THE EFFECT OF COLOR CODING STRATEGY IN STUDENTS' WRITING PROCEDURE TEXT AT YP AL MASDAR BATANG KUIS

THESIS

Submitted to the Tarbiyah Faculty UIN-SU Medan

As a Partial Fullfilment of The Requirements for S-1 Program

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NORTH SUMATERA

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2018

Medan, September 2018

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Demikianlah   kami   sampaikan,   atasperhatianBapak   kami ucapkanterimakasih.WassalamualaikumWr.Wb.

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PERNYATAAN KEASLIAN SKRIPSI

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Menyatakan dengan sebenarnya bahwa skripsi yang saya serahkan ini benar - benar merupakan hasil karya sendiri, kecuali kutipan-kutipan dari ringkasan-ringkasan yang semuanya telah saya jelaskan sumbernya. Apabila dikemudian hari terbukti atau dapat dibuktikan skripsi ini hasil jiplakan, maka gelar ijazah yang diberikan oleh Universitas batal saya terima.

Medan,   September 2018

Yang Membuat Pernyataan

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ABSTRACT

THE EFFECT OF COLOR CODING STRATEGY IN STUDENTS' WRITING PROCEDURE TEXT AT YP AL MASDAR BATANG KUIS

This research was intended to find out the empirical evidence of the students' achievement in writing ability by using Color Coding strategy at the eighth grades of YP AL MASDAR Batang Kuis in academic year 2017/2018. This research was experimental research. The population of this research was taken from all eighth grades of YP AL MASDAR Batang Kuis. The samples of this research were taken from 32 students of experimental group (class VIII-1) and 32 students of control group (class VIII-2). The instrument for collecting data were observed, interview and test. After analyzing the data, the writer got; (1) The students' ability in writing procedure text by using Color Coding strategy got mean 69,84 and standard deviation was 6,02; (2) the students' ability in writing procedure text by using conventional strategy got mean 56,81 and standard deviation was 6,64. The value of $t_{observed}$ was 16.28 and that of t_{table} 2,0002. So the value of $t_{observed}$ was higher than that of t_{table}. It means that there was significant effect of using Color Coding strategy on the students' achievement in writing procedure text.

ACKNOWLEDGEMENT

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ
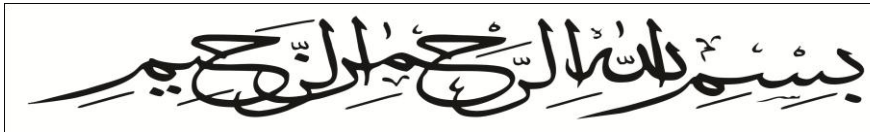
In the Name of Allah the Most Gracious and the Most Merciful

Praise and Gratitude be to Allah for the health and strength that has given to the writer in writing this *thesis*. Peace and blessing be upon the Prophet Muhammad *Shallallaahu'alaihiwa salaam*, his family, his relatives, and all his followers.

This *thesis* is written to fulfill one of the requirements to obtain the *Sarjana Pendidikan degree* at the Department of English Education, Faculty of Tarbiyah and Teachers Training, State Islamic University of North Sumatera.

In addition, there are many people who contribute in finishing this *skripsi*, the writer would like to express her appreciation to:

1. **Prof. Dr. Saidurrahman, M. Ag** as a Rektor of State Islamic University of North Sumatera

2. **Dr. Amiruddin Siahaan, M.Pd**. as a Dean of Faculty of Tarbiyah and Teachers Training State Islamic University of North Sumatra

3. **Dr. Sholihatul Hamidah Daulay,S.Ag.,M.Hum.**as the Head of EngllishDepartmenand **Maryati Salmiah,S .Pd.,** M. Hum as the secretary, thank for the suggestion in implementing this research.

4. **Dr. Siti Zubaidah, M.Ag** as my advisor I who has given her charm ideas, suggestion, correction, beneficial opinion and encouragement in process of writing this thesis.

5. **Deasy Yunita Siregar, M.Pd** as my advisor II who has given me guidance, dedication, kindness, and support during writing this thesis.

6. All lectures of English Department of UIN-SU who have taught the researcher during her study.

7. The principle of YP AL MASDAR BATANG KUIS, **M. Idris siregar, S.H**, and the English teacher **suriyani, S.Pd,** and all of the students who helped me during the research.

8. Thank you so much to my lovely father **Nurayadi ,** my lovely mother **Suryanti** as the best parents ever in this world and for your uncounted prayers, endless love, encouragement advices support both financially and mentally that made me possible to finish my study.

9. **My sisters Irma suryani, Nurhaliza, wiWina agustina and my little brother Muhammad Akbar.** Thanks to always support and accompany me whenever I need. It's such an overwhelming blessing to have all of you in my life.

10. Thanks to My lovely grandfather and grandmother who always support me and always give me advices that I really need, also thanks to my aunty, my uncle, my cousin and my families from father and mother for everything you have given me.

11. Thanks to Defitri, Syarifah Nooh Nasution**,** Maulidatur rahmi who have helping me in completing this thesis. My beloved friends Juraida, Reni, Mifta, Agung, Zulfikar, Cici, fadlah, Putri, Intan (ex-PBI 6), Nurli, Yunita, Ziana, Aja, Mastina who always support each other, sharing the information, accompanied me, entertaining me until I could completing this *thesis.*

12. All of my classmates and especially my family in the same struggle PBI 6 and PBI 4stambuk 2014 who made my insanity become totally logical when I was with you. A 'favorite' class with chivalrous, hilarious, and cranky persons spent plenty of times together fighting with a ton of tasks by shedding sweat and tears until we felt like we could barely eat, sleep, and breathe.

13. All people who cannot be mentioned one by one for the contribution in completing this *thesis*.

May Allah protect and give the great blessing for them. *Amiin.*

The final word the author realized that in the writing of this thesis is still far from perfection, therefore, the authors sincerely welcomes critics and suggestions which is build for the sake of perfection and may be useful for all of us.

Medan, July 2018

The Writer

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CHAPTER I

INTRODUCTION

A. Backgroud of Study

For Indonesian people, English is the first foreign language which is taught to the students from elementary school until university. By using English, a student can know the other countries. In junior high school and senior high school, English is one of foreign languages which is demanded to pass of national examination. English has been taught in elementary school till senior high school as the first foreign language for many years. However we never be proud of the result. Most of the students are not able to carry on a simple conversation about their daily activity or write a simple essay in English.

Language is an instrument to sent or exchange information and to interact with the others. Language is used by all people in the world a means of communication. Anyone cannot interact with others without language, thus it is very important to learn language. There are four language skills in teaching English; they are listening, speaking, reading and writing. Generally, language can be spoken and written, so it is also necessary to learn writing.

In holy Al-Qur'an, writing also one of the important skill that should be learned. Allah the almighty states in the glorious Al-Qur'an (Al-Alaq; 4-5)

$$ ٱلَّذِى عَلَّمَ بِٱلْقَلَمِ ۝ عَلَّمَ ٱلْإِنسَٰنَ مَا لَمْ يَعْلَمْ ۝ $$

Meaning: "*he who taught (writing) by the pen. Taught man that which he did not know*".

From the verse above, it can be concluded that people should study to look for the knowledge. Pen is not creature, but many things which can be understood by human can be

written by the pen. Allah the almighty teachs human write something by using pen. After they using pen well, so Allah the almighty would like to give many knowledge nd one of that is writing. Writing is the skill that is used to express the feeling, ideas and opinions in written form.[1]Writing is one of skill in language teaching. It is also one of English skills that is important to be learned because, writing is one of the way to communicate with other people.[2]Writing is one of the important skills to be mastered by the students. Writing is an effective way to communicate and express our thoughts, feelings, and opinions to others. Writing has function to entertain and make fun. There are various ways to use writing in our everyday life. For example we can write about the making a cup of tea.

When I observe and interview at YP SMP Al Masdar. I found the information about the teacher in that school there are two English teachers and one of them is SuriyaniS.Pd. In her class she used conventional method. She only explained definition of procedure text, it's function and generic structure. Base on that case the students have some difficulties aspect, such as: they had difficulty to choose words to make a paragraph or essay. It makes students less comprehended, less interest in writing, and makes students bored. These problems are important to be solved, therefore students get more comprehension in material of writing, students think that writing is an interesting skill, and can continue English material in the next semester.

Another factor is external factor, such as; teacher's method in teaching writing, the facility is not support in learning process, the source of the books in not complete, and etc. all of them are important in improve students' writing. Especially the teacher, how the way the

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[1]Mona lisa, Refnaldi, "*Using PLEASE Strategy in Writing a Descriptive text,* journal of English language teaching, vol. 1 No. 2, maret 2013, Hal 1

[2]Zulraudah, jufri, "*teaching Writing by UsingRunning Dictation Activity for Elementary School Students",* JELT Vol. 3 No. 1 Serie A, September 2014 Hal 1

teacher teach students is very important. The teacher often teach with the traditional method, it make them not interest to learn English, especially about writing.

In fact, one of major difficulties in writing is to find something to write about. In English classes, students frequently complain that finding something to write about is more difficult than writing, they do not have any idea of what to write. The students also can not choose the right words, and they do not know how to start their writing. One factor causes the problem is the strategy applied by the English teachers. They do not have sufficient and suitable teaching techniques, and also lack of appropriate materials in their classes. Besides, many teachers still use the traditional teacher-centered method in writing classes, which make classes boring and ineffective.

To solve the problem, English teachers should do well to provide students with as many acceptable suggestions as they can. Teachers also must find an effective strategy in teaching writing skill, especially in teaching procedural text and color coding strategy is the answer.

Base on the above problem, the researcher intends to conduct research on "**The Effect of Color Coding Strategy in Writing Procedure Text at YP Al MasdarBatangKuis**"

B. **Identification of Problem**

In relation to the background, the problem of this research will be identified as the following:

1. The students have difficulties in writing, especially in writing procedure text.
2. Most of students are often bored in the English.
3. The teacher used conventional method in teaching writing, make the students' motivation in studying English are still low.

C. Research Question

In relation to the background of the study, the problem in this research can be formulated as follow:

1. What is the strength and weakness of using Color Coding strategy in writing procedure text ?
2. Is there any significance of the students' ability in writing procedure text before and after using of color coding strategy?

D. Objective of the Study

The aims of study are:

1. To find out the information about strength and weakness of using Color Coding strategy in writing procedure text.
2. To find out significance of the students' ability in writing procedure text before and after using of color coding strategy.

E. Significances of the Study

The significances of the study as follows:

1. To the English teachers, as an input to increase the students' ability in writing procedure text.
2. To the teacher of other schools, as contribution to increase their strategy in teaching writing procedure text.
3. To be reference for reader and other researches to conduct a study related to dependent variable of this research with more variation independent variable.

CHAPTER II

THEORITICAL FRAMEWORK

A. Theoretical Framework

A set of theories and ideas are needed to explain the relation between the terms that are used in the study. The use of theories and ideas are also to clarify the terms themselves, in order to avoid ambiguity and misunderstanding.

1. Writing

1.1. Definition of Writing

According to Harmer writing is one of the four skills in English . writing is considered as the productive skill since it allows the language user to produce texts. Writing (as one of the four skills of listening, speaking, reading and writing) has always formed part of the

syllabus in the teaching of English.[3] Writing is an action process of discovering and organizing the ideas, putting them on a paper and reshaping and revising them.[4] Writing can be defined as an activity of delivering messages (communication) with the use of written language as a means or media, or in other words writing is communication activities such as delivering a message in writing to the other people.[5]

Harmer stated that writing as one of the four skills has always formed part of the syllabus in the teaching of English. However, it can be used for a variety of purposes ranging from being merely a backup for grammar teaching to a major syllabus stand in its own right where mastering the ability to write effectively is seen as a key objective for learners.[6]

Writing is more than public communication; it is a way of thinking. When people will write something, they must have already been thinking about what they are going to say and they are going to write it. After they have finished writing, they read over what they have written and make correction of their writing.

Hammond said that in writing we arrange clauses into a sentence: the main idea becomes the main clause; subsidiary ideas become subordinate clauses and so on.[7] We must use one topic sentence in each paragraph as our central idea that will be expressed and add subordinated sentence as the explanation of our main idea.

Writing is the most difficult skill for second language learners to master. The difficulty is not only in generating and organizing ideas, but also in translating idea into

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[3] Jeremy harmer. 2011. *How to Teach Writing.* Malaysia: Longman .p. 31
[4] Alan Meyers. 2005. *Gate away to Academic Writing: Effective Sentences, Paragraph and Essays.*(New York: Longman), p.1.
[5] Suparno and MohamadYunus, *KeterampilanDasarMenulis,* (Jakarta: UniversitasTerbuka), p.3.
[6] Jeremy Harmer, 2004. *How to Teach Writing,*(England: Longman), p.30.
[7] Peter Knapp and Megan Watkins, 2005.*Genre Text Grammar: Technologies for Teaching and Assessing Writing*. (Australia: UNSW Press Book), p.15.

readable text.[8] We must also consider what is genre in accordance with our goals. Harmer stated that writing is a process that what we write is often heavily influenced by constraints of genres than these elements has to be presented in learning activities.[9]

Based on the explanation above, the writer concludes that writing is a process of delivering the ideas, expressing the into written form, and organizing them into meaningful statements or paragraphs. The communications in writing is used to convey ideas to the readers. To make the reader easy to understand the idea that conveyed in writing the writer must write in coherent and correctly.

1.2. The Purpose of Writing

Writing has the purpose to the writer and the reader. The purpose of writing is to express the ideas, feelings and expressions or information through organizing our thought into good arrangement of written text.

According to Penny Ur "the purpose of writing, in principle, is the expression of ideas, the conveying of messages to the reader. So the ideas themselves should arguable be seen as the most important aspect in the writing".[10] It means that when the writers do their writing, of course they have some purposes. They have to consider the purpose of their writing since this will influence, not only the type of text they wish to produce, but including the language which they use and the information that they choose.

In addition, there are some levels of purpose of writing:

a. General Purpose

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[8]Jack C, Richards and Willy A. Renandya. 2011.*Methodology in Language teaching: An Anthology of current Practice.* (Cambridge University Press), p.303.
[9] Jeremy Harmer, 2004. *How to Teach Writing.*(England: Longman), p.86.
[10]Penny Ur. 2011. *A Course in language Teaching; Practice and Theory*, (London: Cambridge University Press), p.163.

We can identify the following general purpose for must of the writing that we do:[11]

1. To inform: to provide information about a specific issue or topic.

2. To educate: to broaden someone's knowledge or expertise, textbook for a human development course might offer an in-depth discussion of the stages of emotional development in children.

3. To entertain: to provide fun or amusement, for instance, a celebrity Magazine might share gossip about a star's wedding.

4. To inspire: to positively influence or motivate others. For example, an essay about the challenges and rewards of running a marathon might inspire others to admire the effort, if not to run a marathon themselves.

5. To persuade: to argue that a certain action should be taken. For instance, well written letter might persuade city officialthat a parking fine that you received was excessive and should be lowered. Knowing the general purpose of your writing project will help you make effective choices about the information to include and how to present this information. If you are trying to include and how to present them clearly and directly.

b. Specific Purpose

Once you have identified the general purpose for your writing project, you will need to select the specific information or ideas you want to communicate to your audience.[12] There is a lot of information that you could provide about your, so you will have to narrow your options and select one specific purpose.

1.3. The process of Writing

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[11] Chris Juzwiak. 2009. Stepping *Stones A Guided Approach To Writing Sentences And Paragraph*, (New York: Bedford/St. Martin's), p.18

[12] Chris Juzwiak. *Stepping Stones…*, p.19.

قَالَ سَمِعْتُ اَبَا هُرَيْرَةَ يَقُوْلُ: لَيْسَ اَحَدٌ مِنْ اَصْحَابِ رَسُوْلِ اللهِ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ اَكْثَرَ حَدِيْثًا عَنْ رَسُوْلِ اللهِ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ مِنِّى اِلاَّ عَبْدَ اللهِ بْنَ عَمْرٍ فَاِنَّهُ كَانَ يَكْتُبُ وَ كُنْتُ لاَ اَكْتُبُ (رواه الترمذي)

Artinya: Aku mendengar Abu Hurairah berkata : "Tidak ada seseorang dari para sahabat Rasulullah yang lebih banyak haditsnya dari Rasulullah SAW daripada aku kecuali Abdullah bin Amr, karena sesungguhnya dia menulis, sedangkan aku tidak menulis."(H.R. Tirmidziy)

The writing process easier the students' writing and organizing ideas, it is as method to solve the problem in teaching writing. The teachers try to use effective approach in teaching, so it can make the students' writing naturally. Writing is a process that involves several steps. At least, there are three steps in the writing process;

    a. Step one: Prewriting

        Thinking about your topic and organizing your ideas

    b. Step two: Writing

        Using your ideas to write a first draft

    c. Step three: Revising

        Improving what you have written.[13]

If the writers follow the steps, and practice by writing often, they will find it easier to write paragraphs and improve writing.

 a. Pre-writing

Prewriting is the thinking, talking, reading, and writing we do about our topic before we write a first draft. Prewriting is a way of warming up our brain before we write, just as we warm up our body before start writing.

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[13] Karen Blanchaard, and Christine Root. 2003. *Ready to Write; A First Composition Text 3ed*, (Longman: Pearson Education, inc), p.41.

There are several ways to warm up before start writing :

 1) Brainstorming

Brainstorming is a quick way to generate a lot of ideas on a subject. The purpose is to make a list of as many ideas as possible without worrying about how you will use them. The step brainstorm are :

    a) Begin with a board topic.

    b) Write down as many ideas about the topic as you can in five minutes.

    c) Add more items to your list by answering the questions *what, how, when, where, why,* and *how*

    d) Group similar items on the list together.

 2) Free-writing

Free-writing is a process of generating a lot of information by non-stop. It allows you to focus on a specific, but forces you to write so quickly that you are unable to edit any of your ideas. You are not worries about complete sentences, proper spelling, or correct punctuation and grammar. You should write everything that comes into your head even if it doesn't necessarily make sense yet. Give yourself a set amount of time (maybe five or ten minutes), and write down everythingthat comes to mind about your topic; some step of free writing are :

    a) Free-writing strategy allows you to increasingly focus your ideas in trying to discover a writing topic. You loop one in five or ten minutes free-writing after another, so you have a sequence of free-writing, each more specific than the other. The same rules that apply to free-writing apply to looping: write quickly, do not edit, and do not stop.

b) Free-writing on an assignment for five to ten minutes, then, read through your free-writing, looking for interesting topic, ideas, phrases, or sentences. Circle those your interesting finding. A variation on looping is to have a classmate circle ideas in your free-writing that interests him or her.

c) Then free-writing again for five to ten minutes on one of the circled topics. You should end up with a more specific free-writing about a particular topic.

d) Loop your free-writing again, circling another interesting topic, idea, phrase, or sentence.

e) When you have finished tour or five round of looping, you will begin to have specific information that indicate what you are thinking about a particular topic.

3) Clustering

Clustering is another prewriting strategy. It is a visual way of showing how your ideas are connected using circles and lines. When you cluster, you draw a diagram of your ideas. This term will be explained in the next section. On the other hand said that prewriting is any activity in the classroom that encourages students to write. It stimulates thoughts for getting started. In fact, it moves students away from having to face blank page toward generating tentative ideas and garhering information for writing.[14]

b. Drafting

After we have spent some time to think about our topic and doing the necessary prewriting, we are ready for the next step in the writing process: writing our paragraph. When we write the first draft of our paragraph, use the ideas we generated from prewriting as a guide.

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[14] Jack c Richard and Willy A renandya, Methodology in Language teaching..., p.316

As you write, remember to :

1) Begin with a topic sentence that state the main idea.

2) Include several sentences that support the main idea.

3) Stick to the topic.

4) Arrange the sentence so that the order of ideas make sense.

5) Use signal words to help the readers understand how the ideas in your paragraph are connected.[15]

 c. Revising

It is almost impossible to write a perfect paragraph on the first try. The first try is called the first draft. After you complete the first draft, you must look for ways to improve it. The step is called revising.[16]

When students revise, they review their text on the basis of feedback given in the previous stage. They reexamine what was written to see how effectively they have communicated their meanings to the reader. In another source stated that writing is a process that involves the following step :

1) Discovering a point-often through prewriting

2) Developing solid support for the point-often through more prewriting.

3) Organizing the supporting material and writing it out in a first draft.

4) Revising and then editing carefully to ensure an effective, error-free paper.[17]

 d. Editing and proofreading

These are the broad categories for proofreading :

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[15] Karen Blanchard and Christine Root, *ready to Write…*, p.43
[16]*Ibid*, p.44
[17] John Langan, 2006. *English Skills with Readings: Sixth edition*, (New York: McGraw-Hill Companies, inc), p.20

1) Check for such things as grammar, mechanics, and spelling.

2) Check the facts: if your writing includes details, be sure you have included the information correctly.

3) Confirm legibility: if you have written your final draft, make sure that each word is legible.

e. Publishing

The final step of the writing process is publishing. The means different things depending on the piece you are working on.

1) Bloggers need to upload, format and post their piece of completed work

2) Students need to produce a final copy of their work, in the correct format. This often means adding a bibliography, ensuring that citations are correct, and adding details such as your student reference number.

3) Journalists need to submit their piece (usually called "copy") to an editor. Again, there will be a certain format for this.

4) Fiction writers may be sending their story to a magazine of competition. Check guidelines carefully, and make sure you follow them. If you have written a novel, look for an agent who represents your genre.

1.4. Text

Text is the expression of language that contains content, syntax, pragmatics that is a unity. A text is a set of language which is together cohesively through meaning. It means that when we use language to write, we are creating and constructing a text. When we read, we are interpreting texts. Moreover, when we talk and listen, we are also creating and interpreting texts.

A text is meaningful linguistic unit in a context.[18] Language as a system of communication is organized as cohesive units we call texts. Text is a context in using language that can be using language in spoken text and written text.[19] A written text refers to any meaningful short or long spoken or written text.[20] A text of language is unique. Some languages may have some similarities in a text.[21] Different types of texts have distinctive characteristics, depending on what they are made to do.[22] So text is the expression of something that has meaning.

There are some types of writing, they are :

1. Narration/narrative: tells world events, which can be informative or entertaining, and can be past world events or present happening.

2. Recount (spoof): contains of the chronology of activities done in past time.

3. Description/descriptive: a descriptive of an object, both living things and dead things, including human and animals.

4. Information report: contains of present information presentation about a thing or a fact supported by data presentation, characteristic, description, and classification or tabulating.

5. Discussion: present information and opinions about a present hot issue, which is sometimes controversial. Text is commonly ended with a conclusion or

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[18]SanggamSiahaan and KisnoShinoda. 2008. *Generic Text Structure*. (Yogyakarta: GrahaIlmu),.p.1.

[19]Pardiyono. 2007. *PastiBisa! Teaching Genre-Based Writing*. (Yogyakarta: CV. Andi Offset),.p.1.

[20]SanggamSiahaan and KisnoShinoda.*Generic Text Structure.*p.1.

[21]*Ibid*, p.1.

[22]Peter Knapp and Megan Watkins, *Genre text Grammar*. p.29

recommendation based on presented data after presenting adequate arguments for the controversial issue.

6. Explanation :to explain of a thing or object according to the character, the procedure, etc.

7. Exposition: contains of an argument, point of views, a matter, a certain thing.

8. Procedure: contains instruction about a sequence of action, or a procedure to do a thing.

9. Anecdote: certain a meaning or shares about ridiculous, shameful, funny, very special, or extra ordinary event.

10. advertisement-persuasive exposition: tries to seduce, attract, and catch the reader eye.[23]

1.5.Preocedure Text

Procedure text is a text in which there are instructions to the action sequences a case containing one thing, it contains aasewuence of treatment procedures to something. Writing focus lies in obedience to the ordinance or the sequence of how a job completed.[24]Siahaan and Shinoda said that procedure text same likes a process. Process in any written English text in which the writer describes how something is accomplished through a sequence of action or step.[25] So, procedure text is the text that contains stetps of how to do something by using process.

We can find procedure text in two forms, oral form and written form. We can find oral form in video or tutorial of doing something. In this case the researcher focused on written form.

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[23]Pardiyono.*PastiBisa! Teaching….,* p.2-3

[24]Pardiyono. 2006.*12 Writing clues for Better Writing Competence.* (Yogyakarta: Andi).p. 172

[25]SanggamSiahaandanKisnoShinoda, *Generic Text Structure.* p.81

In the context of communication, often someone should explain about how the work should be completed in sequence step. Instruction on step that must be done so that a job can be done well and packaged in a text called procedure. Key word for this type of text is " what need to be does?" or "what should I do?"[26]Procedure text is aimed to describe how something is achieved through a sequence of actions or steps:

a. **Function or Procedure Text**

The function of procedure text is to explinhow to do or to make something based on th given instruction or to describe how something is achieved through a sequence of actions or steps.

b. **Generic Structure of Procedure Text**

There are 4 generic structure in writing procedure text namely: goal, material, method and re-orientation.[27]Pardiyono also said that 3 generic structures in writing procedure text: they are goal, materials and steps.[28]

1. Goal or purpose is to describe how something is accomplished. For example if the goal is making on avocado juice, the title is commonly written as: how to make a glass of avocado juice.

2. Material is deals with the thing needed in the case bring discussed. For example, how to make an omelet, the material that you must prepare are egg. Union, garlic. Etc

3. Steps are sequence steps in doing or making something (firstly, you out it.. secondly, then, etc). Another text feature of procedure text is covering. For Morever, there is also comment about significance, danger, and efficacy in doing

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[26]*Ibid*.p. 125
[27]SanggamSiahaandanKisnoShinoda, *Generic Text Structure* ,p.81.
[28] Pardiyono,*12 Writing clues….,* p.172-173

the steps. The text features are then used to be the significance assessment for examining students writing procedure text.

c. Grammatical Features of Procedure Text.

Grammatical features of procedure text follow:

1. The address (subject) may be referred to represent the process involved in completing a task.

2. Action vebs are used in instruction to represent the process involved in completing a task.

3. Verbs are the simple present tense to create a sense of timelessness. They are also stated as imperative.

4. Advebs are often used to quality verbs and to provide extra imformation about how a task should be completed.

5. Temporal connectives are used in procedural instruction to ensure processes are placed in the correct order of time.

6. Conditional connectives sometime used to provide a premise upon which a command or statement is based.

7. Modality is used in instruction to lessen or heighten the degree of obligation is completing a task.[29]

d. Example of Procedure Text

How to make Mango Juice

Goal   : A cup of mango juice

Materials   : 1. some ice pack

                   2. a spoon of sugar

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[29]Knapp p & Watkins. 2005. *Genre, Text, and Grammar*.(Sydney: UNSW Press).p. 156-257

3. a mango

4. a half glass of water

Step   :

    a. first, peel the mango and wash it cleanly

    b. second, cut the mango into pieces and put them into the blender

    c. after that, put the sugar, the water, and ice

    d. the next step, turn on the blender and wait about 15 seconds

    e. finally, pour the mango juice into juice into the glass and it is ready to drink.

2. Teaching Strategy

Teaching is guiding and facilitating learning, enabling the learner to clean, setting the condition for learning.[30] Teaching learning process can be done and the goal of learning can be reach. When delivered the material to the students the teacher should use strategy.

Allah the almighty said in the Holy Qur'an in surah An-Nahl in the 125th verse. It says:

ٱدْعُ إِلَىٰ سَبِيلِ رَبِّكَ بِٱلْحِكْمَةِ وَٱلْمَوْعِظَةِ ٱلْحَسَنَةِ ۖ وَجَٰدِلْهُم بِٱلَّتِى هِىَ أَحْسَنُ ۚ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَن ضَلَّ عَن سَبِيلِهِۦ ۖ وَهُوَ أَعْلَمُ بِٱلْمُهْتَدِينَ ﴿١٢٥﴾

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[30] H. Douglas Brown.2000. *Principles of Language Learning and Teaching.* 4th Ed. (San Fransisco: Longman).p.7

The meaning : "Call into the way of the Lord with wisdom and fair exhortation, and reason with them in the better way. Lo! thy Lord is Best Aware of him who strayed from His way, and He is Best Aware of those who go right."[31]

From the verse above, Allah the almighty asked the human to give the lesson by wisdom, wisdom means the way by right strategy. It can help the teacher to make teaching learning process run be used in teaching writing is color coding strategy.

According to Kozna, learning strategy can be defined as the activity that is chosen to provide facilities or assistance to students towards achieving specific learning objectives.[32] J.R. David states that learning strategy is a plan, method, or series of activities designed to achieve a particular education goal.[33]

Strategy refers to general approach or plan : tactics refer to the methods used to carry out strategies in particular situations; techniques are the procedures used to carry out the tactics.[34] Teaching strategy is the way that was chosen by teacher to teach the material in giving teaching situation covering attitude sequence and contest of activities. It is the way of the teacher to make the students easy to understand the material.

Here are a few teaching strategies that have been a staple in most classrooms. Depending upon your style, performance, and your students, choose one that suite your needs:

a. The gallery walk

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[31] http://makalahpendidikanislamlengkap.blogspot.co.id.2016/12/ayat-ayat-al-qur'an-tentang-metode.html

[32] Hamzah B.Uno.2007.*Model Pembelajaran: Menciptakan Proses BelajarMengajaryangKreatifdanEfektif ,* (Jakarta: BumiAksara),p.1

[33] NunukSuryani and Leo Agung.2012.*Strategi BelajarMengajar,* (Yogyakarta: PenerbitOmbak).,p.2.

[34]

the gallery walk is a cooperative learning strategy in which the instructor devises several question/problems and posts each question/problem at a different table or at a different place on the walls (hence the name "gallery"). Students form as many groups as there are questions, and each group moves from question to question (hence the name "walk"). After writing the group's response to the first question, the group rotates to the next position, adding to what is already there. At the last question, it is the group's responsibility to summarize and report to the class.

b. Effective discussion

discussion is an excellent way to engage students in thinking and analyzing or in defending one side of an issue, rather than listening to lecture. students must also respond to one another, rather than interacting intellectually only with the instructor. Good discussion can be difficult to generate, however. Clicking "more information" below will take you to some tips for having a good discussion in class and a sample template for class discussion.

c. concept sketches

concept sketches (different form concept maps) are sketches or diagrams that are concisely annotated with short statements that describe the processes, concepts, and interrelationships shown in the sketch. Having students generate their own concept sketches is a powerful way for students to process concepts and convey them to others. Concept sketches can be used as preparation for class, as an in-class activity, in the field or lab, or as an assessment tool.

d. just-in-time teaching

just-in-time teaching (JiTT) was developed as a way of engaging students in course material before class and preparation them to come to class and participate actively during class.

Clicking "more information" below will take you to a discussion, at the starting point site, of using just-in-time teaching.[35]

e. Color Coding Strategy

Color coding can be used in many ways and at every stage of the writing process to help you make choices and develop your ideas.[36]

3. Color Coding Strategy

The writers focus on color coding strategy. Color coding strategy helps the students to make choices and developing their ideas. Use color coding to make writing organization obvious and to connect a students' plan to their draft.

1. Assign a different color to each element of a piece. For example, in opinion writing the opinion statement could be red, the first step could be yellow, and the last step could be green.

2. Mark whatever planning graphic organizer you are using with these colors.

3. When you demonstrate drafting, and when students are doing their own drafting, underline the sentences for each section with the appropriate color. This makes it easy for students to look at your example writing and remember how it is organized. It also helps you quickly check your students' writing as you rove the room to make sure nothing is left out and that everything is in the right order.[37]

4. Teaching Procedure Text by Using Color Coding

1. Introduce the color-coding system using the picture of the traffic light:

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[35] (http://sere.carleton.edu/NAGTWorkshop/coursedesign/tutorial/strategies.html)
[36] http:/writingcenter.unc.edu/tips-and-tools/color-coding/
[37] https://www.theclassroomkey.com/2015/08/8-smart-strategies-for-teaching-writing.html

a. Show the picture of the traffic signal and explain to students that the green, yellow and red colors of the traffic signal can help us to organize our text. Have students color the traffic signal.

b. Read the procedure text : How to Make Mango Juice, highlight or underline the various sentences with the appropriate color.

2. introduce the color coding strategy using the procedure text

a. Have students read the title. Ask them what the paragraph will be about.

b. Red. Read the goal with your students. Remind them that a topic sentence amnnounces what the whole paragraph is about. Tell students that topic sentences are colored red because the topic sentence shows what idea writer is going to prove or explain. Red the first key/star idea with your students. Explain that in information writing the topic sentence are supported by reason, details, or facts that prove or explain the topic.

c. Yellow. Read the material with your students. Ask them what you need if you want to make mango juice and give some explanation about material.

d. Green. Read the step with your students. Ask students what green tells the writer to do. (stop and explain). Have students refer to the Traffic Light Signal. Review the colors with them.

3. instructional steps for assisting students in planning and writing procedure text.

a. Prepare for the writing lesson

b. Introduce the topic. Write the topic on the board. Read the topic. Have students simplify the topic. (e.g. How to make mango juice)

c. Brainstorm possible ideas to complete. Have students write a lost of idea that could be possibly used as ideas. (THINK)

d. Guide students in completing the informal outline. Have students record their key/star ideas on the outline and highlight the ideas in colors.

e. Guide students in writing the procedure text.

f. Support students in proofreading the paragraph.

B. Related Study

- Ariyuni, EkaDesi, 2012, English Department Faculty of Language and Art. State University of Medan. The effect of using video on the students' achievement in writing procedure text. The objective of this study was to investigate whether video significantly affected on students' achievement in writing procedure text. This study was an experimental research design. The population of this study was grade XI students of SMA SwastaSinarHarapanLubukPakam with 70 students as samples who were divided into two groups, namely experimental and control group. the experimental group was taught by using video, while the control group was taught by without video. The instrument of collecting data was essay tests. The data were analysis showed that value is higher than ttable(4.79 > 2.00) at the level of significance 0.05 with be degree of freedom (df) 68. It means that the null hypothesis (Ho) is reacted and hypothesis alternative (Ha) is accepted.

- Siregar, Asrina Sari, 2015, English Department, Faculty of language and Art, State Universitas of Medan, also has done a research " The Effect of Small Group Work Strategy on Students' Achievement in Writing Procedure Text". This study attempts to discover the effect of applying Small Group Work

Strategy on students' Achievement in writing procedure text. It was conducted by using experimental research design .the population of this research was the ninth (IX) grade students of SMP N 1 Padang BolokJulu which consists of 3 parallel classes with the total number of students in 90. Thr samples of this research were taken by random sampling through lottery technique . the result was class IXI consisted of 30 students become the experimental group and the XI3 consisted of 30 students become the control group . The instrument was used to collect the data was writing procedure text. After the data were analyzed, it was found that the value of t-observed was 3.37 with the degree of freedom (df = 58) at the level significance 0,05. It means that t-obseved was higher than t-table (3.37 > 2.00). therefore, the null hypothesis (Ho) is reacted and the hypothesis alternative (Ha) is accepted.

C. Conceptual Framework

The important of writing is to convey the ideas to the ideas readers in communication. One kindof writing is procedure text. Procedure text is the text that has function to tell the reader how to do or make something .the information is presented in a logical sequence of events which is broken up into small sequenced steps. These texts are usually. Written in the present tense. The most common example of a procedural text is a recipe:

As the researcher has explained on the background of research, the students still have difficulties at writing procedure text. There are some factors that influenced the students' ability at writing procedure text, such as grammar, vocabulary, punctuation, media, strategy , etc.

To make thought of framework clearer, so it can be seen following draft below:

| Color Coding Strategy | → | Writing Procedure Text |
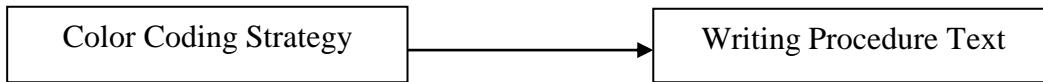
In this case the researcher will use strategy to make the students' ability at writing procedure text be better. The strategy is Color Coding strategy. Color Coding strategy is a fun and active strategy that adds variety of activity in teaching learning process. This strategy focused on group in making class is maximal and active. In using this strategy the teaching learning process will be fun cause using colors. Color will make the student interest to learn and make their brain fresh. Each students in group has to answer the question that was given by the teacher to get a point so the students can study in team work, study hard, improving their thinking ability and understand the material that was given by the teacher.

D. Hypothesis

Hypothesis for this research are :

Ha = there is a significant effect of color coding strategy in writing procedure text.

Ho = there is no significant effect of color coding strategy in writing procedure text.

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The writer choose YP SMP Al Masdar Batang Kuis T.A 2018-2019, because the writer have observation and there are still many students who are not interesting in learning

English especially in writting, and the writer want to know there is the effect of color coding strategy make them interested. The approach used in this research is quantitative.According to Sugiyono, the research method based on positivism philosophy, used in researching the samples and research pupils, the sampling technique is generally done by random sampling, while the data collection is do by using the research instruments used, the data used is quantitative / can be measure with the aim to test the hypothesis set previously.[38]While the method employed is through experimental research in which its purpose is to search and compare the certain treatment toward other within controlled condition. An experiment is the way to find the causal relationship between two factors which are raise by the researcher in purpose by reducing or eliminating any distracting factors. The writer used pretest-posttest control group design with one treatment as the design for this study.

The procedure of experiment design includ pre-test, treatment and post-test. Firstly, both of groups are give a pretest. Then the different treatments are apply to the two groups; the experimental group are treat through color coding strategy and the control group are teach without color coding in writing procedure text. Both of them are teach the same materials based on the curriculum and in the same month. Finally, after they get treatment, the experimental group and the control group receive a post-test.

Table 1. The Design of Research

Group	Pre-test	Treatment	Post-test
Exprimental Group(EG)	✓	Color Coding strategy	✓
Control	✓	Conventiona	✓

[38]Sugiyono .2014, *Metodepenelitian*,(Bandung: alfabeta), p.364

Group(CG)		l method	

B. Population and Sample

1. Population

Population is the whole object which will be researched.[39] Population is a number of all subjects that it has supply which is needed in the research. As Arikunto states that population is all of subjects research.[40] The population of this research is all of the students in eight grade students of YP SMP Al MasdarBatangKuis. The total number of the students are 78 students. The details are as follows:

Table 2. Population

NO	CLASS	NUMBER
1	VIII 1	32
2	VIII2	32
TOTAL		64

2. Sample

Sample is part of population, which is chose to participate in the study. The researcher will observe not at all of classes but only a class, that is eight grade. To determine the two classes, the researcher used purposive sampling technique. This technique is taking by the subject/ sample which is not based on strata, random or area but it is based on consideration of a certain purpose.

[39]Syahrum and Salim, *MetodologiPenelitianKuantitatif*(Bandung: Ciptapustaka Media, 2007), p.113
[40]SuharsimiArikunto. *ProsedurPenelitianSuatuPendekatanPraktek.* (Jakarta: RinekaCipta, 2006).p. 108

The consideration that the researcher tried to complete in preliminary research are the sample that will be choose has to be homogeny, so that the research will be a good and valid research. Because we know that something that can be compare is something that has the similar characteristic.

The researcher take class VIII 1 and VIII 2 because based on the result of the summative test of the mid-semester, these two classes gained similar average achievement and considered as homogenous class. Each class consisted of 30 students. Class VIII 1 is chose as the experimental group which is teaching by Color Coding Strategy while class VIII 2 is chosen as the control group which is teach without Color Coding Strategy.

C. **Instrument for Collecting Data**

For collecting data, a writing test was used as the instrument. The test is administered to the students in both experimental and control group. they are pre-test and post-test. The design of the test is in essay form. The students are instructed to write a procedure text based on the topic given by writer. The test is given to both groups: experimental and control group. The students' achievement in learning procedure text is analyzed by the collecting data in the test.

D. **Scoring the Data**

In scoring the written test, the cumulative score ranging from 0-100. To know the students achievement in writing ability, there are some criteria that is considered. According to Brown

there are five scoring components scale name: content, organization, vocabulary, language

use and mechanics. [41]

Those specific criteria are described in detail in the following stages:

Table 3. Score of the Test

Components Level	Criteria	Score
1. Content The score of content depend of the students' ability to write ideas, information in the form of logical sentence.	**Excellent to very good** (Knowledge substantive, development of topic sentence, is relevant to and assigned topic.)	**30 – 27**
	Good to average (Some knowledge of subject-adequate range-etc)	
	Fair to poor (Limited knowledge of subject – little substance-etc)	**21 – 17**
	Very poor (Does not show knowledge of subject-non-substantive-etc)	**16 – 13**
2. Organization The organization refers to the students'	**Excellent to very good** (Fluent expression – ideas clearly stated- etc)	**20 – 18**

[41] Arthur Hughes, (2003), *Testing for Language Teachers (Second Edition),* Cambridge: Cambridge University Press, p. 104.

ability to write the ideas, information in good logical order. The topic and supporting sentences are clearly stated.	**Good to average** (Somewhat choppy –loosely organized but main ideas stand out, etc)	**17 – 14**
	Fair to poor (Non fluent – ideas)	**13 – 10**
	Fair to poor (Non fluent – ideas confused or disconnected – etc)	**13 – 10**
	Very poor (Does not communicate – no organization – etc)	**9 – 7**
3. Vocabulary Vocabulary refers to the students' ability in using word or idiom to express idea logically. It also refers to use synonym, antonym, prefix, and suffix exactly.	**Excellent to very good** (Sophisticated range – effective word/ idiom choice and usage – etc)	**20 – 18**
	Good to average (Adequate range- occasional errors of word/ idiom form, choice, usage but meaning not obscured).	**17 – 14**
	Fair to poor (Limited range–frequent errors of word/ idiom, form, choice, usage – etc)	**13 – 10**
	Fair to poor (Limited range–frequent errors of word/ idiom, form, choice, usage – etc)	**13 – 10**
	Very poor	**9 –**

	Essentially translation – little knowledge of English vocabulary	7
4. Language Use Language use refers to the students' ability in writing the sentence, simple, complex, and compound sentence correctly and logically it also refers to the ability to use arragement in the sentence and some other words such as nouns, verbs and time signal.	**Excellent to very good** (Effective complex construction – etc)	**25 – 22**
	Good to average (Effective but simple constructions – etc)	**21 – 19**
	Fair to poor (Major problems in simple/ complex constructions – etc)	**17 – 11**
	Very poor (Virtually no mastery of sentence construction rules – etc)	**10 – 5**
5.Mechanism Mechanism refers to the students' ability to use words appropriately and function correctly, such as punctuationand spelling. Paragraph and text can be read correctly.	**Excellent to very good** (Demonstrated mastery of conventions – etc)	**5**
	Good to average (Occasional errors of spelling, punctuation – etc)	**4**
	Fair to poor	**3**

	(Frequent errors of spelling, punctuation, capitalization – etc)	
	Very poor (No mastery of conventions – dominated by errors of spelling, punctuation, capitalization, paragraphing – etc)	**2**

E. Instrument of Research

The technique of collecting data used in this research are :

1. Test

Test is a set of questions and exercises used to measure the achievement or capacity of the individual or group. Test is used to assess and measure students' achievement; mainly the cognitive side related the students' mastery on learning as aim of education and teaching. This research uses test to get the students' achievement that will be used as main data in measure the students' writing ability.

The researcher gathers the data by analyzing the test based on material of procedure text. The researcher gave the test twice (pre-test and post-test) in both experimental and control class.

a. Pre test

Before the teacher explain material by using Color Coding strategy, the teacher give pre-test to experimental and control class in same way. It will be give before the experimental was run.

b. Treatment

The treatment conducted after give the pre-test. The experimental group are giving by using Color Coding strategy while the control group with the conventional strategy. Both experimental and control groups were taught with the same material.

c. Post test

Post-test are give to the experimental and control class. It is give in order to know students' understanding and score in procedure text after they are teach by Color Coding strategy (experimental class) and using non-Color Coding strategy (control class).

F. The Technique for Analyzing Data

In this research the data will be obtained from the experimental and control class. To significantly whether there was effect of Color Coding Strategy on the students' achievement in writing procedure text , the writer should do requirement test at the first by using normality and homogeneity test.

1. Normality Test

Normality test use to determine if a data set is well-modelded by a normal distribution and to compare how likely it is random variable underlying the data to be normally distribution. The normality test of variable X use Liliforstest :

A. Perception $x_1, x_2, \ldots x_n$, made permanent number $z_1, z_2, \ldots z_n$, by formula :

$$z_i = \frac{x - \bar{x}}{s}$$

Where : X = Score of student

$\bar{x}$ = Mean Score

S = Standard Deviation

I.   To every this permanent number and by using enlist of permanent normal distribution, and then calculate the opportunity $F(z_1) = P(z \leq z_1)$

II.   Here in after calculate a proportion $z_1, z_2, \ldots \ldots z_n$ the smaller is equal to z_i

III. Count the difference $F(z_i) - S(z_i)$ and then determine its absolute price

IV.   Take the biggest price among absolute price among absolute price the difference. Mention the price the L_0. If $L_0 < L$ obtain from critical value price test the Liliefors with real level $\alpha = 0.05$, hence distribution normal

2. Homogeneity Test

To test whether variants of both homogenous sample, use by two variants equality test, that is :

$$F = \frac{The\,biggest\,variants}{the\,smallest\,variants}$$

Here in after compare with the table F.

Its criterion if $F_{count} < F_{table}$, so both sample are homogenous.

After the writer find out whether both groups have normal distribution and homogenity. The writer will be use validity test to find out the instrument valid or not, and realibility test to consistency and accuracy in scoring.

3. Hypothesis Test

$$\text{T-test} = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1{}^2}{n_1} + \frac{S_2{}^2}{n_2}}}$$

Where:

T-test = The effect

$\overline{x}_1$ = Mean of Post-test – Pre-test in experimental group

$\overline{x}_2$ = Mean of Post-test – Pre-test in control group

$S_1{}^2$ = Variant of Pre-test – Post-test in experimental group

$S_2{}^2$ = Variant of Pre-test – Post-test in control group

n_1 = Sample in experimental group

n_2 = Sample in control group

The hypothesis to be test in the form :

Ha : $\mu x = \mu y$

Ho : $\mu x \neq \mu y$

Where:

Ha : alternative hyphothesis

H_0 : null hyphothesis

μx : the mean score of the students' teach by using Color Coding strategy

μy : the mean score of students' teach by using conventional method.

CHAPTER IV

RESEARCH FINDING AND ANALYSIS

A. Research Finding

The results of this research showed that there was significant effect between the students' achievement in writing procedure text by using Color Coding strategy and without using Color Coding strategy. When Color Coding Strategy applied in the students' writing procedure text it was good strategy on the students' achievement in writing procedure text. It can be seen from the results of the students' score who were taught by using Color Coding strategy. Color coding strategy had strength in teaching writing procedure text. This strategy made the students have fun while learning processed using colors, helped the students to express their ideas, helped to build their idea while writing and made their writing increase. Moreover, Color Coding strategy helped the students to think the relevant ideas when writing, and encourage the students to have the initiative to study independently. This strategy has good to be applied in the classroom. It's just there is the problem in that learning process, grammatical and vocabulary were some of the problems that occur when the strategy applied. The students were difficulties to write good grammatical and the students has the limitation in vocabulary because in this strategy did not teach grammatical and vocabulary.

B. Description of Data

This study was conducted by applying ban experimental research. There were two groups in this research, namely experimental and control group. This research applied a reading text which the total score 100. The pre test was given before the treatment and the post test was given after the treatment. The researcher gave the data treatment the students' in the experimental group by using Color Coding strategy while control group without using Color Coding strategy. After conducting the research got the data of students' scores in pre test and post test from both exprimental and control group.

Table 4. The score of Pre Test and Post Test of experimental Group.

No	Students' initial	Scores	
		Pre test	Post test
1	AI	40	65
2	AP	50	70
3	AD	40	70
4	AS	55	65
5	AY	50	80
6	AF	60	60
7	BF	40	65
8	DS	45	60
9	DL	55	80
10	EW	40	70
11	GL	50	75
12	HD	45	65

13	HN	45	75
14	ID	60	65
15	LS	50	70
16	MR	55	75
17	ML	45	60
18	MR	50	65
19	MF	60	70
20	MI	50	75
21	MA	50	70
22	MF	40	60
23	NH	55	80
24	RD	55	70
25	RN	45	75
26	RI	55	70
27	RS	55	65
28	RP	50	80
29	RPU	45	70
30	SI	50	70
31	SR	50	70
32	RA	45	75
	TOTAL	1580	2235
	MEAN	49.375	69.84375

Based on the table above, the students' achievement in writing text in experimental group showed the lowest score pre test was 40, and the highest score of pre test was 60 and

the mean of pre test was 49,37. On the other hand the lowest score of post test was 60, and

the highest of post test was 80 and the mean of post test was 69,84.

Table 5. The Score of Pre Test and Post Test of Control Group

No	Students' initial	Scores	
		Pre test	Post test
1	AH	55	58
2	AN	46	55
3	AE	43	55
4	AP	43	58
5	AD	50	58
6	AS	50	50
7	AW	40	60
8	BP	40	55
9	CP	50	55
10	DS	43	60
11	IAS	50	50
12	IP	46	60
13	JMM	55	58
14	KR	40	50
15	KN	43	60
16	LP	50	55
17	MI	40	55
18	MK	43	50
19	MA	46	58

20	MD	50	58
21	MF	40	65
22	MRP	55	58
23	MR	43	50
24	NM	43	58
25	OS	40	65
26	PM	40	65
27	RJ	46	58
28	RM	43	50
29	AN	50	65
30	RN	43	50
31	SR	43	58
32	SL	46	58
	TOTAL	1455	1818
	MEAN	45.46875	56.8125

Based on the table above, the students' achievement in writing text in experimental group showed the lowest score pre test was 40, and the highest score of pre test was 55 and the mean of pre test was 45,46. On the other hand the lowest score of post test was 50, and the highest of post test was 65 and the mean of post test was 56,81.

Based on the explanation above,it shows that the students' score in experimental group was higher than students' scorenin control group, where in pre test 49,37 and the scorein post test 69,84. The total score of the mean score in experimental and control group

showed that there was significant effect in improvement of students' score between pre test and post test.

C. Data Analysis

1. Normality Testing

Normality testing used to determine if a data set is well-modeled by normal distribution and to compare how likely it is for a random variable underlying the data set to benormally distributed.

1.1.Normality Testing of Exprimental Group

Table 6. Frequency Distribution of Pre Test in Exprimental Group

No	Xi	Fi	FiXi	Xi²	FiXi²
1	40	5	200	1600	8000
2	45	7	315	2025	14175
3	50	10	500	2500	25000
4	55	7	385	3025	21175
5	60	3	180	3600	10800
TOTAL		32	1580	12750	79150

Based on the data above, the result of FiXi² is 79150 and FiXi 1580. Then the following is the calculation of mean, variant and standard deviation.

    a. **Mean**

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

Where: $\bar{x}$ = Mean of Variable x

           $\sum$FiXi   = Total number of score

$$\sum Fi \qquad = \text{Number of sample}$$

So,

$$\bar{x} = \frac{\sum fi\,Xi}{\sum fi}$$

$$= \frac{1580}{32}$$

$$= 49{,}37$$

b. **Variant**

Where :

$$S^2 \qquad = \text{variant}$$

$$N \qquad = \text{Number of sample}$$

So'

$$S^2 = \frac{N \sum FiXi^2 - (\sum FiXi)^2}{N(N-1)}$$

$$= \frac{32 \; x \; 79150 - (1580)^2}{32(32-1)}$$

$$= \frac{2532800 - 2496400}{992}$$

$$= \frac{36400}{992}$$

$$= 36{,}69$$

c. **Standard Deviation**

$$S = \sqrt{S^2}$$

$$= \sqrt{36{,}69}$$

$$= 6{,}057$$

After getting the calculation of mean, variant and standard deviation, then the next step is to found out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality reading text can be seen in the following table:

Table 7. Normality Testing of Pre Test in Experimental Group

No	Score (Zi)	F	Fkum	Zi	F(Zi)	S(Zi)	F(Zi)-S(Zi)
1	40	5	5	-1.54	0.0618	0.1562	-0.0944
2	40	5	5	-1.54	0.0618	0.1562	-0.0944
3	40	5	5	-1.54	0.0618	0.1562	-0.0944
4	40	5	5	-1.54	0.0618	0.1562	-0.0944
5	40	5	5	-1.54	0.0618	0.1562	-0.0944
6	45	7	12	-0.72	0.2358	0.375	-0.1392
7	45	7	12	-0.72	0.2358	0.375	-0.1392
8	45	7	12	-0.72	0.2358	0.375	-0.1392
9	45	7	12	-0.72	0.2358	0.375	-0.1392
10	45	7	12	-0.72	0.2358	0.375	-0.1392
11	45	7	12	-0.72	0.2358	0.375	-0.1392
12	45	7	12	-0.72	0.2358	0.375	-0.1392
13	50	10	22	0.10	0.5398	0.6875	-0.1477
14	50	10	22	0.10	0.5398	0.6875	-0.1477
15	50	10	22	0.10	0.5398	0.6875	-0.1477
16	50	10	22	0.10	0.5398	0.6875	-0.1477
17	50	10	22	0.10	0.5398	0.6875	-0.1477
18	50	10	22	0.10	0.5398	0.6875	-0.1477
19	50	10	22	0.10	0.5398	0.6875	-0.1477
20	50	10	22	0.10	0.5398	0.6875	-0.1477
21	50	10	22	0.10	0.5398	0.6875	-0.1477
22	50	10	22	0.10	0.5398	0.6875	-0.1477
23	55	7	29	0.93	0.8238	0.9062	-0.0824
24	55	7	29	0.93	0.8238	0.9062	-0.0824
25	55	7	29	0.93	0.8238	0.9062	-0.0824
26	55	7	29	0.93	0.8238	0.9062	-0.0824
27	55	7	29	0.93	0.8238	0.9062	-0.0824
28	55	7	29	0.93	0.8238	0.9062	-0.0824
29	55	7	29	0.93	0.8238	0.9062	-0.0824
30	60	3	32	1.75	0.9599	1	-0.0401
31	60	3	32	1.75	0.9599	1	-0.0401
32	60	3	32	1.75	0.9599	1	-0.0401
TOTAL	1580			L0= -0.1477			

MEAN	49.375	LT= 0,1566

a. Finding Z score

Formula: Zi 1 $= \frac{xi - \bar{x}}{s}$

Zi 1 $= \frac{40-49,37}{6,05}$ $= -1,54$

Zi 2 $= \frac{45-49,37}{6,05}$ $= -0,72$

Zi 3 $= \frac{50-49,37}{6,05}$ $= 0,10$

Zi 4 $= \frac{55-49,37}{6,05}$ $= 0,93$

Zi 5 $= \frac{60-49,37}{6,05}$ $= 1,75$

B. Finding S(Zi)

S(Zi) $= \frac{F\ kum}{N}$

S(Zi) $= \frac{5}{32}$ $= 0,1562$

S(Zi) $= \frac{12}{32}$ $= 0,375$

S(Zi) $= \frac{22}{32}$ $= 0,6875$

S(Zi) $= \frac{29}{32}$ $= 0,9062$

S(Zi) $= \frac{32}{32}$ $= 1$

From the table above, it can be seen that Liliefors observation or Lo = with n = 32 and at real level α = 0,05 from the list of critical value of Liliefors table Lt = . It is known that the coeficient of Lo (-0.1477) < Lt (0,1566). So it can concluded that the data distribution of the students' ability in writing parargraph text normal.

Table 8. Frequency Distribution of Post Test in experimental class

No	Xi	Fi	FiXi	Xi²	FiXi²
1	60	4	240	3600	14400
2	65	7	455	4225	29575
3	70	11	770	4900	53900
4	75	6	450	5625	33750
5	80	4	320	6400	25600
TOTAL		32	2235	24750	157225

from the data above, the result of FiXi² is 157225 and FiXi 2235. Then the following is the calculation of mean, variant and standard deviation.

a. **Mean**

$$\bar{x} = \frac{\sum fi\,Xi}{\sum fi}$$

Where:

$$\bar{x} = \frac{\sum fi\,Xi}{\sum fi}$$

Where: $\bar{x}$ = Mean of Variable x

$\sum$FiXi = Total number of score

$\sum$Fi = Number of sample

So,

$$\bar{x} = \frac{\sum fi\,Xi}{\sum fi}$$

$$= \frac{2235}{32}$$

$$= 69{,}84$$

b. **Variant**

Where :

S^2 = variant

N = Number of sample

So'

$$S^2 = \frac{N \sum FiXi^2 - (\sum FiXi)^2}{N(N-1)}$$

$$= \frac{32 \; x \; 157225 - (2235)^2}{32(32-1)}$$

$$= \frac{5031200 - 4995225}{992}$$

$$= \frac{35975}{992}$$

$$= 36{,}265$$

c. **Standard Deviation**

$$S = \sqrt{S^2}$$

$$= \sqrt{36{,}265} = 6{,}02$$

After getting the calculation of mean, variant and deviation standard, then the next step is to found out the normality of the test. It means that the test was given to the students' is observed by Liliefors test. The calculation of normality reading text can be seen in the following table:

Table 9. Normality Testing of Post Test in Exprimental Group

No	Score (Zi)	F	Fkum	Zi	F(Zi)	S(Zi)	F(Zi)-S(Zi)
1	60	4	4	-1.63	0.0516	0.125	-0.0734
2	60	4	4	-1.63	0.0516	0.125	-0.0734
3	60	4	4	-1.63	0.0516	0.125	-0.0734
4	60	4	4	-1.63	0.0516	0.125	-0.0734
5	65	7	11	-0.80	0.2119	0.3437	-0.1318
6	65	7	11	-0.80	0.2119	0.3437	-0.1318
7	65	7	11	-0.80	0.2119	0.3437	-0.1318
8	65	7	11	-0.80	0.2119	0.3437	-0.1318
9	65	7	11	-0.80	0.2119	0.3437	-0.1318
10	65	7	11	-0.80	0.2119	0.3437	-0.1318
11	65	7	11	-0.80	0.2119	0.3437	-0.1318
12	70	11	22	0.02	0.508	0.6875	-0.1795
13	70	11	22	0.02	0.508	0.6875	-0.1795
14	70	11	22	0.02	0.508	0.6875	-0.1795
15	70	11	22	0.02	0.508	0.6875	-0.1795
16	70	11	22	0.02	0.508	0.6875	-0.1795
17	70	11	22	0.02	0.508	0.6875	-0.1795
18	70	11	22	0.02	0.508	0.6875	-0.1795
19	70	11	22	0.02	0.508	0.6875	-0.1795
20	70	11	22	0.02	0.508	0.6875	-0.1795
21	70	11	22	0.02	0.508	0.6875	-0.1795
22	70	11	22	0.02	0.508	0.6875	-0.1795
23	75	6	28	0.85	0.8023	0.875	-0.0727
24	75	6	28	0.85	0.8023	0.875	-0.0727
25	75	6	28	0.85	0.8023	0.875	-0.0727
26	75	6	28	0.85	0.8023	0.875	-0.0727
27	75	6	28	0.85	0.8023	0.875	-0.0727
28	75	6	28	0.85	0.8023	0.875	-0.0727
29	80	4	32	1.68	0.9535	1	-0.0465
30	80	4	32	1.68	0.9535	1	-0.0465
31	80	4	32	1.68	0.9535	1	-0.0465
32	80	4	32	1.68	0.9535	1	-0.0465
TOTAL	2235				L0= -0.1795		
MEAN	69.84375				LT= 0.1566		

a. **Finding Z Score**

Formula: Zi 1 $= \dfrac{xi - \bar{x}}{s}$

$$\text{Zi 1} \quad = \frac{60-69{,}84}{6{,}02} \quad = -1{,}63$$

$$\text{Zi 2} \quad = \frac{65-69{,}84}{6{,}02} \quad = -0{,}80$$

$$\text{Zi 3} \quad = \frac{70-69{,}84}{6{,}02} \quad = -0{,}02$$

$$\text{Zi 4} \quad = \frac{75-69{,}84}{6{,}02} \quad = 0{,}85$$

$$\text{Zi 5} \quad = \frac{80-69{,}84}{6{,}02} \quad = 1{,}68$$

b. **Finding S(Zi)**

$$S(Zi) \quad = \frac{F\ kum}{N}$$

$$S(Zi) \quad = \frac{4}{32} \quad = 0{,}125$$

$$S(Zi) \quad = \frac{11}{32} \quad = 0{,}3437$$

$$S(Zi) \quad = \frac{22}{32} \quad = 0{,}6875$$

$$S(Zi) \quad = \frac{28}{32} \quad = 0{,}875$$

$$S(Zi) \quad = \frac{32}{32} \quad = 1$$

From the table above, it can be seen that Liliefors observationor Lo= -with n = 32 and at real level α= 0,05 from the list of critical value of Liliefors table Lt =. It is known that the coeficient of Lo (-0.1795) < Lt (0,1566). So it can be concluded that the data distribution of the students' ability in writing text normal.

1.2.Normality Testing of Control Group

Table 10, Frequency Distribution of Pre Test in Control Group

No	Xi	Fi	FiXi	Xi²	FiXi²
1	40	7	280	1600	11200
2	43	10	430	1849	18490
3	46	5	230	2116	10580
4	50	7	350	2500	17500
5	55	3	165	3025	9075
TOTAL		32	1455	11090	66845

from the data above, the result $FiXi^2$ is 66845 and FiXi is 1455. Then the following is the calculation of mean, variant and standard deviation.

a. **Mean**

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

Where:

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

Where: $\bar{x}$ = Mean of Variable x

$\sum$FiXi   = Total number of score

$\sum$Fi   = Number of sample

So,

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

$$= \frac{1455}{32}$$

$$= 45,46$$

b. Variant

Where :

S^2 = variant

N   = Number of sample

So'

$$S^2 = \frac{N \sum FiXi^2 - (\sum FiXi)^2}{N(N-1)}$$

$$= \frac{32x66845 - (1455)^2}{32(32-1)}$$

$$= \frac{2139040 - 2117025}{992}$$

$$= \frac{22015}{992}$$

$$= 22,19$$

c. Standard Deviation

$$S = \sqrt{S^2}$$

$$= \sqrt{22,19} = 4,71.$$

After getting the calculation of mean, variant and standard deviation, then the next step is to find out the normality of the test. It means that the test was given to the students' is observed by Liliefots test. The calculation of normality reading text paragraph can be seen in the following table:

Table 11. Normality Testing of Pre Test in Control Group

No	Score (Zi)	F	Fkum	Zi	F(Zi)	S(Zi)	F(Zi)-S(Zi)
1	40	7	7	-1.15	0.1251	0.2187	-0.0936
2	40	7	7	-1.15	0.1251	0.2187	-0.0936
3	40	7	7	-1.15	0.1251	0.2187	-0.0936
4	40	7	7	-1.15	0.1251	0.2187	-0.0936
5	40	7	7	-1.15	0.1251	0.2187	-0.0936
6	40	7	7	-1.15	0.1251	0.2187	-0.0936
7	40	7	7	-1.15	0.1251	0.2187	-0.0936
8	43	10	17	-0.52	0.3015	0.5312	-0.2297
9	43	10	17	-0.52	0.3015	0.5312	-0.2297
10	43	10	17	-0.52	0.3015	0.5312	-0.2297
11	43	10	17	-0.52	0.3015	0.5312	-0.2297
12	43	10	17	-0.52	0.3015	0.5312	-0.2297
13	43	10	17	-0.52	0.3015	0.5312	-0.2297
14	43	10	17	-0.52	0.3015	0.5312	-0.2297
15	43	10	17	-0.52	0.3015	0.5312	-0.2297
16	43	10	17	-0.52	0.3015	0.5312	-0.2297
17	43	10	17	-0.52	0.3015	0.5312	-0.2297
18	46	5	22	0.11	0.5438	0.6875	-0.1437
19	46	5	22	0.11	0.5438	0.6875	-0.1437
20	46	5	22	0.11	0.5438	0.6875	-0.1437
21	46	5	22	0.11	0.5438	0.6875	-0.1437
22	46	5	22	0.11	0.5438	0.6875	-0.1437
23	50	7	29	0.96	0.8315	0.8285	0.003
24	50	7	29	0.96	0.8315	0.8285	0.003
25	50	7	29	0.96	0.8315	0.8285	0.003
26	50	7	29	0.96	0.8315	0.8285	0.003
27	50	7	29	0.96	0.8315	0.8285	0.003
28	50	7	29	0.96	0.8315	0.8285	0.003
29	50	7	29	0.96	0.8315	0.8285	0.003
30	55	3	32	2.02	0.9783	1	-0.0217
31	55	3	32	2.02	0.9783	1	-0.0217
32	55	3	32	2.02	0.9783	1	-0.0217
TOTAL	1455	L0= 0.003					
MEAN	45.46875	LT= 0.1566					

a. Finding Z Score

Formula: Zi 1 $= \frac{xi - \bar{x}}{s}$

Zi 1 $= \frac{40 - 45,46}{4,71}$ $= -1,15$

Zi 2 $= \frac{43 - 45,46}{4,71}$ $= -0,52$

Zi 3 $= \frac{46 - 45,46}{4,71}$ $= 0,11$

Zi 4 $= \frac{50 - 45,46}{4,71}$ $= 0,96$

Zi 5 $= \frac{55 - 45,46}{4,71}$ $= 2,02$

b. Finding S(Zi)

S(Zi) $= \frac{F\ kum}{N}$

S(Zi) $= \frac{7}{32}$ $= 0,2187$

S(Zi) $= \frac{17}{32}$ $= 0,5312$

S(Zi) $= \frac{21}{31}$ $= 0,6875$

S(Zi) $= \frac{23}{31}$ $= 0,8285$

S(Zi) $= \frac{32}{32}$ $= 1$

From the table above, it can be seen that Liliefors observation or Lo= - with

n= 32 and at real level α = 0,05 from the list of crtical value of Liliefors table Lt = . It is

known that the coefficient of Lo (0.003) < Lt (0.1566). So it can be concluded that the

data distribution of the students' ability in reading text normal.

Table 12. Frequency Distribution of Post Test in Control Group

No	Xi	Fi	FiXi	Xi²	FiXi²
1	50	7	350	2500	17500
2	55	6	330	3025	18150
3	58	11	638	3364	37004
4	60	4	240	3600	14400
5	65	4	260	4225	16900
TOTAL		32	1818	16714	103954

Based on the data above, the result of FiXi^2 is 103954 and FiXi is 1818. Then the following is the calculation of mean, variant and standard deviation.

a. **Mean**

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

Where:

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

Where: $\bar{x}$ = Mean of Variable x

$\sum$FiXi = Total number of score

$\sum$Fi = Number of sample

So,

$$\bar{x} = \frac{\sum fi\, Xi}{\sum fi}$$

$$= \frac{1818}{32}$$

$$= 56{,}81$$

b. **Variant**

Where :

$$S^2 \qquad\qquad = \text{variant}$$

$$N \qquad\qquad = \text{Number of sample}$$

So'

$$S^2 = \frac{N \sum FiXi^2 - (\sum FiXi)^2}{N(N-1)}$$

$$= \frac{32(103954) - (1818)^2}{32(32-1)}$$

$$= \frac{3326528 - 3305124}{992}$$

$$= \frac{21{,}404}{992}$$

$$= 21{,}57$$

c. **Standard Deviation**

$$S = \sqrt{S^2}$$

$$= 21{,}57 = 4{,}644$$

After getting the calculation of mean, variant and standard deviation then the next step is to find out the normality of the test. It means that the test was given to the students' is observed by Liliefors test. The calculation of normality reading text can be seen in the following table:

Table 13. Normality Testing of Post Test in Control Group

No	Score (Zi)	F	Fkum	Zi	F(Zi)	S(Zi)	F(Zi)-S(Zi)
1	50	7	7	-1.46	0.0721	0.2187	-0.1466
2	50	7	7	-1.46	0.0721	0.2187	-0.1466
3	50	7	7	-1.46	0.0721	0.2187	-0.1466
4	50	7	7	-1.46	0.0721	0.2187	-0.1466
5	50	7	7	-1.46	0.0721	0.2187	-0.1466
6	50	7	7	-1.46	0.0721	0.2187	-0.1466
7	50	7	7	-1.46	0.0721	0.2187	-0.1466
8	55	6	13	-0.39	0.3483	0.4062	-0.0579
9	55	6	13	-0.39	0.3483	0.4062	-0.0579
10	55	6	13	-0.39	0.3483	0.4062	-0.0579
11	55	6	13	-0.39	0.3483	0.4062	-0.0579
12	55	6	13	-0.39	0.3483	0.4062	-0.0579
13	55	6	13	-0.39	0.3483	0.4062	-0.0579
14	58	11	24	0.25	0.5987	0.75	-0.1513
15	58	11	24	0.25	0.5987	0.75	-0.1513
16	58	11	24	0.25	0.5987	0.75	-0.1513
17	58	11	24	0.25	0.5987	0.75	-0.1513
18	58	11	24	0.25	0.5987	0.75	-0.1513
19	58	11	24	0.25	0.5987	0.75	-0.1513
20	58	11	24	0.25	0.5987	0.75	-0.1513
21	58	11	24	0.25	0.5987	0.75	-0.1513
22	58	11	24	0.25	0.5987	0.75	-0.1513
23	58	11	24	0.25	0.5987	0.75	-0.1513
24	58	11	24	0.25	0.5987	0.75	-0.1513
25	60	4	28	0.68	0.7517	0.87	-0.1183
26	60	4	28	0.68	0.7517	0.87	-0.1183
27	60	4	28	0.68	0.7517	0.87	-0.1183
28	60	4	28	0.68	0.7517	0.87	-0.1183
29	65	4	32	1.76	0.7517	1	-0.2483
30	65	4	32	1.76	0.7517	1	-0.2483
31	65	4	32	1.76	0.7517	1	-0.2483
32	65	4	32	1.76	0.7517	1	-0.2483
TOTAL	1818				L0= -0.2483		
MEAN	56.8125				LT= 0.1566		

a. **Finding Z Score**

Formula: Zi 1 $= \frac{xi - \bar{x}}{s}$

$$\text{Zi 1} \quad = \frac{50-56{,}81}{4{,}64} \quad = -1{,}46$$

$$\text{Zi 2} \quad = \frac{55-56{,}81}{4{,}64} \quad = -0{,}39$$

$$\text{Zi 3} \quad = \frac{58-56{,}81}{4{,}64} \quad = 0{,}25$$

$$\text{Zi 4} \quad = \frac{60-56{,}81}{4{,}64} \quad = 0{,}68$$

$$\text{Zi 5} \quad = \frac{65-56{,}81}{4{,}64} \quad = 1{,}76$$

Finding S(Zi)

$$S(Zi) \quad = \frac{F\ kum}{N}$$

$$S(Zi) \quad = \frac{7}{32} \quad = 0{,}1935$$

$$S(Zi) \quad = \frac{13}{32} \quad = 0{,}4062$$

$$S(Zi) \quad = \frac{24}{32} \quad = 0{,}75$$

$$S(Zi) \quad = \frac{28}{32} \quad = 0{,}87$$

$$S(Zi) \quad = \frac{32}{32} \quad = 1$$

From the table above, it can be seen that Liliefors observation or Lo= with n= 32 and at real α = 0,05 from the list of critical value of Liliefors table Lt= . It is known that the coefficient of Lo (-0,2483) < Lt (0,1566). So it can be concluded that the data distribution of the students' ability in writing text is normal.

2. Homogenity Testing

2.1 Homogeneity testing of pre test

$$F_{obs} = \frac{s1^2}{s2^2}$$

Where : $S1^2$ = the biggest variant

               $S2^2$ = the sm,allest variant

Based on the variants of both samples of pre test found that :

$S^2_{ex} = 36,69$ n = 32

$S^2_{co} = 22,19$ n = 32

So :

$$F_{obs} = \frac{36,69}{22,19} = 1,653$$

Then the coefficient of $F_{obs} = 1,653$ is compared with F_{table}, where F_{table} is determined at real α = 0,05 and the same numerator dk = 32-1 that was exist dk numerator 31, the denomirator dk = 32-1 (32-1= 31). Then F_{table} can be calculated $F_{0,05(31;31)} = 1.90$

So $F_{obs} < F_{tab}$ or (1,653 < 1,90) so it can be concluded that the variant is homogeneous.

2.2 Homogenity Testing of post test

$$F_{obs} = \frac{s1^2}{s2^2}$$

Where : $S1^2$ = the biggest variant

               $S2^2$ = the sm,allest variant

Based on the variants of both samples of post test found that :

$S^2_{ex} = 36,26$ $\qquad\qquad\qquad\qquad\qquad$ n = 32

$S^2_{co} = 21,57$ $\qquad\qquad\qquad\qquad\qquad$ n = 32

So : $F_{obs} = \dfrac{36,26}{21,57} = 1,681$

Then the coefficient of $F_{obs} = 1,681$ is compared with F_{table}, where F_{table} is determined at real α = 0,05 and the same numerator dk = 32-1 that was exist dk numerator 31, the denomirator dk = 32-1 (32-1= 31). Then F_{table} can be calculated $F_{0,05(31;31)=}$ 1.90

So $F_{obs} < F_{tab}$ or (1,681 < 1,90) so it can be concluded that the variant is homogeneous.

3. Hyphothesis Testing

Table 14. Mean of Post Test- Pre test in Exprimental Group

No	Score Post test	Score Pre Test	Decrease
1	65	40	25
2	70	50	20
3	70	40	30

4	65	55	10
5	80	50	30
6	60	60	0
7	65	40	25
8	60	45	15
9	80	55	25
10	70	40	30
11	75	50	25
12	65	45	20
13	75	45	30
14	65	60	5
15	70	50	20
16	75	55	20
17	60	45	15
18	65	50	15
19	70	60	10
20	75	50	25
21	70	50	20

22	60	40	20
23	80	55	25
24	70	55	15
25	75	45	30
26	70	55	15
27	65	55	10
28	80	50	30
29	70	45	25
30	70	50	20
31	70	50	20
32	75	45	30
Total			655
Mean			20.46875

Table 15. mean of post test -pre test in control group

No	Post test	Pre test	Decrease
1	58	55	3
2	55	46	9

3	55	43	12
4	58	43	15
5	58	50	8
6	50	50	0
7	60	40	20
8	55	40	15
9	55	50	5
10	60	43	17
11	50	50	0
12	60	46	14
13	58	55	3
14	50	40	10
15	60	43	17
16	55	50	5
17	55	40	15
18	50	43	7
19	58	46	12
20	58	50	8

21	65	40	25
22	58	55	3
23	50	43	7
24	58	43	15
25	65	40	25
26	65	40	25
27	58	46	12
28	50	43	7
29	65	50	15
30	50	43	7
31	58	43	15
32	58	46	12
Total			363
Mean			11.34375

Before doing hyphothesis testing by using t-test, in this case is done by taken post test score in experimental class and post test score in control class. The post test is taken because the score that gotten after teaching learning process.

The formula t-test used as follows :

The formula t-test used as follows :

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\frac{1}{N1} + \frac{1}{N2}}}$$

The combination of Variant was conducted by using this formula

$$S^2 = \frac{(n_1 - 1)\, s_1{}^2 + (n_2 - 1)s_2{}^2}{n_1 + n_2 - 2}$$

$$S^2 = \frac{(32 - 1)\, 6{,}02 + (32 - 1)4{,}64}{32 + 32 - 2}$$

$$S^2 = \frac{(31)\, 6{,}02 + (31)4{,}64}{62}$$

$$S^2 = \frac{186{,}62 + 143{,}84}{62}$$

$$S^2 = \frac{330{,}46}{62}$$

$$S^2 = 5{,}33$$

The deviation standard is

$$S = \sqrt{5{,}33}$$

$$S = 2{,}30$$

So, it can be known that the value of the combining deviation standard from pulled up the roots of variant values 5,33 is 2,30

.

$$\bar{X}_1 = 39{,}69$$

$$\bar{X}_2 = 22$$

$$n_1 = 32$$

$$n_2 = 32$$

S $= 2{,}30$

It can be counted as follows :

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S\sqrt{\frac{1}{N1} + \frac{1}{N2}}}$$

$t_0 = t - \text{test}$

$\bar{X}_1$ = Different levels of pre test score and post test experimental class

$\bar{X}_2$ = Different levels of pre test score and post test control class

n_1 = The sample of experiment group

n_2 = The sample of control group

S = combining standard deviation

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S\sqrt{\frac{1}{N1} + \frac{1}{N2}}}$$

$$t_0 = \frac{20.46 - 11.34}{2{,}30\sqrt{\frac{1}{32} + \frac{1}{32}}}$$

$$t_0 = \frac{9.12}{2{,}30\sqrt{\frac{2}{32}}}$$

$$t_0 = \frac{9.12}{2{,}30 \; x \; 0{,}244}$$

$$t_0 = \frac{9.12}{0{,}56}$$

$T_{obs\,=}\,16.28$

The coefficient of t_{count} was 16.28 that was compared with t_{table} , where the coefficient of t_{table} at real level $\propto$ 0,05 with dk = 32 + 32 -2 = 62 gained the coefficient of $t_{(0,05)(60)}$ = 2,0002. In fact , the coefficient of t_{obs} (16.28) > t_{table} (2,0002). It shows that t_{obs} is in zero hypothesis rejection (H_0) is accepted. It means that the alternative hypothesis which is proposed by the researcher that there is significant effect of Color Coding strategy to students' Achievement in writing procedure text is accepted.

CHAPTER V

Conclusion And Suggestion

A. Conclusion

From the data obtained it is seen that the result of the students' achievement on writing procedure text by using Color Coding strategy is higher than that by using convential strategy at the eight grade of YP Al-Masdar Batang Kuis. Color Coding strategy is significant to be used in the effect on the students' achievement in writing procedure text. The result of t_{obs} is 16.28 and t_{tab} is 2,0002 ($t_{obs} > t_{tab}$,16.28 > 2,0002). It means that H_0 is rejected and H_a is accepted. There is a significant effect of using Color Coding Strategy on the students' achievement in procedure text.

B. Suggestion

Based on the conclusion above, the researcher gives some suggestions as follows:

1. English teachers are suggested to use Color Coding in their teaching learning process in order to improve the students' writing procedure text.

2. The researcher who are interested in doing a research related to this study should try to apply Color Coding strategy on different level of learners through different genre to prove the effectiveness of Color Coding strategy on the students' writing procedure text.

3. Finally, the researcher considers that this study still need validity from the next researcher that has the similar topic with the study.

REFERENCES

Alan Meyers. 2005. *Gate away to Academic Writing: Effective Sentences, Paragraph and Essays.* (New York: Longman)

Chris Juzwiak. 2009. Stepping *Stones A Guided Approach To Writing Sentences And Paragraph*, (New York: Bedford/St. Martin's)

Fred D White, 1986. *The Writer's Art.*(California: Wads Worth Publishing Company Balmont)

H. Douglas Brown.2000. *Principles of Language Learning and Teaching.* 4th Ed. (San Fransisco: Longman)

Hamzah B.Uno.2007.*Model Pembelajaran: Menciptakan Proses BelajarMengajaryangKreatifdanEfektif ,*(Jakarta: BumiAksara)

http://makalahpendidikanislamlengkap.blogspot.co.id.2016/12/ayat-ayat-al-qur'an-tentang-metode.html

http:/writingcenter.unc.edu/tips-and-tools/color-coding/

https://www.theclassroomkey.com/2015/08/8-smart-strategies-for-teaching-writing.html

Jack C, Richards and Willy A. Renandya. 2011.*Methodology in Language teaching: An Anthology of current Practice.* (Cambridge University Press)

Jeremy Harmer, 2004. *How to Teach Writing.*(England: Longman)

John Langan, 2006. *English Skills with Readings: Sixth edition*, (New York: McGraw-Hill Companies, inc)

Karen Blanchaard, and Christine Root. 2003. *Ready to Write; A First Composition Text 3ed*, (Longman: Pearson Education, inc)

Knapp p & Watkins. 2005. *Genre, Text, and Grammar*.(Sydney: UNSW Press)

Mona lisa, Refnaldi, "*Using PLEASE Strategy in Writing a Descriptive text,* journal of English language teaching, vol. 1 No. 2, maret 2013.

NunukSuryani and Leo Agung.2012.*Strategi BelajarMengajar,* (Yogyakarta:

   PenerbitOmbak)

Pardiyono. 2007. *PastiBisa! Teaching Genre-Based Writing*. (Yogyakarta: CV. Andi Offset)

Pardiyono. 2006.*12 Writing clues for Better Writing Competence.* (Yogyakarta: Andi)

Penny Ur. 2011. *A Course in language Teaching; Practice and Theory*, (London: Cambridge

   University Press)

Peter Knapp and Megan Watkins, 2005.*Genre Text Grammar: Technologies for Teaching

   and Assessing Writing*. (Australia: UNSW Press Book)

SanggamSiahaan and KisnoShinoda. 2008. *Generic Text Structure*. (Yogyakarta: GrahaIlmu)

SuharsimiArikunto. *ProsedurPenelitianSuatuPendekatanPraktek.* (Jakarta: RinekaCipta,

   2006)

Syahrum and Salim, *MetodologiPenelitianKuantitatif*(Bandung: Ciptapustaka Media, 2007)

Zulraudah, jufri, "*teaching Writing by UsingRunning Dictation Activity for Elementary

   School Students",* JELT Vol. 3 No. 1 Serie A, September 2014.

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

Nama Sekolah : **YP SMP Al Masdar**

Mata Pelajaran : **Bahasa Inggris**

Kelas/Semester : **VIII/II (Genap)**

Alokasi Waktu : **4× 45 menit (2x pertemuan)**

Materi : **Procedure Text**

A. Standar Kompetensi : Membaca

12. Mengungkapkan makna dalam teks tulis fungsional dan esai pendek sangat sederhana

berbentuk descriptive dan procedure untuk berinteraksi dengan lingkungan terdekat.

B. Kompetensi Dasar :

12.2 Mengungkapkan makna dan langkah retorika dalam esai pendek sangat sederhana

dengan menggunakan ragam bahasa tulis secara akurat, lancar dan berterima untuk

berinteraksi dengan lingkungan terdekat dalam teks berbentuk procedure.

C. Indikator

1. Melengkapi teks procedur.

2. Menyusun teks procedur.

D. TujuanPembelajaran

Pada akhir proses pembelajaran diharapkan siswa dapat:

1. Melengkapi teks procedur.

2. Menyususn teks procedur dengan tepat.

E. Materi Pokok

Procedure Teks

Pengertian Procedure Text

Sebelum menjelaskan tentang generic structure, ciri-ciri procedure text dan contohnya, saya akan memulai penjelasan ini mendefinisikan pengertian procedure text baik dalam bahasa Inggris maupun dalam bahasa Indonesia. *"Procedure text is a text that is designed to describe how something is achieved through a sequence of actions or steps".* Jadi yang dimaksud dengan procedure text adalah sebuah genre of text yang berfungsi untuk menggambarkan bagaimana sesuatu dilakukan atau dicapai melalui urutan tindakan atau langkah yang benar.

Tujuan Procedure Text

Tujuan komunikatif dari procedure text adalah bagaimana seorang penulis mampu memahamkan pembaca tentang cara melakukan, menyelesaikan atau mencapai sesuatu dengan cara yang runtut dan benar atau prosedural. Sebenarnya dilihat dari istilahnya, kita tentu sudah bisa memahami apa yang dimaksud dengan procedure text. Jadi mungkin ini adalah salah satu genre of text yang tanpa dijelaskan sebelumnya tapi kita sudah dapat meraba apa maksud tujuan teks ini.

Generic Structure Procedure Text

1. **The Goal of Activity**

Pada bagian ini, penulis mencoba menjelaskan tentang apa yang akan dibuat atau dicapai melalui serangkaian langkah yang akan dijelaskan pada paragraf berikutnya sehingga pembaca tidak salah paham tentang apa yang sedang dibicarakan.

2. **Any Material Needed for Procedure**

Setelah pembaca mengetahui sesuatu apa yang akan dibuat atau dicapai, kemudian penulis memaparkan materi atau bahan-bahan yang harus dipersiapkan atau dibutuhkan agar sesuatu tersebut dapat dicapai dengan baik. Jadi pastikan semua bahan atau materi sudah lengkap sebelum mulai membuatnya.

3. **Steps to Achieve the goal**

Jika bahan-bahan atau materi yang dibutuhkan sudah lengkap, barulah penulis memberitahukan langkah-langkah yang harus dilakukan secara runtut atau urut. Jadi pada bagian ini penulis harus menjelaskannya secara urut dan tidak boleh loncat-loncat.

4. **Conclusion**

Kesimpulan yang berisi tentang hasil akhir dari apa yang telah dikerjakan sesuai dengan langkah-langkah yang telah ditentukan.

Contoh Procedure Text

A milkshake is a sweet, cold beverage which is usually made from milk, ice cream, or iced milk, and flavorings or sweeteners such as butterscotch, caramel sauce, chocolate sauce, or fruit syrup. If you want to make a delicious milkshake by your selves, then this is the way how to make it.

The ingredients that you need to make a milkshake are:

1. 4 cups vanilla ice cream

2. 2 cups milk

3. 4 teaspoons chocolate sauce (optional)

4. 1 cup fresh or frozen strawberries

Now, follow these steps to make a milkshake.

1. Place milkshake glasses into the freezer. Using cold glasses will help the shake stay cool to give you time to enjoy. Leave for up to an hour if possible.

2. Soften ice cream. It is easier to make a shake when the ice cream is slightly soft. Take the ice cream out of the freezer a few minutes before making your shake.

3. Place the ingredients into a blender. Mix the ice cream, milk and added flavors into the blender. Blend on high for one minute. Don't leave in the blender for longer or the shake will melt quickly.

4. Pour shakes into frosty glasses. Take the glasses out of the freezer as soon as the blending is complete. Then pour the shake mixture in.

5. Drop a straw into the shake, then enjoy. You can sip a shake right from the glass but somehow the straw adds to the flavor and the experience.

If you do not have a blender, you may substitute with a mixer, but be careful as it could be messy. And if you do not have anything else to mix, just use a spoon, but let the ice cream thaw first to make the milkshake easier to mix. Enjoy your milkshake.

Penjelasan:

1. Paragraf pertama: **the Goal**. Penulis berusaha menjelaskan apa itu milkshake dan mengapa ia menulis tulisan ini, yaitu ingin memberitahu pembaca bagaimana cara membuat milkshake.

2. Paragraf kedua: **the Materials Needed**. Berisi bahan-bahan yang harus dipersiapkan dan dibutuhkan untuk membuat milkshake.

3. Paragraf ketiga: **Steps**, yang berisi langkah-langkah yang dishare oleh penulis untuk membuat milkshake dari langkah pertama hingga menjadi milkshake.

4. Paragraf keempat: **Conclusion**. Jadi kesimpulannya, karena namanya shake (dikocok) maka pembuatan milkshake harus menggunakan alat bantu seperti blender, jika tidak punya, penulis menganjurkan menggunakan mixer, bahkan jika tidak punya sama sekali, maka bisa menggunakan spon.

F. Metode Pembelajaran

- Color Coding Strategy

G. Langkah-Langkah Kegiatan

Pertemuan Ke I:

Kegiatan Awal (10*)

1. Mengucapkan salam dengan siswa ketika memasuki ruang kelas

2. Berdoa sebelum memulai pelajaran

3. Mengecek kehadiran siswa

4. Mengecek kerapian dan kebersihan ruang kelas

Kegiatan Inti (60*)

Eksplorasi (20*)

1. Guru memberikan pengantar tentang materi oleh menanyakan beberapa pertanyaan

2. Siswa menjawab pertanyaan secara lisan

3. Guru menjelaskan tentang kosa kata, tata bahasa, dan langkah retorika terkait dengan penulisan teks monolog prosedur.

4. Guru menjelaskan tentang color coding strategy

5. Guru memberikan teks prosedur tentang " Making Fried Noodle".

6. Guru meminta siswa untuk membaca teks prosedur tersebut.

7. Guru meminta siswa untuk menulis frasa-frasa, kalimat-kalimat yang diperlukan untuk menulis

Elaborasi (30*)

1. Guru memberi siswa lembar kerja prosedur teks.

2. Guru meminta siswa untuk menyelesaikan lembar kerja berdasarkan contoh teks.

3. Guru membimbing siswa untuk menyelesaikan lembar kerja menggunakan color coding strategy.

4. Guru memeriksa siswa bekerja dan berdiskusi dengan siswa.

Konfirmasi (10*)

1. Guru bersirkulasi dan mencatat semua masalah mereka memiliki bagian dari color coding strategy.

2. Guru bertanya kepada siswa tentang kesulitan

3. Guru memberi kesempatan kepada siswa untuk bertanya pertanyaan

4. Guru menjawab pertanyaan dari siswa

5. Guru memberikan kesimpulan.

Kegiatan Akhir (10*)

1. Guru mengingatkan siswa untuk belajar sendiri di rumah

2. Guru memotivasi siswa untuk belajar lebih giat

3. Guru memberikan pernyataan penutup dan menolak

Pertemuan Ke II:

Kegiatan Awal (10*)

1. Mengucapkan salam dengan siswa ketika memasuki ruang kelas

2. Berdoa sebelum memulai pelajaran

3. Mengecek kehadiran siswa

4. Mengecek kerapian dan kebersihan ruang kelas

Kegiatan Inti (60*)

Eksplorasi (20*)

1. Guru memberikan pengantar tentang materi oleh menanyakan beberapa pertanyaan

2. Siswa menjawab pertanyaan secara lisan

3. Guru menjelaskan tentang kosa kata, tata bahasa, dan langkah retorika terkait dengan penulisan teks monolog prosedur.

4. Guru memberikan teks prosedur tentang " Making Manggo Juice".

5. Guru meminta siswa untuk membaca teks prosedur tersebut.

6. Guru meminta siswa untuk menulis frasa-frasa, kalimat-kalimat yang diperlukan untuk menulis

Elaborasi (30*)

1. Guru memberi siswa lembar kerja prosedur teks.

2. Guru meminta siswa untuk menyelesaikan lembar kerja berdasarkan contoh teks.

3. Guru membimbing siswa untuk menyelesaikan lembar kerja.

4. Guru memeriksa siswa bekerja dan berdiskusi dengan siswa.

Konfirmasi (10*)

1. Guru bersirkulasi dan mencatat semua masalah mereka memiliki.

2. Guru bertanya kepada siswa tentang kesulitan

3. Guru memberi kesempatan kepada siswa untuk bertanya pertanyaan

4. Guru menjawab pertanyaan dari siswa

5. Guru memberikan kesimpulan.

H. Sumber

- Nancy Rogers Bosso, (2015), Reading *Comprehension Grade 8*, USA: Carson-Dellosa Publishing.

I. Bahan

1. Papantulis

2. Spidol

3. Teks yang terkait

4. Bacaan yang terkait

J. Penilaian

1. Teknik penilaian   : Tes tertulis

2. Bentuk penilaian   : Tes pilihan ganda (individu)

3. Instrument penilaian   : Terlampir

Medan,   Juli 2018

Mengetahui

English Teacher   Researcher

Suriyani, S.Pd   **Weldi Rizky**

Known By The Headmaster of

YP SMP Al Masdar

M. Idris Siregar S.H

Apendix2

Pre Test

Name   :

Class   :

How to Make Orange Juice

Apendix3

Post Test

Name   **:**

Class   **:**

How to Make Mango Juice

Appendix 4

Answer Key Pre test and Post test

Pre test

How to Make Orange Juice

INGREDIENTS:

1. 6 fresh oranges
2. 40 ml of sugar water
3. ¾ cup of ice cubes
4. 200 ml boiled water

HOW TO MAKE:

1. First, you need to peel the fruits and after that, dispose the seeds. Put the orange flesh into the blender.
2. Second, add the ice cubes or the shaved ice inside. Put it with the sugar and the boiled water.
3. Blend it for about 3 minutes in order to make it quite well.
4. Serve by using a beautiful glass and the juice is ready to be drunk.

Post Test

How to Make Mango Juice

INGREDIENTS:

- a piece of mango
- a half glass of water
- a glass of ice pack
- a spoon of sugar

HOW TO MAKE:

1. First, peel the mango and clean it
2. Next, cut the mango into pieces and put them into the juicer
3. Then, put the water, ice and sugar
4. After that turn on the juice and wait about 15 seconds
5. Finally, pour the mango juice into the glass and ready to drink

Apendix V

KELAS VIII-1

O	Initial	Name of students
	AI	Ahmad Ibnu
	AP	Anggi Pratiwi
	AD	Aldika
	AS	Ardiansyah
	AY	Ayumi
	AF	Afijar
	BF	Bayu firdaus
	DS	Devita Sari
	DL	Desi Lestari
0	EW	Eko Wicitro
1	GL	Gilang
2	HD	Hidayatul
3	HN	Halimah Nasution
4	ID	Indra
5	LS	Lidia Safitri
6	MR	Mariani
7	ML	M. Lutfi
8	MR	M. Rehan
9	MF	M. Ferdi
0	MI	M.Irsan
1	MA	M. Alwi
2	MF	M. Fikri
3	NH	Nur Halimah
4	RD	Raja Doli
5	RN	Raja Namora
6	RI	Riana

7	RS	Rian Syafrulloh
8	RP	Riski Prayoga
9	RPU	Rizka Putri
0	SI	Salim Irwan
1	SR	Syahril Ramadhan
2	RA	Sabani Agung

KELAS VII-2

O	Initial	Name of students
	AH	Alimudin Hsb
	AN	Anatasya
	AE	Arya erlangga
	AP	Aprian pulungan
	AD	Ardian Syah
	AS	Ari Syahputra
	AW	Agung Wiraguna
	BP	Bagus Prabowo
	CP	Cut Pitriani
0	DS	Desi Syahputri
1	IAS	Imelia Afrida Sari
2	IP	Irwansyah Putra
3	JMM	Juyus Marga Marbun
4	KR	Kharul Ramadan
5	KN	Khairunnisa
	LP	Lidia Pratiwi

6		
7	MI	M. Ilyasa
8	MK	M. Kharozi Nst
9	MA	M. Amin
0	MD	M. Dafa
1	MF	M. Fadilah BB
2	MRP	M. Rido PK
3	MR	M. Rizky
4	NM	Nurmalisa
5	OS	Oriza satifa
6	PM	Prayono Martono
7	RJ	Restu Jaya
8	RM	Risky Muhawar
9	AN	Anisa
0	RN	Riani
1	SR	Sandi Rahmansyah
2	SL	Serli

Apendix VI

APENDIX VII

THE CRITICAL VALUE LILIEFORS TEST

Ukuran Sampel	Taraf Nyata (α)				
	0,01	0,05	0,10	0,15	0,20
n = 4	0,417	0,381	0,352	0,319	0,300
5	0,405	0,337	0,315	0,299	0,285
6	0,364	0,319	0,294	0,277	0,265
7	0,348	0,300	0,276	0,258	0,247
8	0,331	0,285	0,261	0,244	0,233
9	0,311	0,271	0,249	0,233	0,223
10	0,294	0,258	0,239	0,022	0,215
11	0,284	0,249	0,230	0,217	0,206
12	0,275	0,242	0,223	0,212	0,199
13	0,268	0,234	0,214	0,202	0,190
14	0,261	0,227	0,207	0,194	0,183
15	0,257	0,220	0,201	0,187	0,177
16	0,250	0,213	0,195	0,182	0,173
17	0,245	0,206	0,189	0,177	0,169
18	0,239	0,200	0,184	0,173	0,166
19	0,235	0,195	0,179	0,169	0,163
20	0,231	0,190	0,174	0,166	0,160
25	0,200	0,173	0,158	0,147	0,142
30	0,187	0,161	0,144	0,136	0,131
n > 30	$\dfrac{1,031}{\sqrt{n}}$	$\dfrac{0,886}{\sqrt{n}}$	$\dfrac{0,805}{\sqrt{n}}$	$\dfrac{0,768}{\sqrt{n}}$	$\dfrac{0,736}{\sqrt{n}}$

Source: Sudjana. *Metoda Statistika*. Bandung: Tarsito, 2002

APPENDIX VII

TABLE OF F DISTRIBUTION

(Bilangan Dalam Badan Daftar Menyatakaan:

Fp : Baris Atas untuk p = 0,05 dan Baris Bawah untuk p = 0,01)

v_2 = dk penyebut	\(v_1 \) = dk pembilang																							
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞
1	161	200	216	225	230	234	237	239	241	242	243	244	245	246	248	249	250	251	252	253	253	254	254	254
	4062	4999	5403	5625	5764	5859	5928	5981	6022	6056	6082	6106	6142	6169	6208	6234	6258	6286	6302	6323	6334	6352	6361	6366
2	18,51	19,00	19,16	19,25	19,30	19,33	19,36	19,37	19,38	19,39	19,40	19,41	19,42	19,43	19,44	19,45	19,46	19,47	19,47	19,48	19,49	19,49	19,50	19,50
	98,49	99,01	99,17	99,25	99,30	99,33	99,34	99,36	99,38	99,40	99,41	99,42	99,43	99,44	99,45	99,46	99,47	99,48	99,48	99,49	99,49	99,49	99,50	99,50
3	10,13	9,55	9,28	9,12	9,01	8,94	8,88	8,84	8,81	8,78	8,76	8,74	8,71	8,69	8,66	8,64	8,62	8,60	8,58	8,57	8,56	8,54	8,54	8,52
	34,12	30,81	29,46	28,71	28,24	27,91	27,67	27,49	27,34	27,23	27,13	27,05	26,92	26,83	26,69	26,60	26,50	26,41	26,30	26,27	26,23	26,18	26,14	26,12
4	7,17	6,94	6,59	6,39	6,26	6,16	6,09	6,04	6,00	5,96	5,93	5,91	5,87	5,84	5,80	5,77	5,74	5,71	5,70	5,68	5,66	5,65	5,64	5,63
	21,20	18,00	16,69	15,98	15,52	15,21	14,98	14,80	14,66	14,54	14,45	14,37	14,24	14,15	14,02	13,93	13,83	13,74	13,69	13,61	13,57	13,52	13,48	13,46
5	6,61	5,79	5,41	5,19	5,05	4,95	4,88	4,82	4,78	4,74	4,70	4,68	4,64	4,60	4,56	4,53	4,50	4,46	4,44	4,42	4,40	4,38	4,37	4,36
	16,26	13,27	12,06	11,39	10,97	10,67	10,45	10,27	10,15	10,05	9,96	9,89	9,77	9,68	9,55	9,47	9,38	9,29	9,24	9,17	9,13	9,07	9,04	9,02
6	5,99	5,14	4,76	4,53	4,39	4,28	4,21	4,15	4,10	4,06	4,03	4,00	3,96	3,92	3,87	3,84	3,81	3,77	3,75	3,72	3,71	3,69	3,68	3,67
	13,74	10,92	9,78	9,15	8,75	8,47	8,26	8,10	7,98	7,87	7,79	7,72	7,60	7,52	7,39	7,31	7,23	7,14	7,09	7,02	6,99	6,94	6,90	6,88
7	5,59	4,74	4,35	4,12	3,97	3,87	3,79	3,73	3,68	3,63	3,60	3,57	3,52	3,49	3,44	3,41	3,38	3,34	3,32	3,29	3,28	3,25	3,24	3,23
	12,25	9,55	8,45	7,86	7,46	7,19	7,00	6,84	6,71	6,62	6,54	6,47	6,35	6,27	6,15	6,07	5,98	5,90	5,85	5,78	5,75	5,70	5,67	5,65
8	5,32	4,46	4,07	3,84	3,69	3,58	3,50	3,44	3,39	3,34	3,31	3,28	3,23	3,20	3,15	3,12	3,08	3,05	3,03	3,00	2,98	2,96	2,94	2,93
	11,26	8,65	7,59	7,01	6,63	6,37	6,19	6,03	5,91	5,82	5,74	5,67	5,56	5,48	5,36	5,28	5,20	5,11	5,06	5,00	4,96	4,91	4,88	4,86
9	5,12	4,26	3,86	3,63	3,48	3,37	3,29	3,23	3,18	3,13	3,10	3,07	3,02	2,98	2,93	2,90	2,86	2,82	2,80	2,77	2,76	2,73	2,72	2,71
	10,56	8,02	6,99	6,42	6,06	5,80	5,62	5,47	5,35	5,26	5,18	5,11	5,00	4,92	4,80	4,73	4,64	4,56	4,51	4,45	4,41	4,36	4,33	4,31
10	4,96	4,10	3,71	3,48	3,33	3,22	3,14	3,07	3,02	2,97	2,94	2,91	2,86	2,82	2,77	2,74	2,70	2,67	2,64	2,61	2,59	2,56	2,55	2,54
	10,04	7,56	6,55	5,99	5,64	5,39	5,21	5,06	4,95	4,85	4,78	4,71	4,60	4,52	4,41	4,33	4,25	4,17	4,12	4,05	4,01	3,96	3,93	3,91
11	4,84	3,98	3,59	3,36	3,20	3,09	3,01	2,95	2,90	2,86	2,82	2,79	2,74	2,70	2,65	2,61	2,57	2,53	2,50	2,47	2,45	2,42	2,41	2,40
	9,65	7,20	6,22	5,67	5,32	5,07	4,88	4,74	4,63	4,54	4,46	4,40	4,29	4,21	4,10	4,02	3,94	3,86	3,80	3,74	3,70	3,66	3,62	3,60
12	4,75	3,88	3,49	3,26	3,11	3,00	2,92	2,85	2,80	2,76	2,72	2,69	2,64	2,60	2,54	2,50	2,46	2,42	2,40	2,36	2,35	2,32	2,31	2,30
	9,38	6,93	5,95	5,41	5,06	4,82	4,65	4,50	4,39	4,30	4,22	4,16	4,05	3,98	3,86	3,78	3,70	3,61	3,56	3,49	3,46	3,41	3,38	3,36
13	4,67	3,80	3,41	3,18	3,02	2,92	2,84	2,77	2,72	2,67	2,63	2,60	2,55	2,51	2,46	2,42	2,38	2,34	2,32	2,28	2,26	2,24	2,22	2,21
	9,07	6,70	5,74	5,20	4,86	4,62	4,44	4,30	4,19	4,10	4,02	3,96	3,85	3,78	3,67	3,60	3,51	3,42	3,37	3,30	3,27	3,21	3,18	3,15
14	4,60	3,74	3,34	3,11	2,96	2,85	2,77	2,70	2,65	2,60	2,56	2,53	2,48	2,44	2,39	2,35	2,31	2,27	2,24	2,21	2,19	2,16	2,14	2,13
	8,86	6,51	5,56	5,03	4,69	4,46	4,28	4,14	4,03	3,94	3,86	3,80	3,70	3,62	3,51	3,43	3,34	3,26	3,21	3,14	3,11	3,06	3,02	3,00
15	4,54	3,68	3,29	3,06	2,90	2,79	2,70	2,64	2,59	2,55	2,51	2,48	2,43	2,39	2,33	2,29	2,25	2,21	2,18	2,15	2,12	2,10	2,06	2,07
	8,68	6,36	5,42	4,89	4,56	4,32	4,14	4,00	3,89	3,80	3,73	3,67	3,56	3,48	3,36	3,29	3,20	3,12	3,07	3,00	2,97	2,92	2,89	2,87
16	4,49	3,63	3,24	3,01	2,85	2,74	2,66	2,59	2,54	2,49	2,45	2,42	2,37	2,33	2,28	2,24	2,20	2,16	2,13	2,09	2,07	2,04	2,02	2,01
	8,53	6,23	5,29	4,77	4,44	4,20	4,03	3,89	3,78	3,69	3,61	3,55	3,45	3,37	3,25	3,18	3,10	3,01	2,96	2,89	2,86	2,80	2,77	2,75
17	4,45	3,59	3,20	2,96	2,81	2,70	2,62	2,55	2,50	2,45	2,41	2,38	2,33	2,29	2,23	2,19	2,15	2,11	2,08	2,04	2,02	1,99	1,97	1,96
	8,40	6,11	5,18	4,67	4,34	4,10	3,93	3,79	3,68	3,59	3,52	3,45	3,35	3,27	3,16	3,08	3,00	2,92	2,86	2,79	2,76	2,70	2,67	2,65
18	4,41	3,55	3,16	2,93	2,77	2,66	2,58	2,51	2,46	2,41	2,37	2,34	2,29	2,25	2,19	2,15	2,11	2,07	2,04	2,00	1,98	1,96	1,93	1,92
	8,28	6,01	5,09	4,58	4,25	4,01	3,85	3,71	3,60	3,51	3,44	3,37	3,27	3,19	3,07	3,00	2,91	2,83	2,78	2,71	2,68	2,62	2,59	2,57
19	4,38	3,52	3,13	2,90	2,74	2,63	2,55	2,48	2,43	2,38	2,34	2,31	2,26	2,21	2,15	2,11	2,07	2,02	2,00	1,96	1,94	1,91	1,90	1,88
	8,18	5,93	5,01	4,50	4,17	3,94	3,77	3,63	3,52	3,43	3,36	3,30	3,19	3,12	3,00	2,92	2,84	2,76	2,70	2,63	2,60	2,54	2,51	2,49
20	4,35	3,49	3,10	2,87	2,71	2,60	2,52	2,45	2,40	2,35	2,31	2,28	2,23	2,18	2,12	2,08	2,04	1,99	1,96	1,92	1,90	1,87	1,85	1,84
	8,10	5,85	4,94	4,48	4,10	3,87	3,71	3,56	3,45	3,37	3,30	3,23	3,13	3,05	2,94	2,86	2,77	2,69	2,63	2,56	2,53	2,47	2,44	2,42
21	4,32	3,47	3,07	2,84	2,68	2,57	2,49	2,42	2,37	2,32	2,28	2,25	2,20	2,15	2,09	2,05	2,00	1,96	1,93	1,89	1,87	1,84	1,82	1,81
	8,02	5,78	4,87	4,37	4,04	3,81	3,65	3,51	3,40	3,31	3,24	3,17	3,07	2,99	2,88	2,80	2,72	2,63	2,58	2,51	2,47	2,42	2,38	2,36
22	4,30	3,44	3,05	2,82	2,66	2,55	2,47	2,40	2,35	2,30	2,26	2,23	2,18	2,13	2,07	2,03	1,98	1,93	1,91	1,87	1,84	1,81	1,80	1,78
	7,94	5,72	4,82	4,31	3,99	3,76	3,59	3,45	3,35	3,26	3,18	3,12	3,02	2,94	2,83	2,75	2,67	2,58	2,53	2,46	2,42	2,37	2,33	2,31
23	4,28	3,42	3,03	2,80	2,64	2,53	2,45	2,38	2,32	2,28	2,24	2,20	2,14	2,10	2,04	2,00	1,96	1,91	1,88	1,84	1,82	1,79	1,77	1,76
	7,88	5,66	4,76	4,26	3,94	3,71	3,54	3,41	3,30	3,21	3,14	3,07	2,97	2,89	2,78	2,70	2,62	2,53	2,48	2,41	2,37	2,32	2,28	2,26
24	4,26	3,40	3,01	2,78	2,62	2,51	2,43	2,36	2,30	2,26	2,22	2,18	2,13	2,09	2,02	1,98	1,94	1,89	1,86	1,82	1,80	1,76	1,74	1,73
	7,82	5,61	4,72	4,22	3,90	3,67	3,50	3,36	3,25	3,17	3,09	3,03	2,93	2,85	2,74	2,66	2,58	2,49	2,44	2,36	2,33	2,27	2,23	2,21
25	4,24	3,38	2,99	2,76	2,60	2,49	2,41	2,34	2,28	2,24	2,20	2,16	2,11	2,06	2,00	1,96	1,92	1,87	1,84	1,80	1,77	1,74	1,72	1,71
	7,77	5,57	4,68	4,18	3,86	3,63	3,46	3,32	3,21	3,13	3,05	2,99	2,89	2,81	2,70	2,62	2,54	2,45	2,40	2,32	2,29	2,23	2,19	2,17

26	4,22	3,37	2,89	2,74	2,59	2,47	2,39	2,32	2,27	2,22	2,18	2,15	2,10	2,05	1,99	1,95	1,90	1,85	1,82	1,78	1,76	1,72	1,70	1,69
	7,72	5,53	4,64	4,14	3,82	3,59	3,42	3,29	3,17	3,09	3,02	2,96	2,86	2,77	2,66	2,58	2,50	2,41	2,36	2,28	2,25	2,19	2,15	2,13
27	4,21	3,35	2,96	2,73	2,57	2,46	2,37	2,30	2,25	2,20	2,16	2,13	2,08	2,03	1,97	1,93	1,88	1,84	1,80	1,76	1,74	1,71	1,68	1,67
	7,68	5,49	4,60	4,11	3,79	3,56	3,39	3,26	3,14	3,06	2,98	2,93	2,83	2,74	2,63	2,55	2,47	2,38	2,33	2,25	2,21	2,16	2,12	2,10
28	4,20	3,34	2,95	2,71	2,56	2,44	2,36	2,29	2,24	2,19	2,15	2,12	2,06	2,02	1,96	1,91	1,87	1,81	1,78	1,75	1,72	1,69	1,65	
	7,64	5,45	4,57	4,07	3,76	3,53	3,36	3,23	3,11	3,03	2,95	2,90	2,80	2,71	2,60	2,52	2,44	2,35	2,30	2,22	2,18	2,13	2,09	2,06
29	4,18	3,33	2,93	2,70	2,54	2,43	2,35	2,28	2,22	2,18	2,14	2,10	2,05	2,00	1,94	1,90	1,85	1,80	1,77	1,73	1,71	1,68	1,65	1,64
	7,60	5,52	4,54	4,04	3,73	3,50	3,33	3,20	3,08	3,00	2,92	2,87	2,77	2,68	2,57	2,49	2,41	2,32	2,27	2,19	2,15	2,10	2,06	2,03
30	4,17	3,32	2,92	2,69	2,53	2,42	2,34	2,27	2,21	2,16	2,12	2,09	2,04	1,99	1,93	1,89	1,84	1,79	1,76	1,72	1,69	1,66	1,64	1,62
	7,56	5,39	4,51	4,02	3,70	3,47	3,30	3,17	3,06	2,98	2,90	2,84	2,74	2,66	2,55	2,47	2,38	2,29	2,24	2,16	2,13	2,07	2,03	2,01
32	4,15	3,30	29,00	2,67	2,51	2,40	2,32	2,25	2,19	2,14	2,10	2,07	2,02	1,97	1,91	1,86	1,82	1,76	1,74	1,69	1,67	1,64	1,61	1,59
	7,50	5,34	4,46	3,97	3,66	3,42	3,25	3,12	3,01	2,94	2,86	2,80	2,70	2,62	2,51	2,42	2,34	2,25	2,20	2,12	2,08	2,02	1,98	1,96
34	4,13	3,28	2,88	2,65	2,49	2,38	2,30	2,23	2,17	2,12	2,08	2,05	2,00	1,95	1,89	1,84	1,80	1,74	1,71	1,67	1,64	1,61	1,59	1,57
	7,44	5,29	4,42	3,93	3,61	3,38	3,21	3,08	2,97	2,89	2,82	2,76	2,66	2,58	2,47	2,38	2,30	2,21	2,15	2,08	2,04	1,98	1,94	1,91
36	4,11	3,26	2,86	2,63	2,48	2,36	2,28	2,21	2,15	2,10	2,06	2,03	1,89	1,93	1,87	1,82	1,78	1,72	1,69	1,65	1,62	1,59	1,56	1,55
	7,39	5,25	4,38	3,89	3,58	3,35	3,18	3,04	2,94	2,86	2,78	2,72	2,62	2,54	2,43	2,35	2,26	2,17	2,12	2,04	2,00	1,94	1,90	1,87
38	4,10	3,25	2,85	2,62	2,46	2,35	2,26	2,19	2,14	2,09	2,05	2,02	1,96	1,92	1,85	1,80	1,76	1,71	1,67	1,63	1,60	1,57	1,54	1,53
	7,35	5,21	4,34	3,86	3,54	3,32	3,15	3,02	2,91	2,82	2,75	2,69	2,59	2,51	2,40	2,32	2,22	2,14	2,08	2,00	1,97	1,90	1,86	1,84
40	4,08	3,23	2,84	2,61	2,45	2,34	2,25	2,18	2,12	2,07	2,04	2,00	1,95	1,90	1,84	1,79	1,74	1,69	1,66	1,61	1,59	1,55	1,53	1,51
	7,31	5,18	4,31	3,83	3,51	3,29	3,12	2,99	2,88	2,80	2,73	2,66	2,56	2,49	2,37	2,29	2,20	2,11	2,05	1,97	1,94	1,88	1,84	1,81
42	4,07	3,22	2,83	2,59	2,44	2,32	2,24	2,17	2,11	2,06	2,02	1,99	1,94	1,89	1,82	1,78	1,73	1,68	1,64	1,60	1,57	1,54	1,51	1,49
	7,27	5,15	4,29	3,80	3,49	3,26	3,10	2,96	2,86	2,77	2,70	2,64	2,54	2,46	2,35	2,26	2,17	2,08	2,02	1,94	1,91	1,85	1,80	1,78
44	4,06	3,21	2,82	2,58	2,43	2,31	2,23	2,16	2,10	2,05	2,01	1,98	1,92	1,88	1,81	1,76	2,17	1,66	1,63	1,58	1,56	1,52	1,50	1,48
	7,24	5,12	4,26	3,78	3,46	3,24	3,07	2,94	2,84	2,75	2,68	2,62	2,52	2,44	2,32	2,24	1,72	2,06	2,00	1,92	1,88	1,82	1,78	1,75
46	4,05	3,20	2,81	2,57	2,42	2,30	2,22	2,14	2,09	2,04	2,00	1,97	1,91	1,87	1,80	1,75	2,15	1,65	1,62	1,57	1,54	1,51	1,48	1,46
	7,21	5,10	4,24	3,76	3,44	3,22	3,05	2,92	2,82	2,73	2,66	2,60	2,50	2,42	2,32	2,22	1,71	2,04	1,98	1,90	1,86	1,80	1,76	1,72
48	4,04	3,19	2,80	2,56	2,41	2,30	2,21	2,14	2,08	2,03	1,99	1,96	1,90	1,86	1,79	1,74	2,13	1,64	1,61	1,56	1,53	1,50	1,47	1,45
	7,19	5,08	4,22	3,74	3,42	3,20	3,04	2,90	2,80	2,71	2,64	2,58	2,48	2,40	2,28	2,20	1,70	2,02	1,96	1,88	1,84	1,78	1,73	1,70
50	4,03	3,18	2,79	2,56	2,40	2,29	2,20	2,13	2,07	2,02	1,98	1,95	1,90	1,85	1,78	1,74	1,69	1,63	1,60	1,55	1,52	1,48	1,46	1,44
	7,17	5,06	4,20	3,72	3,44	3,18	3,02	2,88	2,78	2,70	2,62	2,56	2,46	2,39	2,26	2,18	2,10	2,00	1,94	1,86	1,82	1,76	1,71	1,68
55	4,02	3,17	2,78	2,54	2,38	2,27	2,18	2,11	2,05	2,00	1,97	1,93	1,88	1,83	1,76	1,72	1,67	1,61	1,58	1,52	1,50	1,46	1,43	1,41
	7,12	5,01	4,16	3,65	3,37	3,15	2,98	2,85	2,75	2,66	2,59	2,53	2,43	2,35	2,23	2,15	2,00	1,96	1,90	1,82	1,78	1,71	1,66	1,64
60	4,00	3,15	2,76	2,52	2,37	2,25	2,17	2,10	2,04	1,99	1,95	1,92	1,86	1,81	1,75	1,70	1,65	1,59	1,56	1,50	1,48	1,44	1,41	1,39
	7,08	4,98	4,13	3,65	3,34	3,12	2,95	2,82	2,72	2,63	2,56	2,50	2,40	2,32	2,20	2,12	2,03	1,93	1,87	1,79	1,74	1,68	1,63	1,60
65	3,99	3,14	2,75	2,51	2,36	2,24	2,15	2,08	2,02	1,98	1,94	1,90	1,85	1,80	1,73	1,68	1,63	1,57	1,54	1,49	1,46	1,42	1,39	1,37
	7,01	4,95	4,10	3,62	3,31	3,09	2,93	2,79	2,70	2,61	2,54	2,47	2,37	2,30	2,18	2,09	2,00	1,90	1,84	1,76	1,71	1,64	1,60	1,56
70	3,98	3,13	2,74	2,50	2,35	2,32	2,14	2,07	2,01	1,97	1,93	1,89	1,84	1,79	1,72	1,67	1,62	1,56	1,53	1,47	1,45	1,40	1,37	1,35
	7,01	4,92	4,08	3,60	3,29	3,07	2,91	2,77	2,67	2,59	2,51	2,45	2,35	2,28	2,15	2,07	1,98	1,88	1,82	1,74	1,69	1,63	1,56	1,53
80	3,96	3,11	2,72	2,48	2,33	2,21	2,12	2,05	1,99	1,95	1,91	1,88	1,82	1,77	1,70	1,65	1,60	1,54	1,51	1,45	1,42	1,38	1,35	1,32
	6,96	4,88	4,01	3,58	3,25	3,04	2,87	2,74	2,64	2,55	2,48	2,44	2,32	2,24	2,11	2,03	1,94	1,84	1,78	1,70	1,65	1,57	1,52	1,49
100	3,94	3,09	2,70	2,46	2,30	2,19	2,10	2,03	1,97	1,92	1,88	1,85	1,79	1,75	1,68	1,63	1,57	1,51	1,48	1,42	1,39	1,34	1,30	1,28
	6,90	4,82	3,98	3,51	3,20	2,99	2,82	2,69	2,59	2,51	2,43	2,36	2,26	2,19	2,06	1,98	1,89	1,79	1,73	1,64	1,59	1,51	1,46	1,43
125	3,92	3,07	2,68	2,44	2,29	2,17	2,08	2,01	1,95	1,90	1,86	1,83	1,77	1,72	1,65	1,60	1,55	1,49	1,45	1,39	1,36	1,31	1,27	1,25
	6,84	4,78	3,94	3,47	3,17	2,95	2,79	2,65	2,56	2,47	2,40	2,33	2,23	2,15	2,03	1,94	1,85	1,75	1,68	1,59	1,54	1,46	1,40	1,37
150	3,91	3,06	2,67	2,43	2,27	2,16	2,07	2,00	1,94	1,89	1,85	1,82	1,76	1,71	1,64	1,59	1,54	1,47	1,44	1,37	1,34	1,29	1,25	1,22
	6,81	4,75	3,91	3,44	3,13	2,92	2,76	2,62	2,53	2,44	2,37	2,30	2,20	2,12	2,00	1,91	1,82	1,72	1,66	1,56	1,51	1,43	1,37	1,33
200	3,89	3,01	2,65	2,41	2,26	2,14	2,05	1,98	1,92	1,87	1,83	1,80	1,74	1,69	1,62	1,57	1,52	1,45	1,42	1,35	1,32	1,26	1,22	1,19
	6,76	4,71	3,88	3,41	3,11	2,90	2,73	2,60	2,50	2,41	2,34	2,28	1,17	2,09	1,97	1,88	1,79	1,69	1,62	1,53	1,48	1,39	1,33	1,28
400	3,86	3,02	2,62	2,39	2,23	2,12	2,03	1,96	1,90	1,85	1,81	1,78	1,72	1,67	1,60	1,54	1,49	1,42	1,38	1,32	1,28	1,22	1,16	1,13
	6,70	4,66	3,83	3,36	3,06	2,85	2,69	2,55	2,46	2,37	2,29	2,23	2,12	2,04	1,92	1,84	1,74	1,64	1,57	1,47	1,42	1,32	1,24	1,19
1000	3,85	3,00	2,61	2,38	2,22	2,10	2,02	1,95	1,89	1,84	1,80	1,76	1,70	1,65	1,58	1,53	1,47	1,41	1,36	1,30	1,26	1,19	1,13	1,08
	6,68	4,62	3,80	3,34	3,04	2,82	2,66	2,53	2,43	2,34	2,26	2,20	2,09	2,01	1,89	1,81	1,71	1,61	1,54	1,44	1,38	1,28	1,19	1,11
∞	3,84	2,99	2,60	2,37	2,21	2,09	2,01	1,94	1,88	1,83	1,79	1,75	1,69	1,64	1,57	1,52	1,46	1,40	1,35	1,28	1,24	1,17	1,11	1,00
	6,64	4,60	3,78	3,32	3,02	2,80	2,64	2,51	2,41	2,32	2,24	2,18	2,07	1,99	1,87	1,79	1,69	1,59	1,52	1,41	1,36	1,25	1,12	1,00

APENDIX IX

PERCENTAGE POINTSOF T DISTRIBUTION

DF	A	0.80	0.90	0.95	0.98	0.99	0.995	0.998	0.999
	P	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001
1		3.078	6.314	12.706	31.820	63.657	127.321	318.309	636.619
2		1.886	2.920	4.303	6.965	9.925	14.089	22.327	31.599
3		1.638	2.353	3.182	4.541	5.841	7.453	10.215	12.924
4		1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5		1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6		1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7		1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8		1.397	1.860	2.306	2.897	3.355	3.833	4.501	5.041
9		1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10		1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11		1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12		1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13		1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14		1.345	1.761	2.145	2.625	2.977	3.326	3.787	4.140
15		1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16		1.337	1.746	2.120	2.584	2.921	3.252	3.686	4.015
17		1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18		1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19		1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20		1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21		1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22		1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23		1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.768
24		1.318	1.711	2.064	2.492	2.797	3.090	3.467	3.745

25			1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26			1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27			1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28			1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29			1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30			1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646
31			1.309	1.695	2.040	2.453	2.744	3.022	3.375	3.633
32			1.309	1.694	2.037	2.449	2.738	3.015	3.365	3.622
33			1.308	1.692	2.035	2.445	2.733	3.008	3.356	3.611
34			1.307	1.691	2.032	2.441	2.728	3.002	3.348	3.601
35			1.306	1.690	2.030	2.438	2.724	2.996	3.340	3.591
36			1.306	1.688	2.028	2.434	2.719	2.991	3.333	3.582
37			1.305	1.687	2.026	2.431	2.715	2.985	3.326	3.574
38			1.304	1.686	2.024	2.429	2.712	2.980	3.319	3.566
39			1.304	1.685	2.023	2.426	2.708	2.976	3.313	3.558
40			1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
42			1.302	1.682	2.018	2.418	2.698	2.963	3.296	3.538
44			1.301	1.680	2.015	2.414	2.692	2.956	3.286	3.526
46			1.300	1.679	2.013	2.410	2.687	2.949	3.277	3.515
48			1.299	1.677	2.011	2.407	2.682	2.943	3.269	3.505
50			1.299	1.676	2.009	2.403	2.678	2.937	3.261	3.496
60			1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
70			1.294	1.667	1.994	2.381	2.648	2.899	3.211	3.435
80			1.292	1.664	1.990	2.374	2.639	2.887	3.195	3.416
90			1.291	1.662	1.987	2.369	2.632	2.878	3.183	3.402
100			1.290	1.660	1.984	2.364	2.626	2.871	3.174	3.391
120			1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
150			1.287	1.655	1.976	2.351	2.609	2.849	3.145	3.357

200			1.286	1.652	1.972	2.345	2.601	2.839	3.131	3.340
300			1.284	1.650	1.968	2.339	2.592	2.828	3.118	3.323
500			1.283	1.648	1.965	2.334	2.586	2.820	3.107	3.310
∞			1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291