head of the fish".(3) Label each ""bone" of the "fish". The major categories typically utilized are:The 4M's: Methods, Machines, Materials, Manpower.The 4 P's: Place, Procedure, People, Policies.The 4 S's: Surroundings, Suppliers, Systems, Skills.Note: You may use one of the four categories suggested, combine them in any fashion or make up your own. The categories are to help you organize your ideas.(4) Use an idea-generating technique (e.g., brainstorming) to identify the factors within each category that may be affecting the problem/issue and/or effect being studied. The team should ask... "What are the machine issues affecting/causing..."(5)Repeat this procedure with each factor under the category to produce sub-factors. Continue asking, "Why is this happening?" and put additional segments each factor and subsequently under each sub-factor. (6)Continue until you no longer get useful information as you ask, "Why is that happening?"(7)Analyze the results of the

fishbone after team members agree that an adequate amount of detail has been provided under each major category. Do this by looking for those items that appear in more than one category. These become the 'most likely causes".(8)For those items identified as the "most likely causes", the team should reach consensus on listing those items in priority order with the first item being the most probable" cause.

4.1 Procedures of FishboneDiagram Strategy.

According toprofessor Kaoru Ishikawa that some procedures of Fishbone Diagram.

Here are some procedures of fishbone Diagram for writing, such as:

1. Agree on a problem statement (effect). Write it at the center right of the flipchart or whiteboard. Draw around it and draw a horizontal arrow running to it.
2. Brainstorm the major categories of causes of the problem.
3. Write the categories of causes as branches from the main arrow.
4. Brainstorm all the possible causes of the problem. Ask: “Why does this happen?” As each idea is given, the facilitator writes it as a branch from the appropriate category. Causes can be written in several places if they relate to several categories.
5. Again ask “why does this happen?” about each cause. Write sub–causes branching off the causes. Continue to ask “Why?” and generate deeper levels of causes. Layers of branches indicate causal relationships.

6. When the group runs out of ideas, focus attention to places on the chart where ideas are few.

4.2 The Advantages of fishbone Diagram Strategy.

According toprofessor Kaoru Ishikawa (1982) the Advantages of fishbone as follows:

a. it can be of great help in a situation where a person or team of people is trying to determine the cause of some problem.
b. a fishbone diagram helps the team by providing a convenient and easily understood way of thinking of and listing possible causes of the problem that is being faced.
c. The team comes up with basic sources of possible problems and then brainstorms, trying to think of what aspects of these sources could possibly be causing the problem.

4.3 The Disadvantages of Fishbone Diagram Strategy.

According toprofessor Kaoru Ishikawa (1982) the disadvantages of fishbone as follows:

a. The major disadvantage is simply that it doesn't solve any problems.
b. It can only help in identifying possible causes of problems and does not offer any possible solutions or any analysis of the likelihood that a given cause is the real one.

   In addition, it is not very good at pointing out which of the possible causes is most likely or most important. Graphically speaking, it makes all possible causes look equally plausible and equally important.

5 The Description of writing.

Writing is one of the most important skills in learning language beside reading, speaking and listening. Writing is derived from the verb “to write”. Writing is to convey exact meaning accurately and clearly organize ideas in idea in a logical structure the register appropriate a for a task/situation. The ideas of the message cab be conveyed in sentences, single paragraph or extended text.

Pradiyono (2006:49) said that a text many consist of one until three paragraph event it can be consisted of one sentence only. In writing the students are encourage to focus on accurate language use and language development. The objective of teaching writing is ithelp students learn how to write in various genres. The will focus on writing text in form of paragraph. Writing is one of the language skills that students should know when learning a language. Pradiyono (2006:249) says writing is the ability to use the structure, the lexical item and the conventional representation, in ordinary matter focus of writing.

From the quotation above, the researcher concludes that writing ability is someone capacity in using grammar an organizing the lexical item to express her/his ideas in form of written representation. Writing should be organizing effectively and includes some aspect such as idea, word choice, grammar, content, and coherent. In this simple form a process approach ask students to consider a procedure of putting together a good piece of work. We might for example to discuss the concept of first and final with our students and then ask them to say whether the following activities take place a first ad final stages and to put them in

the best order:(1) Check language use. (2)Check your spelling. (3)Check your writing for unnecessary repletion of wordor information. (4)Decide on the information for each paragraph and the order the paragraph should go on. (5)Note down the various idea. (6)Select the best idea for the conclusion. (7)Write a clean copy of correct version. (8)Write ought rough version.

5.1 Genres of Writing

Genres must deal with kinds of text. It has communicative purpose or social function, generic structure, or text organization and language featureGenre organizing concept for cultural practices. Genre is based on accession, function, behavior, and interaction structures. Each of text uses different language feature.

AccordingtoSanggamandKisso(2008), based on generic structure and language feature dominantly used textare divided into several types namely (1) Narrative: has function to amuse, entertain and deals with actual or various experience in different ways. (2) Recount: has function to retell events for purpose or informing/entertaining. (3) Descriptive: has function to describe a particular person, place or thing. (4) Report: has function to describe the way are things are with reference to arrange of natural man made and phenomenon in environment.(5) Procedure: has function to describe how something is accomplished thorough a sequence of action or steps. (6) Explanation: has function to explain the purpose involved in the formation of working of natural on socio-cultural phenomenon. (7) Discussion: has function present information and opinion about issues in more one of an issue. (8)Anecdote: has function to share with others and account of an unusual amusing incident. (9) Spoof: has function

to tell event with a humorous twist and entertain the readers. (10) News: has function give an information and the events.

5.2 Process of writing.

According to Carrol et al (2001:15) in producing a writing piece, there is process involved. Process is the stage where the researcher goes through in order to produce a writing matter. Carrol et al (2001:15) elaborate a stage of writing process as follow**:** (1)Prewriting: preely exploring topic and beginning to gather an organize details before your write.(2) Drafting: getting your ideas down on paper in roughly the format you intend. (3) Revising: correcting any errors and improving the writing's form the content. (4)Editing and proofreading : polishing the writing : fixing error in grammar, spelling, and mechanize.(5)Publishing and presenting: sharing your idea.

6 The Definition of Procedur Text

According MsGatzke 2003 A proceduretext is a text which gives instructions on how to do something.

1. The purpose of a procedure is to tell the reader how to do or make something.
2. The information is presented in a logical sequence of events, which is broken up into small sequenced steps.
3. The most common example of a procedural text is a recipe.

6.1 Types ofProcedur Text.

Texts that instruct how to do a particular activity recipes, rules for games, science experiments, road safety rules, how to do it manuals. Texts that instruct how to operate thingshow to operate an appliance, a machine, the photocopier, the computer

6.2Featuresof Procedure Text

A procedure text usually has four components

Goal or Aim	states what is to be done
Materials	listed in order of use
	includes items needed to complete task
Method	a series of steps
Evaluation	how the success of the procedure
	can be tested

Headings, subheadings, numbered steps, diagrams, photographs
are often used to help clarify instructions.

6.3 Language of Procedur Text

The text usually: (1) is written in the simple present tense (do this, do that) (2) focuses on generalized people rather than individuals (first you take, rather than first I take) (3) the reader is often referred to in a general way, i.e. pronouns *(you or one)* (4) action verbs *(cut, fold, twist, hold etc)*(5) linking words to do with time *(first, when, then)* are used to connect the text (6)detailed information on how *(carefully, with the scissors)*; where *(from the top)*; when *(after it has set)*(7) detailed factual description *(shape, size, colour, amount)*

How to make pancake

Ingredients:

1. 3 – 4 spoonful of flour
2. 2 eggs
3. 1 ½ (250 ml) of milk
4. 1 stick of butter

Materials:

1. 1 mixing bowl
2. 2 table spoons
3. 2 cups
4. 1 small pan

Procedure:

1. Put the flour in the bowl.
2. Put milk in a cup.
3. Make sure it's 250 ml of milk.
4. Put the milk in the bowl.
5. Break the 2 eggs into the bowl.
6. Mix it with a spoon.
7. Heat up the pan and put the butter
8. Put the mix in the pan.
9. Let the pancake mix cook about 5 minutes.
10. Flip pancake over when the top is brown.

11. And your pancake its ready to be serve

7 Teaching writing byFishbone Diagram Strategy.

According toprofessor Kaoru Ishikawathere are some steps in teaching writing byFishbone Diagram Strategy, such as:

1. Place students in groups of three or four.
2. Provide each group with a paper invite them to create a skeleton of fish with a topic of procedure text. The topic can be the same or different for all groups.
3. Give students two minutes to think and record their ideas on their paper.
4. Have them to Write the categories of causes as branches from a topic of procedure text.
5. From categories of causes as branches from a topic of procedure text ask the students to create procedure text.
6. Bring the skletion class together to review and to identify patterns and categories in what has been written.

B. Conceptual Framework

As in the Theoretical Framework, Writing is a process of expressing ideas, facts, feeling, experience, and thought in written form. In writing, the aspects include the use of vocabulary, structure of the sentence, composition of the sentence, spelling, and function.

In teaching activity, teacher should design a strategy in influencing the students' achievementin learning process, especially in writing achievement.

Students' should be able to communicative in process of transferring the knowledge and more practice or exposure to use the language. Therefore, the suitable of teaching strategy is very important to increase students' ability in writing achievement.

This research was done by giving pre-test, treatment and pos-test. The pre-test is given written test. The treatment provides learning to studentsbyFishbone Diagram Strategy**.** The post test is given to experimental group, the test same as the pre-test, tabulating the students' score in this case the researcher to achieve the students' writing achievement.

Fishbone Diagram StrategyisStrategyin writing lesson by using some medias, this Strategyhelp the students to know procedure text by inviting the students towrite their ideas in skeleton on the paper .Fishbone Diagram Strategywhich been applied to the students are interested or follow every parts in thisStrategy, develop the ideas, arrange outline and then create a procedure text. This Strategyoffers an enjoyable way for creating something in a text, and writing will no longer be a boring activity for students.

C. Hypothesis

Based on the explanation of both theoretical and conceptual framework, the hypothesis was formulated as follows :

Ha= There is a significant effect of usingFishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text.

Ho= There is no significant effect of using Fishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text.

CHAPTER III

METHOD OF RESEARCH

A. Location

This research was conducted at SMP Satria Nusantara, Binjai,Sumatera Utara.Academic year 2016/2017.The researcher is choosing this school because the researcher find that it so many students are not interesting in writing, they are not able to express their idea in writing, especially in Procedure text.

B. Population and Sample

1. Population

The population of this research taken was the eighth grade students of SMP Satria Nusantara Binjai. There are two parallel classes of academic year 2016/2017 consist of VIII-1 (30 students), VIII-2 (30 students), with, the total population consist of 60 students.

2. Sample

The technique of taking the sample was total sampling technique. VIII-I consisted of 30 students and the VIII-2 consisted of 30 students as well, so the total sample was 60 students**.**

Table 3.1

Sample

Group	CLASS	SAMPLE
Experimental	**VIII-1**	**30**
Control	**VIII-2**	**30**
	Total	**60**

C. Research Design

This research was an experimental research design which meant that there are two groups of the sample. The experimental group was the group that was taught by applying Fishbone Diagram Strategy and the control group was the group that was taught by free writing style.

Table 3.3

Research Design

Group	Pre-test	Treatment	Post-test
Experimental	✓	Fishbone Diagram Strategy	✓
Control	✓	Free Writing Style	✓

D. The Instrument of the Research

The instrument for collecting data was written test. The students were asked to write a proceduretext based on the topic given.

To score the students performance in writing procedure text, some criteria were used. The cumulative score was ranged from (0-100). To know the students achievement in writing there was some criteria considered there are five scoring components scales namely content, organization, vocabulary, language use, and mechanism.

1. Content

The scoring of the content depends on the students achievement in write their idea and information on the form of logical sentences.

30-27	Excellent to very good: knowledge able substantive through development of topic sentence-relevant to assigned topic
26-22	Good to average: some knowledge able of subject-adequate range limited development of topic sentence mostly relevant to topic, but lack detail.
21-17	Fair to poor: Limited knowledge of subject detail little substance inadequate development topic.
16-12	Very poor: does not show of subject not substantive not part time or not enough to evaluate.

2. Organization

The organization refers to students ability write the ideas, information in logical order. The topic and supporting sentences are clearly states

20-18	Very good: exact word, effective word choice and usage word form mastery appropriate register.
17-14	Good to average: adequate, accasional errors of word. Choice but meaning not obscured..
13-10	Fair to poor: Limited range, frequent errors, choice usage meaning confused or obscured..
9-7	Very poor: essentially a translation, knowledge of English vocabulary, word form or not enough to evaluate.

3. Vocabulary

Vocabulary refers to the students ability in using word or idiom to express idea logically, It also refers to the ability to use synonym, prefix, suffix exactly. The criteria of scoring vocabulary used are:

20-18	Very good: exact word, effective word choice and usage word form mastery appropriate register.
17-14	Good to average: adequate, accasional errors of word. Choice but meaning not obscured..
13-10	Fair to poor: Limited range, frequent errors, choice usage meaning confused or obscured..
9-7	Very poor: esentially a translation, knowledge of English vocabulary, word form or not enough to evaluate.

4. Language use

Language use refers in the students achievement in using some article or conjunction. The score of language use will be taken from five criteria had the highest score or is 25 point. They use consist of tense, article, pronoun preposition and structure. The criteria the language use as follow:

25-22	Excellent to very good: effective complex construction few errors argument test, number, or order/fiction, article, pronouns, preposition.
21-18	Good to average: effective but simple construction minor problems is complex construction-several errors of agreement, tense, number word order/fiction, article, pronouns, preposition, but the meaning seldom obscured.
17-11	Fair to poor: mayor problems in simple complex construction-frequent of errors of negation, agreement, devitions meaning.
9-7	Very poor: usually no mastery of sentences construction rules dominated by errors, doe not communicate, not enough to evaluate.

5. Mechanism

5	Excellent to very good: demonstrated of function few errors in spelling.
4	Good to average: occasional errors, punctuation, writing sentences but meaning not obscure.

3	Fair to poor: Frequent errors to spelling, punctuation and capitalization, writing sentences, hand writing not enough to evaluate.
2	Very poor: to mastery of convention, dominated by errors of spelling, punctuation, capitalization, paragraphing hand writing illegible, or not enough to evaluate.

Based on this indicators, then the students ability in writing procedure text is classified qualitative and quantitative system, the scale are as follow:

Table 3.2
The scale of Quantitative and Qualitative

Quantitative form	Qualitative form
90-100	Excellent to very good
70-85	Good to average
30-86	Fair to poor
0-29	Very poor

E. The Technique for Collecting Data

To collect the data of the research, step were used:

The data was collected by applying some steps as follows.

1. Giving pre-test to both groups.
2. Teaching in the experimental group by applying Fishbone Diagram
3. Take back pre-test from both group
4. Scoring the students' test
5. Teaching in the control group by using Free Writing Style .
6. Giving post-test to both groups.
7. Take back pre-test from both group
8. Scoring The students' test.

F. The Technique of Analyzing Data

In this research, descriptive quantitative technique was applied to analyze the data, and the steps were:

1. Listing their scores in two tables, first for experimental group scores and second for control group score.
2. Calculating the total score pre test and post test in experimental group and control group.
3. Finding the mean of the score of pre test and post test in experimental group and control group by using formula :
    a. Mean variable X (variable 1)

$$M_x = \frac{\sum X}{N}$$

(Sudijono, 2012 : 81)

    b. Mean variable Y (variable 2)

$$M_y = \frac{\sum y}{N}$$

4. Finding the standard deviation by using formula :
    a. Standard Deviation (SD) for variable X (variable 1)

$$SD_x = \sqrt{\frac{\sum x^2}{N}}$$

(Sudijono, 2012 :157)

    b. Standard Deviation (SD) for variable Y (variable 2)

$$SD_y = \sqrt{\frac{\sum y^2}{N}}$$

    c. Standard error of mean variable 1

$$SE\ M_1 = \frac{SD_1}{\sqrt{N_1 - 1}}$$

(Sudijono, 2012 :315)

    d. Standard error of mean variable 2

$$SE\ M_2 = \frac{SD_2}{\sqrt{N_2 - 1}}$$

e. The differences of standard error between mean variable 1 and mean variable 2

$$SE\ M_1 - M_2 = \sqrt{SE\ M_1}$$ (Sudijono, 2012 :316)

5. Testing hypothesis by applying T-test

$$t_o = \frac{M_1 - M_2}{SE\ M_1 - M_2}$$ (Sudijono, 2012 :314)

Notes :

M_x = Mean for variable 1 or X

M_y = Mean for variable 2 or Y

$\sum X$ = Total of students' score

$\sum y$ = Total of students' score

N_1 = Number of Cases for variable 1

N_2 = Number of cases for variable 2

SD_x = Standard deviation for variable x

SD_y = Standard deviation for variable y

$\sum x^2$ = The square oftotalstudents' score

$\sum y^2$ = The square ofTotal students' score

$SE\ M_1 - M_2$ = Standard error between M_1 and M_2

t_o = t observed

G. Statistical Hypothesis

In this research statistical hypothesis wasused to decide whether the hypothesis will be accepted or rejected. The statistical hypothesis are:

If t-test > t-table = Ha is accepted and H_0 is rejected

If t-test < t-table = Ha is rejected and H_0 is accepted

Where:

Ha : There is a significant Effect ofApplying Fishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text.

H_0 :Thereis not a significant Effect of Applying Fishbone Diagram Strategyon the Students' Achievement in Writing Procedure Text.

CHAPTER IV

DATA AND DATA ANALYSIS

A. The Data Collection

The data of this study were students' answer which was collected by giving the students a written test. The data this were the scores of the pre-test and post-test score. The following tables were the scores of the pre-test and post-test of experimental and control class

Table 4.1

Pre-test scores of students' achievement in Experimental Group

No	Students' Initial	Criteria					Total
		Content	Organization	Vocabulary	Language use	Mechanism	
1	AY	17	10	9	7	2	45
2	AR	21	16	12	13	3	65
3	AAR	15	8	8	7	2	40
4	DA	18	11	10	9	2	50
5	ES	20	16	13	13	3	65
6	HA	19	15	12	12	2	60
7	HS	17	9	10	7	2	45
8	HN	19	12	11	10	3	55
9	IS	18	11	10	9	2	50
10	IAR	15	8	8	7	2	40
11	LY	14	9	8	7	2	40
12	MIS	21	16	13	12	3	65
13	MMA	19	15	12	12	2	60
14	MR	19	12	11	10	3	55
15	MLS	17	9	10	7	2	45
16	MF	18	11	9	10	2	50
17	NU	17	9	10	7	2	45
18	NR	19	12	11	10	3	55

19	NS	18	12	11	11	3	55
20	PA	14	8	9	7	2	40
21	PP	19	11	12	10	3	55
22	RS	20	16	13	13	3	65
23	RP	17	10	9	7	2	45
24	RB	14	9	8	7	2	40
25	RT	18	13	10	11	3	55
26	RAP	17	12	9	10	3	50
27	RH	17	10	9	7	2	45
28	RRN	13	10	8	7	2	40
29	RM	12	9	9	7	2	40
30	SF	19	14	13	12	3	60
Total							1520

Based on the data in the table above, the lowest sample score in the pre test was 40and the highest was 65

Table 4.2

Pre-test Scores of Students' achievement in Control Group

No	Students' Initial	Criteria					Total
		Content	Organization	vocabulary	Language use	Mechanism	
1	CR	15	8	8	7	2	40
2	DR	17	15	13	12	3	60
3	DD	12	7	7	7	2	35
4	DR	17	10	9	7	2	45
5	ES	16	14	12	11	2	55
6	KH	10	6	6	6	1	30
7	LS	17	12	10	9	2	50

8	LT	17	10	12	9	2	50
9	LA	15	8	8	7	2	40
10	LI	18	11	13	10	3	55
11	MHN	19	10	10	13	3	55
12	MAS	17	10	9	7	2	45
13	MA	18	9	12	9	2	50
14	MFK	18	14	13	12	3	60
15	MI	15	8	8	7	2	40
16	MR	20	15	14	13	3	65
17	MRG	17	9	10	7	2	45
18	MRK	18	13	14	12	3	60
19	MT	18	9	9	7	2	45
20	MH	18	10	11	9	2	50
21	NK	20	10	12	10	3	55
22	NA	18	10	11	9	2	50
23	RH	18	14	13	12	3	60
24	RW	16	11	11	9	3	50
25	RR	19	12	11	10	3	55
26	RMS	18	11	10	9	2	50
27	SL	18	8	8	7	2	40
28	TP	20	16	13	13	3	65
29	TA	18	11	10	8	3	50
30	YS	10	6	6	6	2	30
Total							1480

Table 4.2 showed that the highest score was 65 and the lowest score was 30. After tabulating the score of pre test then the score of post test were as the following table.

Table 4.3

Post-Test Scores Of Students' achievement In Experimental Group

No	Students' Initial	Criteria					Total
		Content	Organization	Vocabulary	Language use	Mechanism	
1	AY	20	16	17	14	3	70
2	AR	25	20	19	18	3	85
3	AAR	20	17	16	14	3	70
4	DA	20	16	15	16	3	70
5	ES	25	19	20	18	3	85
6	HA	22	18	17	15	3	75
7	HS	23	17	17	15	3	75
8	HN	20	19	18	18	3	80
9	IS	21	19	20	17	3	80
10	IAR	23	17	17	15	3	75
11	LY	20	16	17	14	3	70
12	MIS	25	19	20	18	3	85
13	MMA	20	19	18	18	3	80
14	MR	22	18	17	15	3	75
15	MLS	21	17	16	14	2	70
16	MF	22	17	18	15	3	75

17	NU	20	19	18	18	3	80
18	NR	24	20	20	18	3	85
19	NS	20	18	18	19	3	80
20	PA	22	18	17	15	3	75
21	PP	21	18	17	16	3	75
22	RS	24	20	20	18	3	85
23	RP	20	18	18	19	3	80
24	RB	21	17	16	14	2	70
25	RT	22	17	18	18	3	80
26	RAP	20	19	16	14	2	70
27	RH	22	17	18	15	3	75
28	RRN	21	16	17	14	2	70
29	RM	20	17	16	15	2	70
30	SF	26	19	19	18	3	85
Total							2300

Based on the data in the table above, the lowest sample score in the post test was 70 and the highest was 85.

Table 4.4

Post-test Scores of Students' achievement in Control Group

No	Students' Initial	Criteria					Total
		Content	Organization	Vocabulary	Language use	Mechanism	
1	CR	21	18	14	14	3	70
2	DR	22	17	14	14	3	70
3	DD	21	16	13	12	3	65
4	DR	23	19	15	15	3	75
5	ES	23	19	15	15	3	75
6	KH	19	14	12	12	3	60
7	LS	20	16	14	13	3	65
8	LT	22	17	14	14	3	70
9	LA	22	14	17	14	3	70
10	LI	23	19	15	15	3	75
11	MHN	21	16	13	12	3	65
12	MAS	22	20	15	15	3	75
13	MA	22	17	14	15	2	70
14	MFK	23	16	14	15	2	70
15	MI	19	14	12	12	3	60
16	MR	19	18	19	16	3	75
17	MRG	20	16	13	13	3	65
18	MRK	23	16	15	14	2	70
19	MT	19	19	18	16	3	75
20	MH	21	18	14	14	3	70

21	NK	20	17	13	13	2	65
22	NA	21	17	15	14	3	70
23	RH	21	17	14	15	3	70
24	RW	20	16	13	13	3	65
25	RR	21	17	15	14	3	70
26	RMS	20	17	13	13	3	65
27	SD	17	15	13	12	3	60
28	TP	23	19	15	15	3	75
29	TA	24	18	15	15	3	75
30	YS	17	15	13	12	3	60
Total							2065

Based on the data in the table above, the lowest sample score in the post test was 60 and the highest was 75

Table 4.5

The Differences Score of Pre-test and Post-test of experimental Group

No.	**Students' Initial**	**Pre-test**	**Post-test**
1	AY	45	70
2	AR	65	85
3	AAR	40	70
4	DA	50	70
5	ES	65	85
6	HA	60	75

7	HS	45	75
8	HN	55	80
9	IS	50	80
10	IAR	40	75
11	LY	40	70
12	MIS	65	85
13	MMA	60	80
14	MR	55	75
15	MLS	45	70
16	MF	50	75
17	NU	45	80
18	NR	55	85
19	NS	55	80
20	PA	40	75
21	PP	55	75
22	RS	65	85
23	RP	45	80
24	RB	40	70
25	RT	55	80
26	RAP	50	70
27	RH	45	75
28	RRN	40	70

29	RM	40	70
30	SF	60	85
	Total	1520	2300

Based on the Table 4.1 showed that the lower score of pre-test was 35 and the highest score was 55, while the lower score of post-test was 55 and the highest score was 80.

Table 4.6

The Differences Score of Pre-test and Post-test of Control Group

No.	**Students' Initial**	**Pre-test**	**Post-test**
1	CR	40	60
2	DR	55	75
3	DA	35	60
4	DR	40	65
5	ES	55	75
6	KH	50	70
7	LS	45	75
8	LT	40	70
9	LA	45	70
10	LI	50	75
11	MHN	50	80

12	MAS	50	70
13	MA	45	65
14	MFK	40	60
15	MI	35	55
16	MR	35	60
17	MRG	35	65
18	MRK	40	70
19	MT	40	65
20	MH	35	60
21	NK	40	60
22	NA	50	70
23	RH	35	65
24	RW	35	55
25	RR	40	65
26	RMS	35	55
27	SD	35	60
28	TP	40	55
29	TA	40	70
30	YS	45	70
	Total	1480	2065

Based on the table 4.2 showed that the lower score of pre-test was 35 and the highest score was 55, while the lower score of post-test was 55 and the highest

score of post-test was 75. After getting the students' score in pre-test and post test of both classes, it can be known that there was a difference of students' achievements in reading comprehension after recieving the treatment.

B. The Data Analysis

1. The Effect of Applying Fishbone Diagram Strategy on the Students' Achievement in Writing Procedure Text.

Based on the data from the test, the score were analyzed in order to find out that the differences of pre test and post test of the experimental group and control group.

Table 4.7

The Differences Score between Pre Test and Post Test of the Experimental Group

No	**Students' Initial**	**Pre Test (xı)**	**Post Test (x_2)**	**X (x_2-xı)**
1	AY	45	70	25
2	AR	65	85	20
3	AAR	40	70	30
4	DA	50	70	20
5	ES	65	85	20
6	HA	60	75	15
7	HS	45	75	30
8	HN	55	80	25
9	IS	50	80	30
10	IAR	40	75	35

11	LY	40	70	30
12	MIS	65	85	20
13	MMA	60	80	20
14	MR	55	75	20
15	MLS	45	70	25
16	MF	50	75	25
17	NU	45	80	35
18	NR	55	85	30
19	NS	55	80	25
20	PA	40	75	35
21	PP	55	75	20
22	RS	65	85	20
23	RP	45	80	35
24	RB	40	70	30
25	RT	55	80	25
26	RAP	50	70	20
27	RH	45	75	30
28	RRN	40	70	30
29	RM	40	70	30
30	SF	60	85	25
	TOTAL	$\Sigma = 1520$	$\Sigma = 2300$	$\Sigma X = 780$

Based on the table 4.5 above the mean score of experimental group were calculated as the follows :

$Mx = \frac{\Sigma X}{N} = \frac{780}{30} = 26$

Which :

Mx : The mean score of experimental group

ΣX : The scores of x_2-x1

N : The sample of experimental group

Table 4.8

The Differences Score between Pre Test and Post Test of the Control Group

No	Students' Initial	Pre Test (y_1)	Post Test (y_2)	Y (y_2-y_1)
1	CR	40	70	30
2	DR	60	70	10
3	DA	35	65	30
4	DR	45	75	30
5	ES	55	75	20
6	KH	30	60	30
7	LS	50	65	15
8	LT	50	70	20
9	LA	40	70	30
10	LI	55	75	20
11	MHN	55	65	10

12	MAS	45	75	30
13	MA	50	70	20
14	MFK	60	70	10
15	MI	40	60	20
16	MR	65	75	10
17	MRG	45	65	20
18	MRK	60	70	10
19	MT	45	75	30
20	MH	50	70	20
21	NK	55	65	10
22	NA	50	70	20
23	RH	60	70	10
24	RW	50	65	15
25	RR	55	70	15
26	RMS	50	65	15
27	SD	40	60	20
28	TP	65	75	10
29	TA	50	75	25
30	YS	30	60	30
	TOTAL	$\Sigma = 1480$	$\Sigma = 2065$	$\Sigma Y = 585$

Based on the table 4.6 above the mean score of control group were calculated as the follows :

My = $\frac{\Sigma Y}{N} = \frac{585}{30} = 19.5$

Which :

My : The mean score of control group

ΣY : The score of y_2-yı

N : The sample of control group

Based on the mean score of both sample groups, the following tables were the tables for calculating standard deviation scores in both groups.

Table 4.9

The Calculation of Mean and Standard Deviation Score of Experimental Group

No	Students' Initial	X (x_2-xı)	x = X-Mx	(X-Mx)²
1	AY	25	-1	1
2	AR	20	-6	1
3	AAR	30	4	81
4	DA	20	-6	16
5	ES	20	-6	1
6	HA	15	-11	81
7	HS	30	4	36
8	HN	25	-1	36
9	IS	30	4	81
10	IAR	35	9	16
11	LY	30	4	1

12	MIS	20	-6	36
13	MMA	20	-6	16
14	MR	20	-6	16
15	MLS	25	-1	16
16	MF	25	-1	1
17	NU	35	9	1
18	NR	30	4	1
19	NS	25	-1	81
20	PA	35	9	16
21	PP	20	-6	1
22	RS	20	-6	81
23	RP	35	9	36
24	RB	30	4	36
25	RT	25	-1	81
26	RAP	20	-6	16
27	RH	30	4	1
28	RRN	30	4	36
29	RM	30	4	16
30	SF	25	-1	16
	TOTAL	$\Sigma = 780$		$\Sigma x^2 = 920$

Based on table 4.7 above the standard deviation of experimental group were calculated as the follows :

$$SD_x = \sqrt{\frac{\sum x^2}{N}} = \sqrt{\frac{920}{30}} = \sqrt{30{,}66} = 5.53$$

Table 4.10

The Calculation of Mean and Standard Deviation Score of Control Group

No	Students' Initial	Y (y_2-yı)	y = Y-My	(Y-My)²
1	CR	30	10,5	110,25
2	DR	10	-9,5	90,25
3	DA	30	10,5	110,25
4	DR	30	10,5	110,25
5	ES	20	0,5	0,25
6	KH	30	10,5	110,25
7	LS	15	-4,5	20,25
8	LT	20	0,5	0,25
9	LA	30	10,5	110,25
10	LI	20	0,5	0,25
11	MHN	10	-9,5	90,25
12	MAS	30	10,5	110,25
13	MA	20	0,5	0,25
14	MFK	10	-9,5	90,25
15	MI	20	0,5	0,25
16	MR	10	-9,5	90,25
17	MRG	20	0,5	0,25

18	MRK	10	-9,5	90,25
19	MT	30	10,5	110,25
20	MH	20	0,5	0,25
21	NK	10	-9,5	90,25
22	NA	20	0,5	0,25
23	RH	10	-9,5	90,25
24	RW	15	-4,5	20,25
25	RR	15	-4,5	20,25
26	RMS	15	-4,5	20,25
27	SD	20	0,5	0,25
28	TP	10	-9,5	90,25
29	TA	25	5,5	30,25
30	YS	30	10,5	110,25
	TOTAL	Σ = 585		Σy^2 =1717,5

Based on the table 4.8 above the standard deviation of control group were calculated as the follows :

$$SD_y = \sqrt{\frac{\sum y^2}{N}} = \sqrt{\frac{1717,5}{30}} = \sqrt{57.25} = 7.56$$

Based on the calculation above shown the following facts :

SD_x = 5.53

SD_y = 7.56

N1 = 30

N2 = 30

x =780

y = 585

M_x = 26

M_y = 19.5

$(x- M_x)^2$ = 920

$(y- M_y)^2$ =1717,5

Therefore, the following formula was implemented :

$$SE_{M_1} = \frac{SD_1}{\sqrt{N_1 - 1}} = \frac{5.53}{\sqrt{30-1}} = \frac{5.53}{\sqrt{29}} = \frac{5.53}{5.38} = 1.02$$

$$SE_{M_2} = \frac{SD_2}{\sqrt{N_2 - 1}} = \frac{7.56}{\sqrt{30-1}} = \frac{7.56}{\sqrt{29}} = \frac{7.56}{5.38} = 1.40$$

Next, the following was implemented to find out the error standard deviation between M_1 - M_2

$$SE_{M_1 - M_2} = \sqrt{SE_{M_1}^2 + SE_{M_2}^2}$$

$$= \sqrt{(1.02)^2 + (1.40)^2}$$

$$= \sqrt{1.04 + 1.96}$$

$= \sqrt{3}$

= 1.73

2. The Students' Difficulties in Writing Procedure Text by Applying Fishbone Diagram Strategy

The Analysis was done to find out the students' difficulties in Writing Procedure Text by Applying Fishbone Diagram Strategy.

$$P=\frac{B}{JS}$$

Where :

P : Difficult index

B : The number of students correct answer

JS : The number of Student.

a. Content

The score of content depends on the students' ability to write ideas, information in the form of logical sentences.

Table 4.11

Percentage scoring Content

Score	Criteria	Frequency	% Percentage
27-30	Excellent to very good	0	0%
22-26	Good to average	14	46.7%
17-21	Fair to poor	16	53.3%
12-16	Very poor	0	0%

b. Organization

The organization refers to students, ability write the ideas, information in logical order. The topic and supporting sentences are clearly states.

Table 4.12

Percentage scoring Organization

Score	Criteria	Frequency	% Percentage
18-20	Excellent to very good	17	56.7%
14-17	Good to average	13	43.3%
10-13	Fair to poor	0	0%
7-9	Very poor	0	0%

c. Vocabulary

Vocabulary refers to the students' ability in using word or idiom to express idea logically. It also refers to the ability to use synonym, prefix, suffix,exactly.

Table 4.13

Percentage scoring Vocabulary

Score	Criteria	Frequency	% Percentage
18-20	Excellent to very good	15	50%
14-17	Good to average	15	50%
10-13	Fair to poor	0	0%
7-9	Very poor	0	0%

d. Language use

The criteria of scoring language use as follows:

Table 4.14

Percentage scoring Language Use

Score	Criteria	Frequency	% Percentage
22-25	Excellent to very good	0	0%
18-21	Good to average	12	40%
11-17	Fair to poor	18	60%

e. Mechanism

The criteria of scoring mechanism are given below:

Table 4.15

Percentage scoring Mechanism

Score	Criteria	Frequency	% Percentage
5	Excellent to very good	0	0%
4	Good to average	0	0%
3	Fair to poor	25	83.3%
2	Very poor	5	16.7%

So, based on the analysis the score of post-test in experimental group, it was found thet there were difficulties faced by the students in writing procedure text by applying Fishbone Diagram Strategy. They were especially in mechanism. The result of analysis stated that language use there was 60%students which they faced difficulties in writing procedure text by applying Fishbone Diagram Strategy. The

students no mastery of convention, dominated by errors of spelling, punctuation, and capitalization.

C. Testing Hypothesis

The result above then be applied to test hypothesis :

$t_o = \frac{M_1 - M_2}{SE_{M_1 - M_2}}$

$= \frac{26 - 19.5}{1.02}$

$= \frac{6.5}{1.02}$

$= 6.37$

The testing hypothesis was aimed to know whether the hypothesis was accepted or rejected. The hypothesis could be tested as follows :

Ha : the value of the $t_{observe}$ was higher than the value of the t_{table} ($t_{observe} > t_{table}$)

After the data above were calculated by using t-test formula.. Then after looking the table of distribution of t-critical as the basic of counting t-critical in certain of df (the degree of freedom), the calculation shown as follow :

df = (N1 + N2-2)

= (30 + (30-2))

= (30 + 28)

= 58

It was taken from the table of distribution was got pride t_{table} for 5%. The calculation of the test for the degree of freedom (df) 58 at the level of significance 5% showed that the critical value ($t_{observe}$) was 6.37 calculated $> t_{table}$ with df 58 or 6.37 > 2.00.

Based on the calculation of testing hypothesis above, it was found that the value of $t_{observe}$ was higher than the value of t_{table} (6.37> 2.00). Therefore alternative hypothesis (Ha) was accepted. So, there was a significance effect of applying Fishbone Diagram Strategy on the students' achievement in writing procedure text.

CHAPTER V

CONCLUSION AND SUGGESTIONS

A. Conclusion

After analyzing the data, conclusion is drawn as following:

1. There was a significant effect of applying Fishbone Diagram Strategy on theStudents' achievement in WritingProceduretext. The result of t_c(6,37) was higher than t_t(2.00) at df58 and α= 0.05. Thus it can be concluded that the using of Topic Selection Strategy has a significant effect of applyingfishbonediagramstrategyon thestudents' achievement in writingproceduretext.
2. The difficulties in applying Fishbone Diagram Strategy on the Students' achievement in Writing Procedure text was inlanguage use. It showed that the students were still difficult in language use as the lowest students' average score in all of indicators.

B. Suggestion

The relations to the conclution are drawn as following:

1. The teacher can using *Fishbone Diagram Strategy* in teaching writing especially in procedure text as a strategy which helps the students to be more confident, interested and add their curious feeling about the story.
2. It was suggested to other researcher who are interested and want to do research that to use these findings as source of information for further related studies.

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