

**IMPROVING STUDENTS' WRITING ACHIEVEMENT THROUGH
FLOWCHART MEDIA AT A SENIOR HIGH SCHOOL**

(Undergraduate Thesis)

By

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ABSTRACT

This research aimed to determine the improvement of the students' writing achievement at the second grade students at SMAN 1 Gedong Tataan in writing explanation text by using flowchart media. The sample consisted of 36 students from class XI.6. This research was a quantitative research. The research design used in this research was t-test. The tests were distributed to students in two sessions. The pretest was carried out at the first meeting before students received treatment to see their initial writing achievement and the posttest was carried out at the end of the meeting after students received treatment. The questionnaire was given after the students finished carrying out the posttest to see the students' perceptions after they have been taught by using flowchart media in writing explanation text. The data obtained was analyzed statistically using SPSS. Based on the data, the results showed that there was an improvement in the students writing. The mean score of the students' writing results increased by 7.00 after the treatment was implemented, from 68.21 in the pretest to 75.21 in the posttest. According to the results of the paired sample test, the t-value was 8.885 with the degrees of freedom (df) of 35 and the t-table was 2.030. It means that $2.030 < 8.885$ (the t-table is lower than the t-value). The value of the significance level showed $0.00 < 0.05$. It means that H_1 was accepted because the alpha level is lower than 0.05 ($\alpha < 0.05$) and H_0 was rejected. In other words, the use of flowchart media can significantly improve the students' writing achievement, especially in the second-grade students of SMA N 1 Gedong Tataan.

Keywords: Improving, Writing Achievement, Flowchart Media

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FLOWCHART MEDIA AT A SENIOR HIGH SCHOOL**

**By:
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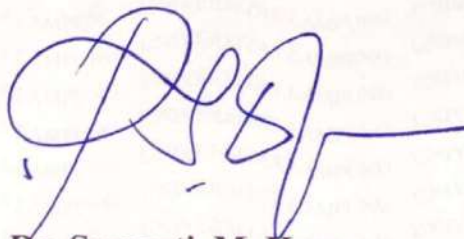


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CURRICULUM VITAE

The researcher's name is Elfira Lutfi. She was born in Gedong Tataan, on May 21, 2002. She is the eldest child of Sufianto and Syamsidar. She has only one younger brother named Alwi Devira Azza.

She began her study at PAUD Sekar Wangi in 2006. Then, she continued her education at SD N 1 Sukaraja and graduated in 2014. In the same year, she was accepted at SMP N 1 Pesawaran and graduated in 2017. Next, the researcher went to SMA N 1 Gedong Tataan. She completed her high school period in 2020 and was immediately accepted as a new student in the same year at the English Education Study Program, University of Lampung.

To fulfill her study, the researcher carried out her research related to improve the students' writing achievement by using flowchart media in SMA N 1 Gedong Tataan in 2024.

MOTTO

“A life to love. A love to live.”

-Haze, by LUCY-

“Don’t care about a thing, I just walk how I feel like.”

-Walk, by NCT 127-

DEDICATION

This script is fully dedicated to:

My dearest parents

My precious little brother

My honorable lecturers

And my beloved almamater, University of Lampung

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The researcher is fully aware that in the process of preparing this script, the researcher was getting lot of assistance, support, suggestion, guidance, and advises from many parties so that this script can be finished on time. Therefore, the researcher would like to convey all respect, appreciation, and thanks to:

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The Writer,

Elfira Lutfi

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I. INTRODUCTION

This chapter discusses about the background of the research, research questions, objectives of the research, uses of the research, scope of the research, and definition of terms.

1.1 Background of the Research

Writing is said to be the most difficult skill to master for EFL students because the ideas possessed need to be transferred into readable text (Richards and Renandya, 2002). Compared to other skills, writing is a complex process because putting ideas, feelings, and thoughts that need to be converted into written form must use language that is as correct as possible. In fact, the difficulties in writing for second language students are because they need to express their ideas using the target language (Asraf et al., 2018). In addition, content becomes a topic or theme which is the main point in writing (Hyland, 2003). If students experience difficulties in this phase, the planning process, namely determining ideas, will be affected even before they start to write. As stated by Harmer (2007) argues that writing is a process which started by planning. The quality of writing is also measured by knowledge of grammar because ideas or messages cannot only be expressed through a single word (Schoonen et al., 2003). As have been mentioned by Hyland (2003), the classification system of knowledge of writing that needs to be mastered by someone who wants to write consists of vocabulary (lexis), grammar (syntax), and mechanics (punctuation and capitalization). This becomes a commons problem faced by students which causes them to experience difficulties in writing.

Even though it is categorized as a difficult skill, writing is still an important skill because apart from being contained in the objective of the Senior High School in School-based Curriculum of 2013 which requires students to be able to understand and produce spoken or written text, writing is also frequently used in everyday life, such as writing short messages, writing papers in college, to writing application letters in the professional field. As mentioned by Galko (2002) that writing is a lifelong skill which is used in school, at work, and in our personal life. By writing, students indirectly must become very involved with the new language. The demands in which students are asked to put the right words into writing on their paper make the relationship between writing and thinking makes writing a valuable part of any language course. The effort to express ideas and the constant use of eye, hand, and brain is a unique way to reinforce learning (Emig in Raimes, 1983).

In the act of writing, text is involved. There are many types of text in English consisting of descriptive, narrative, report, recount, procedure, exposition, hortatory, explanation, etc. Of the many texts that students learn at school, explanation text is one of the texts that are quite complex and rarely discussed in everyday life. In general, explanation texts explain how and why a natural phenomenon can occur. Xueqian (2008) states that explanation text is intended to explain how and why something works in a particular way and why something happens. The function of the explanation text is mentioned by Refnaldi (2010) as a factual text to explain the processes in the evolution of natural phenomena. Because this text is actually often found in the science and social field, indirectly explanation text provides students to become critical writers who are able to use and focus on appropriate vocabulary for the specific audience, structure, and well-organized necessary information (Barwick, 1999). Explanation text prepares students to be able to understand about the world and how it operates in a logical

sequence using intellectual ideas and knowledge. These difficulties are related to the aspects of writing which consist of content, organization, grammar, vocabulary, and mechanics.

Based on Thompson's (2004) statement, the use of a graphic organizer can help students comprehend information through visual representation of ideas or relationships. Therefore, one strategy for developing students' ideas is to apply charts. Galko (2002) states that flowchart is aimed to show the steps in a process. Flowchart is the most effective technique in examining cause and effect relationships because it represents a process or situation. By applying the flowchart technique, it can help students in making a good explanation text while improving their writing skills. This technique will guide students in expanding information from ideas they already have through various forms of shape diagrams which are then followed by arrows that form branches and connects an information with another. This interrelated information will make it easier for students to arrange cause and effect sentences in explanation texts to form paragraphs and become integrated texts. The flowchart technique is easy for students to understand, so it is expected that students will also take part in learning in a more interactive and proper way.

There are several previous research results dealing with Flowchart Techniques conducted by researchers where they proved its effectiveness. The first result comes from Hadi (2009) which shows that the combination of VCD and flowchart media results in a significant increase in the writing performance of junior high school students. The third study was from Agustiana (2014) who conducted research by dividing class groups into an experimental group and a control group with a pretest-posttest research design. The results of the study after being given the treatment in the form of a flowchart were shown to improve students' writing

skills, especially in writing simple cause and effect sentences in the experimental group. The third study was conducted by Gratitude and Wahyuno (2021) where the results of the students' posttest showed an increase in students' writing skills, especially in writing paragraphs within five meetings. The data findings show that there were three students who scored excellent to very good after the treatment given, while in the pretest none of the students achieved that score. It can be concluded that the application of the Flowchart Technique has a good influence on students' writing achievement and is capable of being used for teaching Explanation Text in senior high school students.

Related to the explanations above, the flowchart media can be an alternative way to improve students' writing achievement in explanation text. Researcher is interested to analyze the use of the flowchart media in improving students' writing achievement in every writing aspect such as content, organization, grammar, vocabulary, and mechanics. Furthermore, the researcher is interested in conducting research with the title "Improving Students' Writing Achievement through Flowchart Media in Senior High School Student."

1.2 Research Questions

Based on the background, the researcher formulated the research questions as follows:

1. Is there any significant improvement in students' writing achievement after the students have been taught by using flowchart media?
2. What are students' perceptions toward the implementation of flowchart media in teaching of explanation text writing?

1.3 Objectives of the Research

Based on the research questions, the objectives of this research are formulated as follows:

1. To find out whether there is a significant improvement in students' writing achievement in explanation text after the students have been taught by using flowchart media.
2. To find out the students' perception toward the implementation of flowchart media in teaching of writing.

1.4 Uses of the Research

The result of this research would be useful with regard to the research question and objectives. The researcher gave the input as follows:

1. Theoretically, the result of the research will give a useful contribution for educational research, especially to support the exiting theories of Flowchart technique and writing. This study also, hopefully, can be used as a reference for further research with the similar content regarding the implementation of flowchart technique towards students' writing skills especially in explanation text.
2. Practically, the findings of this research can be used as information for other researchers and teachers to find out the appropriate technique to improve student's writing achievement and can be used as consideration in teaching writing. The findings of this research will also make the learning process becomes easier.

1.5 Scope of the Research

This research is quantitative research. Through this study, the researcher will search for the results of the objectives. This research focuses on applying the flowchart media to see whether there is an improvement in students' writing achievement and what are student perceptions after the implementation of

flowchart media in teaching writing in explanation text. The results of the research will be obtained through a writing test given by the researcher to the students, namely the One-Group Pretest-Posttest Design. Furthermore, the researcher uses questionnaire to see students' perception toward flowchart media. This research will be conducted in the second grade of senior high school students in SMAN 1 Gedong Tataan as the population of the research. The sample of this research is one class sampling which chosen by using random sampling method. This research focuses on explanation text.

1.6 Definitions of Terms

There are some terms that are used by the researcher related to the study. The researcher provides the definition of each term to avoid the misunderstanding towards the concept. These are the definitions of some term related to the research:

1. Writing Achievement

Writing achievement is an accomplishing goal of teaching and learning of writing especially by effort, skill, and courage which can be seen from students' ability in writing product (Ersa & Ernidawati, 2012, p.3).

2. Explanation Text

Explanation text is a text type which often used to tell how and why phenomena or something occur in nature (Mark and Kathy Anderson, 1997: 82).

3. Flowchart

Flowchart is a system that indicates the process of distributing information such as logic flows, input, output, data storage, and also operational processes such as physical flows, activities, and entities (Mujilan, 2012: 34).

4. Media

Media is a facility form for teachers to be used in the teaching and learning process, namely to create instructions, deliver messages in the form of learning materials to students, and stimulate them to learn (Ruis, 2009, p. 2).

This chapter discusses the introduction of the research including the explanation about the background of the research, research questions, objectives of the research, uses of the research, scope of the research, and definition of terms. In the next chapter, the researcher will explain more about the theories used in this research.

II. LITERATURE REVIEW

This chapter discusses about previous studies, concept of writing, aspects of writing, the steps of writing, criteria of good writing, teaching writing, types of text, explanation text, concept of flowchart, teaching writing through flowchart, advantages and disadvantages of flowchart to improve students' writing skills, theoretical assumption, and hypothesis.

2.1 Previous Studies

To strengthen this research, the researcher provides several previous studies that are related to this research. Agustrianti (2014) conducted a research at the first grade of Senior High School N 5 Palu to see whether there is an increase in students' writing skills in writing simple cause effect sentences after the implementation of the flow chart technique using t-test research design (pretest and posttest). Based on the findings in this study, the result shows that after students were introduced to flowchart, they felt interested and enthusiastic. Students also began to actively state their ideas aloud and write them down in words or phrases, they also actively asked the teacher about vocabulary that they did not know. The posttest result stated that students were finally able to write simple words related to cause and effects sentences. It can be seen that other aspects also experienced an increase namely students are motivated to learn English, students complete assignments more quickly, also students look confident in writing sentences in English.

In line with the research above, there is a study by Indrianingrum (2020) in the third grade of Junior High School N 25 Purworejo about improving students writing skills in writing narrative through flowchart as the medium. Before the flowchart is applied to the classroom, the learning process is still dominant in the traditional method which more emphasis on explaining theory than practice. This causes students to be less skilled in writing narratives and unable to put their ideas into writing. Students also tend to find it difficult to understand the topic given by the teacher because the learning method is not appropriate, causing students not to be too interested in the learning process and tend to be passive. However, the results show that students' narrative writing skills were getting better and they were able to revise and edit their own writing. In addition, there is a change in positive attitude where students no longer feel coerced in the learning process (especially writing narratives), they instead feel excited because in each process, the teacher acts as a collaborator who helps students provide direction and motivation, and also students are free to exchange ideas with other fellow students. There are other unexpected results that occur such as students read more often and they are also willing to talk and ask their teacher or other friends to state their questions or opinions, so it can be interpreted that students' attitudes are more active than before after the implementation of flow chart media.

Another previous research is coming from Hanafi (2020) who has done observation at the first grade students of SMK Wikrama, Semarang. The research was about improving students' writing skills in procedure text using flowchart. Based on the result of his research, it can be concluded that the use of flowchart as a media in learning process has success improved. The students feel enjoy by the application of the flowchart when they learn a procedure text. The students' score also increased evenly from the pretest.

Other research related to the use of flowcharts as a teaching media comes from outside the language teaching context. Gencer (2023) conducted research at an undisclosed university whose aim was to look at the use of flowcharts as a media that could help the performance of undergraduate pre-service chemistry teachers to solve problems related to reversible isothermal and isochoric processes. The results of this research showed that the use of flowcharts helps pre-service chemistry teachers to solve the problems associated with the first law of thermodynamics and reduce errors that occur when solving these problems. Apart from that, it was also found that almost all of the research participants were known to be successful in correctly solving problems related to reversible isothermal and isochoric processes with the flowchart. In addition, there were open-ended questionnaires given to course participants containing their perception scale on the use of flowcharts. The results of this perception stated that the level of usefulness of the flowchart reaches frequency 25 as a media that provided guidance to choose and use the right formula, frequency 24 was said to be a media that helps to solve the problems step-by step, frequency 7 was said to be a media that contributes to their learning about the topic, and frequency 6 was said to be a media that can save their work time.

Meanwhile, Wilson (2017) in his research implemented SPFA or Scientific Process Flowchart Assessment as a method for evaluating changes in understanding and visualization in multidisciplinary student scientific processes. He revealed that SPFA has at least three main affordances, namely that it can be used on small samples size, it can be used for many different disciplines that teach scientific processes such as sociology, psychology, biology, chemistry, and even engineering, it can also be used and studied by students who do not or do not have a training background in the concept of mapping techniques.

Furthermore, researchers also aim to find out students' perceptions of the media that will be applied as treatment in the research. There are several previous studies that examine student perceptions which can strengthen this research. Sadiq (2011) in his research investigated students' perceptions regarding academic writing courses and writing in general. This research has a sample consisting of a total of 64 female students who took the AWC course in the ESP program, UAEU. Data was obtained through questionnaires and focus-group interviews by combining quantitative and qualitative research methods. The results of this research showed that students have a high perception of the importance of ESL writing skills for their academic education and also their future careers. Apart from that, students also realized that they need to improve their writing skills in English.

Furthermore, Shabiralyani et. al (2015) carried out research to see the impact of using visual aids (charts) as a motivational tool to improve student learning processes, especially student attention in reading literary text. This research applied random sampling techniques to collect data. The population of this study consisted of staff and students from the Ghazi University Campus, Dera Ghazi Khan, with a total sample of 200 participants. The results of data analysis was presented using a pie and line chart and classified into several factors. Regarding motivation factor, it was known that 70% of students and staff agree that visual aids help increase motivation in learning. Meanwhile, related to clarification factor, the data showed that 75% of participants agree that visual aids (charts) help in clarification of the contents. Regarding vocabulary factor, the graph showed that 68% of participants agreed that visual aids (charts) helped them increase their vocabulary. Meanwhile, for the aspect of saving time, the diagram showed that 82% of participants also agree that visual aids help save time in preparing lessons.

Another research related to student perceptions was carried out by Aam (2019), where the research analyzed student perceptions regarding the use of language teaching media in the classroom. The research had a sample consisting of 80 students from the Literature, Economics, and Informatics department who were still in their first semester. Researchers used mixed methods, namely quantitative and qualitative. The questionnaires and interviews were given on the same day as research data collection instruments. Research findings related to students' perceptions of the use of learning media show that most students strongly agree that the use of learning media is very important for them. Learning media helps students to study much better because using the media can help them to keep track of the material which is sometimes not always easy to understand.

Furthermore, Mageswary et. al (2023) examined students' perceptions of the implementation of the RAPTOR (Rapid Algorithmic Prototyping Tool for Ordered Reasoning) program application specifically to help students solve problems by visualizing their algorithms and avoid logic errors in creating flowcharts. This application is used by students to design and practice flowcharts in the Problem Solving and Program Design course. The research had a sample consisting of 210 students from Diploma Information Technology (Digital Technology, DTT) in the Department of Information Technology & Communication, Polytechnic Ungku Omar. This research used the GQM (Goal Question Metric) approach as quantitative research. Data was collected through distributing Google-Forms to participants. The results of this research showed that 85.8% of students were satisfied with using RAPTOR as a media for creating flowcharts in the Problem Solving and Design Program courses. Furthermore, 87.1% of students agreed that using RAPTOR helped them concentrate better during lecturing. Meanwhile, 86.2% of students agreed that RAPTOR helped them improve their problem-solving skills.

Based on the statements above, the researcher is interested in investigating the study to promote flowchart as a media of teaching writing aimed to improving students' writing skills in writing explanation text. Furthermore, the researcher is also interested in investigating students' perceptions toward the use of flowchart media in improving their writing achievement.

2.2 Concept of Writing

According to Batubara (2017) writing is functional communication which making learners possible to create imagined worlds of their own design. The similar point is stated by Suparno (2011: 129) says that writing is a communication activity in delivering messages in writing to other parties using written language as a tool or media. It means that the students need to major on how to explore and express their thought, feeling, ideas and experience to convey a specific purpose in writing. In transferring the idea into a written form, they need to give more attention on many aspects like language use, word choice, punctuation, and so on as correctly as possible so that the audience can easily catch the meaning of the purpose. Within the process of writing, the students need to have broadly ideas and ability to organize them well and express it in appropriate style. As mentioned by Tarigan (2013:4), writing is used, reported or informed, and influences, and such intentions and purposes can only be achieved well by those who can compose their minds and express it clearly. Hedge (1998: 5) in his theory stated that writing requires the number of things such as a high degree of accuracy so that there is no ambiguity of meaning conveyed. Thus, as a language skill, writing is considered as the complex activity which is difficult to be mastered by the students (Asrobi, & Prasetyaningrum, 2017). Nevertheless, someone can convey their thoughts more communicatively and expressively to other in writing which is sometimes difficult to convey it orally. Conveying such information also tends to be more easily received through writing.

2.3 Aspects of Writing

In order to make a good writing, there are five aspects that should be considered in the process of making a composition. Heaton (1998) classifies five important aspects in writing to judge the quality of the writing. Those aspects are:

1. Content

Content refers to the substance of the writing. It can be seen from how each paragraph contains set of information (how the writer develops the main idea by stating the supporting detail to support the main topic).

2. Organization

Organization refers to how the students arrange each of their ideas into a written form. It can be seen from how each idea is placed sequentially, clearly and cohesively.

3. Vocabulary

Vocabulary refers to the selection of words that are appropriate for the content of the text. It can be seen by how the writer chose the words in their writing.

4. Grammar

Grammar is a system or rule of language in combining the words so that the sentences become structured, well-formed, and meaningful.

5. Mechanics

Mechanics is shown on how the writer uses the punctuation, spelling, and capitalization within the paragraph written. If the use of all the part in mechanics is not appropriate, the paragraph will be seen unclear.

All of the aspects above, content, organization, vocabulary, grammar, and mechanic will be used to evaluate the writing result of the students in writing explanation text.

2.4 Teaching Writing

As stated by Brown (2000: 7), teaching is a process of showing or helping someone to learn how to do something, giving instruction, guiding in the study of something, providing with knowledge, causing to know or understand. In other words, teaching means an activity that is useful for helping other people to explore their abilities further. According to Jamhuri (2019, pp. 201-2016), in teaching teachers need to be communicative with their students so that the learning goals are achieved. The aim of teaching is to make students master the knowledge delivered by the teacher. Apart from that, teachers also need to make sure that the students understand the material that is being taught and that the students can apply this knowledge well. It means that teacher has a big role and responsibility in the student learning process, especially in learning writing.

Cheung (2014) states that writing is an important skills for English language learners which to be mastered on it, it needs various approaches by teacher. As result, teachers need to determine the appropriate guides and facilities, as well as create a comfortable learning setting so that students can be helped in understanding the material and are able to express their ideas well and structured in written form. Therefore, before starting to teach writing, teachers need to be aware of the aspects of writing which consist of content, organization, vocabulary, grammar and mechanics so that the written product will be good writing. At each step of writing, the teacher needs to supervise each student's activities until the

last step so that what the student conveys in their writing is more specific but remains in place.

A good writing means the contents of the text produced is understandable and well-delivered to its audience from the beginning to the end of the text. To form such writing, several processes are needed to be considered by the writer. According to Harmer (2004: 5), there are five stages of constructing a well-formed writing. They are described as follows:

1. Planning

Planning is the first part of the writing process. At this stage, the writer needs to prepare the topic to be discussed. Topics are chosen based on many things, they can come from issues that have recently become hot news, or they can be something that suddenly comes to mind. Apart from that, in this process the writer needs to pay attention to other things such as the purpose of the writing, whether the writing is intended to entertain or to provide important information. Another thing to be considered is the target reader. By paying attention to who will be the majority of the target readers, this will influence the use of language style, paragraph form, diction, and so on, adjusting the use of writing style and achieving the reading target effectively.

2. Drafting

At this stage, writers begin to express their ideas in written form. These ideas are developed broadly and little by little narrowed down to become more specific. The drafting section is the part where the writer can organize and determine these ideas, including the important points that need to be placed in the first, third, and so on point. The process of expressing ideas is written using their own words.

Writers can also look at arguments or information from articles to expand the branching of ideas while strengthening the ideas formed.

3. Editing (reflecting and revising)

At the editing stage, the writer needs to check the writing that has been written in its entirety. Usually, the writer will ask for the opinion of other people who are more experts to determine whether or not the writing is suitable for finally being published to the public. The checking process can take the form of checking for incorrect grammar, inappropriate supporting information, or parts of the writing that seems confusing. Subsequently, the writer can revise the unclear parts before they are finally ready to be distributed to the target readers.

4. Final version

This part is the final stage of writing. The final version is the part where the text written is ready to be published to readers. Usually, the final draft of writing has undergone many changes so it will have several differences from the first draft.

2.5 Criteria of Good Writing

A good writing has several criteria according to Tarigan (1994: 6) which are explained as follows:

1. A good writing shows the writer's ability to process ideas from an abstract material into an organized and coherent in form of written.
2. A good writing shows the writer's ability to form loose ideas into a complete text as a whole.
3. A good writing shows the writer's ability to write clearly and not vaguely, using the appropriate structure, providing example in the sentences so that the

meaning conveyed can be delivered to the reader either implicitly or explicitly.

4. A good writing shows the writer's ability to write convincingly. The writing that is written can attract readers with various coercions which are not only easy to understand, but also make sense. Writers need to avoid repetitive use of unnecessary words or phrases that can make readers bored and confused. Each point of the idea conveyed must be connected and harmonious with each other.
5. A good writing shows the writer's ability to criticize the first draft of the writing and improve it to be better. The writer's willingness and ability to revise is an important aspect of good writing.
6. A good writing shows the author's pride in their own writing or manuscript. Writers can use punctuation carefully, applying a word based on the correct meaning and interpretation that has been studied before applying it to a sentence. The writer is also able to find shortcomings in their writing before finally presenting it to the target reader.

2.6 Types of Text

Based on the School Based Curriculum that used in senior high school, there are several types of text which is taught at second grade students in SMA N 1 Gedong Tatatan. The types of text are as follows:

1. News item Text

News item is a text that informs about the factual or important events that has occurred and is worthy of being broadcast. According to Eltis (1990), new item is a text that ordered systematically, consists of newsworthy event, background event, and sources of the events.

2. Procedure Text

As stated by Anderson (1997: 50), procedure is a piece of text that gives us instruction for doing something. Another perspective is coming from Muthmainah (2014: 33), stated that procedure text is a text that show a process in order to describe how something is done through a sequence of series. The purpose of procedure text is to explain how something can be done or made.

3. Review Text

Review text is a text which contain review or evaluation to the particular product or service like publication work such as movie, drama, concert, books, musical theatre, or a piece of hardware like the new launces of a car, computer, etc. The purpose of writing a review is to give critic to the event or works thus they the owner of the object being criticized can improve their works. On the other hand, writing reviews can help readers so that they can consider buying or using the product or service being reviewed.

4. Explanation Text

According Knapp and Watkins (2005), explanation text is a text that has two mains orientation; to explain why and to explain how. In general, explanation text discusses an issues or phenomenon which can in form of natural phenomenon or non-natural phenomenon, why that phenomenon happen, how the phenomenon occurs, and what the effect of the phenomenon is after it occurs. In this research, the writer only focused on explanation text material.

2.7 Explanation Text

2.7.1. Definition of Explanation Text

One of the texts that the students will find at school is explanation text. According to Hyland (2008:5), explanation text is a text that outlines how or why things occur, or how things operate. This statement is supported by Xueqian's (2008) view that explanation text is aimed at explaining how and why something works in a particular way and why something happens. This means that in this text there is a process that needs to be explained in a connected and related way. It can be said that the 'how and why' are formed based on the relationship between cause and effect of the matter being discussed, which is then arranged to form an informative text.

In general, explanation texts discuss the processes that occur in a phenomenon, which can be natural phenomena, social phenomena, cultural phenomena, and so on. As stated by Davies (2000:76), explanation text is a text fills about the processes of phenomena, social, sciences, and so on. Thus, an explanation text will often be found in science and social studies, where writing requires high level logical skills, sensitivity to real conditions in the surrounding environment, and an understanding of why an event occurred. Apart from that, another view comes from Mallet (2013: 153) stated that explanation text also explains structure like a plant, an animal, or machine. It tends to explain the steps on how something occurs and to give reasons why the thing happened. To sum up, explanation text is a text that is written to explain how and why a particular phenomenon occurs.

2.7.2. The Purpose of Explanation Text

Every type of text has its own purpose. According to Perry (2001: 5) statement, the purpose of explanation text is to explain how things work or why things happen. This view is supported by Refnaldi (2010) who states that the function of explanation text is as a factual text that explains the evolutionary process of

natural phenomena. Through explanation text, readers will gain new knowledge about how something operates and how and why something is formed. Examples include how volcanoes erupt, earthquakes, land erosion, floods, acid rain, condensation, social inequality, poverty, and so on. It will open our views and this knowledge can also be useful in the future. It can also help and answer various questions in our minds regarding the way things that happen in this world work to make more sense and easier. Explanation text also tells us why things happen in similar or different ways.

2.7.3. Types of Explanation Text

There are several kinds of explanation text form. These kinds are based on the types of process the topic or issues chosen is described. The types of explanation text are as follows:

1. Sequential explanation

This type explains the process of natural and artificial phenomena which is discussed in detail. An example is the topic of discussion related to the butterfly life cycle.

2. Causal explanation

This type explains the causes of a change from a certain state to another state. An example of the topic of discussion is how a president is elected.

3. Theoretical explanation

This type explains the possibility of a natural or artificial phenomenon or event whose nature is still based on theory and is not yet fully understood. Examples of discussion topics are what caused the Nazis to lose World War II.

4. Factorial and consequential explanation

This type describes a series of events that contain the causes and impacts of a process. Examples of discussion topics are the causes of climate change.

2.7.4. Generic Structure of Explanation Text

In order to write a text, the writer should know the generic structure of the text. Thus, the text will become a structured and coherent. By knowing the generic structure, it also will make it easier for the writer to write a text. According to Hyland (2008: 5), there are three generic structures of explanation text. They are as follows:

1. General Statement

In this section, the topic or issue that will be discussed is explained. These problems contain general phenomena that occur in society, such as problems related to flooding, how rain occurs, how tides occur, and so on.

2. Sequenced of Explanation

In this paragraph, the topics discussed are explained in more detail. Sequenced explanation reveals how and why the topic occurred (why the event occurred) and what the impact of the event was. The writing of this section must be arranged or sequentially connected by chronological conjunctions.

3. Closing

This section contains a closing sentence that reveals a summary of how and why the problem occurred.

2.7.5. Language Features of Explanation Text

In compiling an explanation text, it is important to pay attention to several language features so that the text produced becomes a good text. Each feature has its own function which can help writer in forming explanation text. Blake (2011, p.62) states that explanation text has some language features which are described as follows:

1. The text is written using simple present tense to express evidence.
2. It uses action verbs which are used to explain the process by which an event occurs. Examples of action verbs are make, create, do, see, go, etc.
3. Use abstract nouns as a subject or an object.
4. Use pronouns to refer to previously mentioned words.
5. Use causal conjunctions such as “this cause”, “because”, “so”, “thus”, “consequently”, “therefore”, etc.
6. Use time sequence connectors such as “next”, “first”, “then”, “to begin with”, etc.

2.7.6. Example of Explanation Text

The following is an example of explanation text:

HOW DOES LIGHTNING HAPPEN

Lightning is a natural phenomenon that usually appears in the rainy season when the sky gives rise to a momentary flash of blinding light. A few moments later, it followed by a thunderous sound called thunder. This difference in time of appearance is due to the difference between the speed of sound and the speed of light.

Lightning occurs because there's a potential difference between the cloud and the earth or with other clouds. The process of the occurrence of charge on the cloud because it moves continuously regularly, and during its movement it will

interact with other clouds so that negative charges will gather on one side (up or down), while positive charges gather on the opposite side.

If the potential difference between the cloud and the earth is large enough, there will be a discharge of negative charges (electrons) from the cloud to the earth or vice versa to reach equilibrium. In this discharge process, the medium through which electrons pass is air. When electrons are able to penetrate the air insulation threshold, a sound explosion occurs.

Lightning is more common in the rainy season, because in that condition, the air contains higher moisture content so that the insulation power drops and the current flows more easily. Because there are negatively charged clouds and positively charged clouds, lightning can also occur between clouds of different charges.

2.8 Concept of Flowchart

The concept of a flowchart is simply a collection of several frames or shapes in a diagram that are arranged systematically from beginning to the end. As stated by Galko (2002: 19), using charts is grouping the ideas virtually in charts or tables. These abstract ideas are transferred into a virtual form which makes it easier for users to see the series of ideas that have been obtained before then being transferred again into coherent writing. The use of visual representation will make it way easier to develop process. The use of flowcharts is also very beneficial because each arrangement of the existing charts shows the sequence of each process of something. Flowchart allows its user to see the entire process flow as well as their specific steps and details (Tague, 2005). The application of flowcharts as a learning medium is connected with arrows or lines that show or represent the direction of flow of the steps of a process, which makes it easier for users to see the direction from the initial process to the final process. Apart from that, the arrow lines on a flowchart are very helpful in converting disjointed

information or ideas that have been written into a structured, simple and easy to understand form.

As stated by Sadiman et. al. (2008), media is everything that can be used to deliver messages from sender to receiver. This means that the use of media in learning is very important to stimulate students' attention, interest, thoughts and feelings in the learning process so that learning becomes an effective process and achieves targets. According to Malik (2004), teaching media is used to make the communication on interaction between teacher and students in the teaching learning process are effective. With media, it makes it easier for teachers to deliver the information to the students easily. Apart from that, the use of interactive and interesting learning media can make students feel less bored and motivate them to learn. It is also possible that the application of appropriate learning media can improve students' abilities to be achieved, one of which is writing skills.

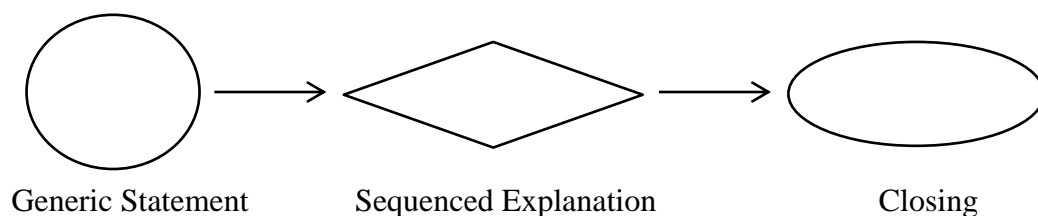
In this case, flowcharts are said to be the right media as a tool for learning to write explanation text. Flowchart provides informative directions and symbols that facilitate students in writing a series of information that is related to each other, especially in cause and effect sentences. The arrangement of the ideas listed becomes clearer and easier to combine. Through flowcharts, associating these ideas into text will be much easier and more efficient. In other words, using flowchart can help improve students' writing skills.

2.9 Teaching Writing Through Flowchart

According to Brown (quoted by Anthony, 2007, p. 14), technique is a specific implementation which consists of activities or tasks applied in the classroom that

are manifested consistently with the method and also in harmony with the approach. In other words, technique means the actual practice of habitual behavior which needs to be carried out from time to time with the main aim of achieving learning objectives. Techniques are used in the classroom as a basis for teaching and learning. Therefore, teachers need to know the right techniques for teaching writing because writing is considered as the difficult skill to be learned. In the field, there are many techniques that can be applied in learning writing, such as picture-based techniques, discussion techniques, lecturer techniques, mind-mapping techniques, and so on, including flowcharts, which are options that can be considered.

According to Ishimura and Bartlett (2008), flowchart is a writing media that can help students to conduct a writing product. The learning process using flowcharts generally has three parts called input, process, and output. These symbols below are used as a rule for the flowcharts, where later the shape of each diagram and the flows will be further developed based on the results of each sample:



Where:

- a. Arrow represents the direction of flow
- b. Circle is starting point
- c. Oval is stopping point
- d. Diamond is decision point

2.10 Procedure in Teaching Writing Explanation Text Using Flowchart Media

The procedure of implementing the flowchart is used to ensure that this research is structured systematically and to avoid confusion. This research has several procedures for teaching writing using flowcharts. They are as follows:

1. Planning

The students are asked several questions related to the explanation text material to warm up their brains. Students will be given a brief explanation regarding the material as well as providing a flowchart model directly in the example text. Next, students are asked to make a flowchart based on the assigned topic from the teacher.

2. Drafting

Students are asked to elaborate their abstract ideas that have been outlined in their own flowchart into sentences. Students begin to sort the parts of the sentences into which explanation text structure. Students also pay attention to each language features used in their sentences.

3. Editing (Reflecting and Revising)

Students are asked to check their writing results again. The teacher's role is to provide feedback by helping in identifying errors that students make in their writing. Afterward, students need to delete, add, or replace parts of their writing to make it more coherent.

4. Final Version

At this stage, students are still allowed to change some parts of their writing that are considered inappropriate. After that, students need to submit the results of their written explanation text to the teacher.

2.11 Advantages and disadvantages of flowchart to improve students' writing skills

In implementing flowchart as a media in teaching writing, there are some advantages and disadvantages which have been considered by the researcher. The advantages are as follows:

1. The use of flowchart can assist students in brainstorming and organizing ideas.
2. Flowchart acts as a tool that facilitates ideas in pre-activity so it makes it easier to write a text.
3. Flowchart can develop students' creative thinking skills.
4. Flowchart provides a place for specific information to the students about the object to be discussed, the cause and effect, and the relation to the events.
5. Flowchart trains the students to arrange the event or topic to be discussed organized.
6. It can motivate students in writing because the form is can be in form of various shapes and not as monotonous as just learning writing usually.

On the other hand, flowchart also has some disadvantages. It needs a lot of effort in applied it to students. This media is not suitable for some students because converting ideas that have been constructed in visual form then transferred into text requires more effort and work. Hence, the implementing flowcharts can be considered a bit time-consuming. This also has a slight effect on reducing students' motivation in learning, especially in writing texts.

2.12 Concept of Perception

The concept of perception is interpreted differently by experts. Hong (2003) states that perception is a person's thought about something that has been learned to measure how a person behaves regarding the use of something, whether he or she agrees or not regarding something that he has learned before. In other words, perception is a view or opinion given by someone, in this case a student, after an object they feel the impact of. On the other hand, Chee (2002) states that a

person's perception can be influenced by an individual past experiences, education, motivation and social interactions. This statement supports the previous theory that perception will emerge after a person receives a particular impulse. Furthermore, based on the psychological process view by Gregorc (2001), perception refers to how the brain organizes and interprets sensory information. Meanwhile, Elliot et al. (2000) states that perception is the giving of meaning to the discrete, meaningless stimuli that initially arouse awareness. Through perception, a person is able to capture the interpretation of a phenomenon or information in the form of data that comes from outside.

The interpretation of the perception will certainly be different for each person, how someone sees is not necessarily the same as how other people see or think about a problem object. This means that each student definitely has different thoughts regarding what they have learned and how they react to teaching and learning activities in class. According to Sidhu (2003), students' perception is the student's perspective on things that occur in the teaching and learning process in the classroom and the results of the learning process are based on the opinions or suggestions of either the teacher or classmates to improve their language learning process. This means that how students perceive their learning activities and learning outcomes is closely related to the treatment or object supplies in the form of learning methods or media provided by the school environment, especially in the classroom. As mentioned by Sharma in Sari, there are three main factors that influence a person's perception, consisting of perceptual learning, mental set, and needs and motivation. The third factor can be obtained primarily by students through the media or learning methods used by teachers which will support them in the learning process.

2.13 Theoretical Assumption

Based on the literature review above, it was known that writing is one of the most difficult skills to be mastered by the students. Besides, the teacher also has to focus on the objectives of teaching writing as the main point. To make teaching writing successful, the teacher needs teaching media which can help the students to be able to write. The use of flowchart to teach writing is believed to improve students' writing skills, especially in writing explanation text. Through flowchart, the students can freely and widely expand their ideas related to the topics discussed. These ideas will then be directed through diagram forms that are adapted to their scope. Also each point has an arrow so that a connected picture of writing will begin to be formed sequentially. Through the visual diagrams that are also presented, it will make the students become more active and it can build a learning atmosphere that is not monotonous, indirectly they are developing their creative and critical ideas. In conclusion, the researcher assumed that the implementation of flowchart media at the second year of SMA N 1 Gedong Tataan can increase the students' writing skills in writing explanation text.

2.14 Hypothesis

Regarding to the theoretical assumption, the researcher formulates the hypotheses as follows:

- H_0 : There is no significant improvement on students' achievement in writing explanation text after the students have been taught by using flowchart media.
- H_1 : There is significant improvement on students' achievement in writing explanation text after the students have been taught by using flowchart media.

This chapter discusses about previous studies, concept of writing, aspects of writing, the steps of writing, criteria of good writing, teaching writing, types of text, explanation text, concept of flowchart, teaching writing through flowchart, advantages and disadvantages of flowchart to improve students' writing skills, theoretical assumption, and hypothesis.

III. RESEARCH METHODOLOGY

In this chapter, the researcher discusses about research design, variable of the research, population and sample, data collection technique, research procedures, validity and reliability of the instruments, scoring system, data analysis, normality of the data, and hypothesis testing.

3.1 Research Design

This research is a quantitative research because it is focused on the product (result of the test). As stated by Creswell (2009), quantitative method is a method which deals with statistical data in the form of scores and numbers. This research is deal with a score which the aim is to find out if there is a significant difference between students' writing achievement before and after they have been taught by flowchart media and to know the students' perception after the implementation of flowchart in teaching of writing. In order to answer the research questions, the researcher will compare the result of the test through one-group pretest-posttest design. The research design is illustrated as follows:

T1 X T2

The design could further be described as follows:

- T1 : The pretest to measure the mean score of students' initial writing achievement
- X : The treatment or teaching writing by using flowchart media

T2 : The post-test to measure the mean score of students' writing achievement after receiving treatment.

3.2 Variable of the Research

The variable of this research consist of the independent variable (X) and dependent variable (Y) which is described further as follows:

1. The students' improvement in writing as the dependent variable (Y)

This is categorized as a dependent variable because students' improvement in writing is an output. The improvement of achievement of the students can be measured to determine whether or not there is an effect of the independent variable.

2. Flowchart media as the independent variable (X)

Flowchart media is categorized as an independent variable because this media is a variable that can affect the dependent variable to determine the effect of the phenomenon and the object which is observed.

3.3 Population and Sample

The research population is all the individuals who are targeted in a study, meanwhile the individual who provide data are called research sample (Setiyadi, 2018). This sample selection is carried out with the assumption that they have the same characteristics as individuals who are not involved in the data collection process so that the conclusions drawn later can be applied to all individuals. The population of this research is the second grade students of Senior High School 1 Gedong Tataan. Only one class as a representative is chosen by using random sampling method for this research which later will receive the treatment.

3.4 Data Collection Technique

In this study, the researcher used several instruments to measure whether the objectives of the research is achieved or not. The instrument of this research is a writing test which will be conducted in the first and last meeting of the research. The data of this research is in form of quantitative data. In detail, the techniques of collecting the data are as follows:

1. Pretest

The researcher administers the pretest before the treatment which aim is to know the students' initial writing achievement. The pretest is done by asking the students to write an explanation text based on the topic given which is related to natural phenomena. This step will be conducted in the first meeting of the research.

2. Treatment

Treatment is applied after the pretest has been done. The researcher teaches writing explanation text to the students by using flowchart media. This step will be conducted for three meeting after the pretest. The implementation of the treatment is aimed to achieve the objectives of the research which is to improve students' writing achievement in writing explanation text.

3. Posttest

Posttest is administered after the treatment has been done. The posttest is given to see the students' writing achievement after the implementation of the flowchart as the teaching media. In the posttest, the students will be given writing test with a similar form as the pretest. The researcher will give the students specific topic and ask them to write an explanation text based on the topic provided. The posttest

will be carried out in only one meeting which is in the last meeting of the research.

4. Questionnaire

The researcher also uses questionnaires as the instrument to collect the research data. The questionnaire constructs to determine students' perception toward flowchart as the teaching media. The questionnaires constructs based on the strategies of the process approach which are planning, drafting, editing (reflecting and revising), and the final version. The questionnaire will be administered after the posttest and it consist of 10 statements.

3.5 Research Procedures

To see the improvement in students' writing achievement before and after the implementation of flowchart media in learning process, the researcher conduct the procedures of the research as follows:

1. Determining the Problem

This research comes from some problems that occur in the learning process. Some students are considered to still have difficulties in expressing ideas through oral production and also in writing. Even though they have mastered a rich vocabulary, it is still found that they have difficulty to arrange those words into written to form a coherent text. The problem of this research is intended to find out whether there is improvement in students' writing achievement after receiving the flowchart as the media of the treatment.

2. Selecting and Determining the Population and Sample

The population of this research is the second grade of Senior High School 1 Gedong Tataan. The sample of the research is selected through random sampling

method. The reason why the researcher observe at the second grade of SMA Negeri 1 Gedong Tataan is based on the information that the students still has difficulty in arranging their ideas and expressing it in writing use English. Besides, the students had been learning English since the seventh grade of Junior High School. Therefore, the sample selection is determined at this school.

3. Determining the Research Instrument

The instrument of this research is writing test. The writing test is carried out in the pre-test and post-test which focused on assessing the students' initial writing achievement and after the treatment has been given. For the writing test, the researcher selects the explanation text.

4. Determining the Materials

The teaching material is arranged based on the curriculum and syllabus of the Senior High School. In this research, the researcher chose explanation text as the materials to be taught for the students.

5. Administering the Pretest

The pre-test is administered to the students before the treatment is done to see the initial students' writing achievement before the students have been taught by using flowchart media. The researcher gives three topics as the option which related to natural phenomena to the student. The students are asked to write an explanation text by selecting one of the topics provided. The time is 90 minutes for this test.

6. Conducting the Treatment

The treatment is applied to improve the students' writing achievement. In this research, the researcher explains the procedures in writing explanation text by

using flowchart media. The students also are asked to do some writing assignment which will support their improvement in writing. The treatment is conducted three times which are about 90 minutes for each meeting.

7. Administering the Posttest

The post-test is conducted after the treatment. The post is done to see the improvement of students' writing achievement after the treatment through flowchart media. The test is in form of writing test. The students are asked to write an explanation text with the topics provided. The test administered in one meeting, after the treatment is conducted.

8. Collecting the Data

After a series of test is administered, the researcher collects the data.

9. Scoring Test

After the data is collected, the researcher assesses the score from the results of writing test done by the students. The assessment is carried out so that the research findings can be analyzed.

10. Analyzing the Data

The researcher analyzed the data after scoring the students' test. The data is analyzed by using SPSS (Statistical Package for Social Sciences). It is used to find out the means of the pre-test and post-test and how significant the students' writing improvement.

3.6 Validity and Reliability of the Instruments

The quality of the test is determined based on the level of its validity and reliability. The following is further elaborated on the fulfillment of the criteria for a good test. They are as follows:

3.6.1. Validity of the Instruments

The term validity refers to the use of measuring instruments in research and is related to reliability. Measurements are carried out to ensure that the tests are carried out in accordance with the objectives, namely to measure what needs to be measured. In this case, the researcher analyzes whether the test for the instrument is good or not by using content validity and construct validity.

1. Content Validity

According to Setiyadi (2018), content validity is related to all the items in a measuring instrument or test. This means content validity has a function to see the extent to which the test measures a representative sample of the subject matter content. This concerned whether the test is a good test as a representative of the material to be tested. To fulfill this validity, the researcher provides the writing test which based on the basic competence in the syllabus of the second year of students of SMAN 1 Gedong Tataan. The instructions of the test are discussed to the English Teacher of the school before it is administered to the students.

2. Construct Validity

Construct validity is defined by Gronlund (1981) as a process of determining the extent to which test performance can be interpreted in terms of one or more constructs. On the other hand, Setiyadi (2018) reveals construct validity as a measuring tool that has several indicators in one aspect or construct. He stated that if a measuring instrument has several aspects and each aspect is measured by

several indicators, then similar indicators must be positively associated with one another. The skills assessed in this study are writing and it has five aspects according to Heaton (1998) perspective. To fulfill this validity, the researcher administered writing test in which the score is given based on the five aspects of writing which consists of content, organization, vocabulary, grammar, and mechanics.

3.6.2. Reliability of the Instruments

According to Setiyadi (2018), reliability is the consistency of a measuring instrument, or the extent to which the measuring instrument can measure the same subject at different time but shows relatively the same results. Besides, if a measuring instrument does not give the same results at different time form the same subject, it can be said that the reliability of the measuring instrument is low.

1. Reliability of the Test

A test score is reliable to the extent which they are consistent over different testing occasions. To avoid subjectivity in measuring the writing test whether it is reliable or not, this research uses inter-rater reliability. The reliability is calculated using SPSS version 26. In this study, researchers used The Cronbach Alpha reliability to check the reliability of each test. Next, the researcher analyzes the coefficient of reliability with the standard of reliability based on Slamento (1998, in Susan 2001) which are described as follows:

- a. A very low reliability (ranges from 0.00 to 0.19)
- b. A low reliability (ranges from 0.20 to 0.39)
- c. An average reliability (ranges from 0.40 to 0.59)
- d. A high reliability (ranges from 0.60 to 0.79)
- e. A very high reliability (ranges from 0.80 to 1.00)

Table 3.1 Reliability Statistics of the Pretest

Reliability Statistics	
Cronbach's Alpha	N of Items
.966	2

The results of the reliability test in the pretest showed a value of 0.966 which was classified as a very high reliability category. This indicates that the pretest of writing used in this research is reliable.

Table 3.2 Reliability Statistics of the Posttest

Reliability Statistics	
Cronbach's Alpha	N of Items
.946	2

Based on the table above, the posttest reliability test resulted in a value of 0.966, which is also classified as very high reliability. This indicates that the writing posttest used in this research is reliable.

2. Reliability of the Questionnaires

The reliability of the questionnaires is measured using The Statistics for the Social Science Program (SPSS) which is determined through a reliability coefficient test named Reliability Alpha Analysis. This research uses the Cronbach Alpha reliability which calculates the average correlation between items in the questionnaires. According to Setiyadi (2018), if the value of Cronbach Alpha is $>.60$, it means the questionnaire is reliable or consistent. However, if the value is $<.60$, it means the questionnaire is unreliable or not consistent.

Table 3.3 Reliability Statistics of the Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items
.834	10

From the table above, it can be seen that the results of the reliability test questionnaire showed a value of 0.834 which is more than 0.60. This shows that the questionnaire used in this research is reliable or consistent.

3.7 Scoring System

Scoring system is a guide for teacher to evaluate the students' performance as well as the students' product. The consideration of criteria to evaluate the students' writing achievement is based on Heaton (1998) theory. There are five aspects to be tested consist of content, organization, vocabulary, grammar, and mechanics. In assessing the students' writing test, the researcher adopts the writing rubric from Jacobs, et. al (1981) as follows:

Table 3.4 The Scoring System of the Test

Aspect	Score	Performance Description
Content (C) 30%	30 – 27	EXCELLENT TO VERY GOOD: knowledgeable, substantive, thorough development of the topic, relevant to assigned topic.
	26 – 22	GOOD TO AVERAGE: some knowledge of the subject, adequate range, limited development of the topic, mostly relevant to the topic but lacks of detail.
	21 – 18	FAIR TO POOR: limited knowledge of the subject, little substances, in adequate development of topic.
	16 - 13	VERY POOR: does not show knowledge of the subject, non-substantive, not pertinent, and not enough to evaluate.
Organization (O) 20%	20 – 18	EXCELLENT TO VERY GOOD: fluent expression, ideas clearly stated/ supported, well organized, logical sequencing, cohesive.

	17 – 14	GOOD TO AVERAGE: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.
	13 – 10	FAIR TO POOR: non-fluent, ideas confused or disconnected, lacks of logical sequencing and development.
	9 – 7	VERY POOR: does not communicate, no organization, and not enough to evaluate.
Vocabulary (V) 20%	20 – 18	EXCELLENT TO VERY GOOD: sophisticated range, effective word/ idiom choice and usage, word form mastery, appropriate register.
	17 – 14	GOOD TO AVERAGE: adequate range, occasional errors of word/ idiom choice, usage, and form but meaning not obscured.
	13 – 10	FAIR TO POOR: limited range, frequent errors of word/ idiom, choice, usage, and form, meaning confused.
	9 – 7	VERY POOR: essentially translation, little knowledge of English vocabulary, idioms, word form, or not enough to evaluate.
Grammar (G) 25%	25 – 22	EXCELLENT TO VERY GOOD: effective complex construction, few errors agreement, tense, number, word order, articles, pronouns, preposition.
	21 – 18	GOOD TO AVERAGE: effective but simple construction, minor problems in complex construction, several errors of agreement, tense, number, word order, articles, pronouns, prepositions

		but meaning seldom obscured.
	17 – 11	FAIR TO POOR: major problems in simple/complex construction, frequent errors of negation, agreement, tense, number, word order, articles, pronouns, prepositions, deletions, meaning confused or obscured.
	10 – 5	VERY POOR: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate.
Mechanic (M) 5%	5	EXCELLENT TO VERY GOOD: few errors of spelling, punctuation, capitalization, paragraphing.
	4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, and paragraphing but meaning not obscured.
	3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused.
	2	VERY POOR: no mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate.

Furthermore, the n-gain test is applied, which is according to Sugiyono (2015), the n-gain is the method used to measure the comparison of the gain score obtained by the students with the highest possible gain score obtained by the students. The researcher applied the measurement criteria for the n-gain category in this research based on the views from Meltzer in Syahfitri (2008: 33) as shown in the table below:

Table 3. 5 The Scoring Category of N-Gain

N-Gain Score	Category
$g > 0,7$	High
$0,3 \leq g \leq 0,7$	Fair
$g < 0,3$	Low

In addition, the result of the questionnaires which is distributed to students is calculated based on the Likert scale as shown in the table below:

Table 3.6 The Scoring System of Questionnaire

No.	Degree of Agreement	Positive Agreement
1.	Strongly Agree	5
2.	Agree	4
3.	Neutral	3
4.	Disagree	2
5.	Strongly Disagree	1

3.8 Data Analysis

In order to get the result of this research, the researcher analyzes the data using quantitative data analysis through some steps as follows:

1. Scoring the pretest and the posttest applied to the students.
2. Scoring the mean of the pretest and the posttest by using a formula designed by Arikunto (2006).

$$M = \frac{\Sigma X}{N}$$

With the explanation as follows:

M : mean

ΣX : total score of the students

N : number of the students

3. Checking and analyzing the questionnaire data by using SPSS.
4. Drawing the conclusion by comparing the means of the pretest and the posttest.
5. Describing the students' perception after they have been taught by using flowchart media.

3.9 Normality of the Data

The normality test is carried out to know whether the data is in normal distribution or not. As stated by Ghasemi and Zahediasl (2012), normality needs to be checked for many statistical procedures including t-test. There are three basic assumptions that must be met in the t-test comparison which one of them is the data has a normal distribution (Setiyadi, 2018). Performing normality test is important because if the data is in normal distribution, the data is considered to be the representative of the population. Thus, the researcher used Shapiro Wilk test to assess the normality of the data. The hypotheses are:

H0 : The distribution of the data is normal

H1 : The distribution of the data is not normal

The hypothesis is accepted if the result is higher than 0.05 which indicates normal distribution, whereas if the result is lower than 0.05 it indicates abnormal distribution of the data.

Table 3.7 Normality of the Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.159	36	.022	.942	36	.057

Posttest	.134	36	.103	.947	36	.086
a. Lilliefors Significance Correction						

Based on the results of the test of normality above, it can be seen that H_0 is accepted because the significance of the pretest was 0.057 which was higher than 0.05 ($\text{sig} > 0.05$) and the significance of the posttest was 0.086 and also higher than 0.05 ($\text{sig} > 0.05$). This indicated that all data obtained are normally distributed.

3.10 Hypothesis Testing

After collecting the data, the researcher analyze them to find out whether there is improvement of students' achievement in writing explanation text after the implementation of flowchart media. To measure the improvement, the researcher compares the results of the pre-test and post-test. The data is analyzed through t-test to see the significant effect of the treatment. The hypotheses are as follows:

H_0 : There is no improvement in students' writing achievement after they have been taught by using flowchart media. The criteria H_0 is accepted if the alpha level is higher than 0.05 ($\alpha > 0.05$).

H_1 : There is improvement in students' writing achievement after they have been taught by using flowchart media. The criteria H_1 is accepted if the alpha level is lower than 0.05 ($\alpha < 0.05$).

This chapter discusses about research design, variable of the research, population and sample, data collection technique, research procedures, validity and reliability of the instruments, scoring system, data analysis, normality of the data, and hypothesis testing.

V. CONCLUSION AND SUGGESTION

This chapter consists of a conclusion of the research and suggestions as a reference for future English teachers who want to use flowcharts as a media to improve students' writing achievement, especially in writing explanation text.

5.1 Conclusion

Based on the results of the analysis and interpretation of data in the previous chapters, it can be concluded that implementing flowcharts as a media of teaching can help to improve the students' writing achievements in writing explanation text. Initially, the students struggled in constructing sentences that were logically connected using time sequence connectors. They also made several errors in vocabulary and mechanics. After the flowchart media being applied, the students' writing results improved. This is proven by an increase in the students' average score of 7.00 from the pretest to the posttest. Furthermore, the result of paired sample test that has been carried out showed the result of the t-value (8.885) with a degree of freedom (df) of 35 was higher than the t-table (2.030). The significance (2-tailed) also shows a result of 0.000 which is lower than 0.05 ($\alpha < 0.05$) and indicates that H_1 is accepted. This means that the use of flowchart media can significantly improve the students' writing achievement, especially in writing explanation text. Apart from that, the results of the students' perceptions seen through filling out the questionnaire showed that no students were dissatisfied with the treatment implementation in the class. Most of the students feel that using flowchart media makes the writing process more effective and efficient than before using them. This is supported by the calculation result of the questionnaire which showed the mean score of 34.36 out of the probability

maximum score of 50. This means that, more than half of the students agreed that the use of flowcharts made the writing process easier for them. Therefore, researchers consider that flowchart media can be an option that can be used by teachers to teach writing, especially in teaching explanation text.

5.2 Suggestion

Referring to the conclusion above, here are several suggestions that researchers can give:

1. Suggestion for English teachers

English teachers can consider applying flowchart media in the classroom, especially in teaching writing because writing is an important skill that students need to master, especially when learning a second language, not only in explanation text, but can also be applied to other texts such as procedure text, and etc. Because writing is a difficult skill, the application of varied, creative and effective teaching methods is needed in the classroom. Flowchart is one of the appropriate options to teach to the students because this media offers graphic images that will not make the students feel bored easily. The existence of flow in a flowchart also makes it easier for students to express and arrange their ideas so that they are organized and related to each other. Flowchart is also considered to be able to help the students' in improving their vocabulary achievement because in the process, the students will indirectly explore and obtain new vocabularies. Therefore, English teachers can also consider flowchart media as a medium for teaching vocabulary to students.

2. Suggestion for Future Researcher

Future researchers who have the same field of study are recommended to continue and improve the quality of research related to the implementation of flowcharts as a media for teaching writing. The researcher suggests to holds

more treatments during the research period than the researcher did in this study so that students' understanding of the treatment applied becomes deeper. This research is one of many similar studies that can be used as a reference. The researcher also suggests to conducts research at different school levels so that a comparison and varying results can be obtained.

Finally, this chapter represents the conclusion of the research and also the suggestions given by the researcher to several parties. Furthermore, researchers highly recommend the use of flowcharts to English teachers as a media for teaching writing. Moreover, the researcher have great hopes that this research can be very helpful and provide some direction for future research that has similarities in this particular field.

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