THE EFFECTIVENESS OF PROBLEM-BASED LEARNING IN IMPROVING STUDENTS' WRITING ON APPLICATION LETTER

(A Quasi Experimental Research at the Eleventh Grade of Software Engineering Major in Public Vocational Senior High School of 1 Pandeglang)

THE PAPER

Submitted to the Department of English Education
Faculty of Education and Teacher Training, as a Partial
Fulfillment of the Requirement for the "Sarjana" Degree

By:

FATMA HIRYANTI
Student's Register Number: 132301435

FACULTY OF EDUCATION AND TEACHER TRAINING

THE STATE INSTITUTE FOR ISLAMIC STUDIES

SULTAN MAULANA HASANUDDIN BANTEN

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STATEMENT OF ORIGINALITY

Herewith I declare that the research paper I wrote as partial fulfillment of the requirements for the Sarjana degree and submitted to the English Education department, the faculty of education and teachers training wholly constitutes my own original scientific writing.

As for the other persons' work whose ideas are quoted in this paper have been revered to appropriately in accordance to the prevailing legal and intellectual ethic in the world of scientific writing tradition.

However, if the originality of this paper either partially or wholly is, later on proved or it falls under convincing plagiarism. I would be prepared to receive any sanction such losing my related academic degree obtained from institution as well as other rules prevailing in Indonesia.

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Fatma Hiryanti
SRN. 132301435

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ABSTRACT

This research investigates the effectiveness of problem-based learning strategy in improving students' writing on application letter. This research is aimed for finding out the students' Application Letter writing skill of the eleventh graders in SMKN 1 Pandeglang; finding out the process of teaching Application Letter through Problem-based Learning in SMKN 1 Pandeglang; finding out the influence of problem-based learning on students' writing application letter. The method which used for this research is experiment research with two classes, called experimental class and control class using pre test and post test technique. The researcher conducted this research from July 18th until August 20th 2017, took eight meetings in class of Software Engineering 1 and Software Engineering 2. This research involves 62 students as sample among the eleventh grade of SMKN 1 Pandeglang in 2017 as population. The result of this research shows that the students' writing application letter which use problem-based learning strategy achieve better performance than those which do not use problem-based learning strategy.

Keywords : problem-based learning, quasi experimental research, writing, application letter.

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By:

FATMA HIRYANTI
SRN: 132301435

Under the Supervision of:

Adviser I   Adviser II

As'ari, S.S., M.Si.   **Anita, S.S., M.Pd.**
NIP. 19741029 200003 1 002   NIP. 19770410 200312 2 001

Acknowledged by:

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Teacher Training Faculty   Department

Dr. H. Subhan, M.Ed.   **As'ari, S.S., M.Si.**
NIP. 19680910 200003 1 001   NIP. 19741029 200003 1 002

THE BOARD OF EXAMINERS' APPROVAL

This is to certify that the undergraduate research paper of **Fatma Hiryanti** has been approved by the Board of Examiners as a partial fulfillment of the requirement for the degree of Sarjana in English Education Department.

Serang, October 23rd, 2017

The Board of Examiners:

As'ari, S.S., M.Si. Chairperson _____
NIP: 19741029 200003 1 002 _____

Tri Ilma Septiana, M.Pd. Secretary _____
NIP. - _____

Dr. Apud, M.Pd. Examiner I _____
NIP. 19710117 200312 1 002 _____

Eulis Rahmawati, S.Pd., M.Pd. Examiner II _____
NIP. 19790713 200312 2 002 _____

As'ari, S.S., M.Si. Adviser I _____
NIP. 19741029 200003 1 002 _____

Anita, S.S., M.Pd Adviser II _____
NIP. 19770410 200312 2 001 _____

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DEDICATION

With deep love, this paper was dedicated to my beloved parents (Maman Suparman and Ratu Latifah), who never bored to give me love, prayer, advice, and material.

You are my motivators.

Thank you so much.

My elder brother, Achmad Lathief who always help and give me spirit.

"Wa liqo'una fil jannaati"

MOTTO

"……… Indeed, Allah will not change the destiny of people except they themselves try to change it. And when Allah intends for a people ill, there is no repelling it. And there is not for them besides Him any patron."

(Q.S. Ar-Ra'du: 11)

A BRIEF BIOGRAPHY

The researcher's name is Fatma Hiryanti. She was born on November 23rd 1995, her father's name is Maman Suparman and her mother's name is Ratu Latifah, the researcher's is the second and the last child in her family. The researcher lives at Jl. Raya Rangkas Bitung km. 1 Kabayan Citiis Rt/Rw 2/1 no. 34, Pandeglang 42212 – Banten.

Firstly, the researcher entered Kindergarten of Aisyiyah branch of Pandeglang in 2000, and finished in 2001. In the same year, she went on her study to Public Primary School of Kabayan 2 Pandeglang, and finished from there in 2007. Still in the same year, she continued her study to Public Junior High School of 3 Pandeglang, and finished in 2010. Still in the same year, she went on her study to Public Vocational High School of 1 Pandeglang. She took Office Administration department, and graduated from there in 2013. In the same year, she continued to extend her study at English Education Department of the Faculty of Education and Teacher Training of the State Institute for Islamic Studies of Sultan Maulana Hasanuddin Banten.

She has some activities, she join some organizations either Intern or Extern Campus. In Intern Campus, she joins Lembaga Dakwah Kampus (LDK). She was the Chief of Woman's Affairs division in 2016. In extern Campus, she is member of JARMUSDA-Banten (Jaringan Muslimah Daerah Banten) or Komisi-C in FSLDK Banten, member of LP3M –

Pandeglang (Lembaga Pengembangan Pelajar Pemuda Muslim Pandeglang), member of FOKUS Pandeglang (Forum Komunikasi Muslimah Pandeglang), member of HAROK1 (Himpunan Alumni Rohis SMKN 1 Pandeglang).

Serang, on October 23rd, 2017

The Researcher

Fatma Hiryanti
SRN. 132301435

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All praise and gratitude be to Allah SWT, the King of the king, the Lord of the world, and the master of everything. Because of His graciousness and mercifullness the researcher can write well.

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After taking a long time of writing, the researcher finally finished this paper on time. In this great occasion the researcher would like to express gratitude to:

In this great occasion the researcher would like to express gratitude to:

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The researcher knows that this paper needs to be revised in order to get good result. The researcher also hopes that this paper will be useful for us.

Serang, on October 23rd, 2017

Fatma Hiryanti

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CHAPTER I

INTRODUCTION

A. Background of the Study

Mankind is a social person who needs other people to live together. One of important aspects in humans' life is communication. People convey what they mean by using language. Elly Van Gelderen says that

> Language is a fundamental human faculty used for creative expression, face-to-face communication, scientific inquiry, and many other purposes. Most humans are born with the ability to acquire language automatically and effortlessly if provided the right input by their environment. [1]

In daily communication, the tool which is often used to communicate is language, either oral or written. As we know that many languages in this world and each country has special language. Therefore, it must be unity or international language, in order that every people can speak with other people eventhough they are from

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[1] Elly van Gelderen, *A History of the English Language* (Philadelphia: John Benjamins Publishing Company, 2006), p.1.

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different country. English is one of languages in this world and it is very important to be learned. Because English has become an essential tool for people in today's global community. It gives big contribution in almost all aspect of humans' life. Increasingly, English is the language of choice used in multinational gatherings. It may not be the predominant language of the group, but is the most likely to be understood by the majority, at least at a basic level, so becomes a powerful tool for communication.

English is also used to transfer knowledge and people will be able to use technology where English as its language. Apart from that, English plays an important role in education field, therefore the students are expected to use it effectively. The main goal of teaching English as a foreign language has focused on four skills, those are listening, speaking, reading and writing.

In 2013 curriculum, English is taught in junior high school and senior high school or vocational high school. Even though English is not a new thing for students of vocational high school, however they still have some difficulties in studying English. Most students find difficulty in writing process. There are many aspects which have to pay attention, not only about a lot of vocabularies for composing paragraph, but also grammatical aspect and well organized in order to be comprehensible. And then, writing needs spend more time planning and revising.

Writing involves the mastery of all elements in the target language such as grammar, content, vocabulary, spelling, and organization. Writing involves complex process, because it needs the mastery of all elements in the target language such as vocabularies, grammar, paragraph construction, punctuation, and unity. Writing is important to be learned. There are many reasons why writing is needed to be learned. Those are to share

knowledge or science to other people, to transmit ideas especially for those who are a distance in time and space, to develop ideas, to be reminder because people can not remind all things, to express their feeling, to persuade the reader, to share information.

In learning English, especially for the writing skill, the students are required to master various type of texts. For vocational or senior high school students, one of the texts which have to be mastered is application letter. In curriculum of 2013 syllabus, KD 4.6 mentioned that twelfth graders must be able to create a written application letter. They have to concern on the purpose and structure of the text, the appropriate language feature and context.

Based on the researcher's observation when she did PPLK programme in one of senior high schools in Pandeglang, the researcher found that students got difficult in writing application letter. The students often

have some mistakes in formatting, planning, and using the language. The most students do not pay attention to the structure of letters, so they can not write well-formatted letter. For the term planning, students usually do not put the ideas and information clearly and properly, so those matters make the readers cannot understand the letter correctly and persuasively. Concerning the language, they often use un-grammatical sentences. They are often confused in using right punctuation. To avoid these kind of mistakes, the teacher should be able to make an interesting teaching techique especially in teaching writing.

In this research, the researcher use Problem-based Learning strategy to increase the students' ability in writing Application Letter. The philosophy of Problem-based Learning is learning by solving problem. Problem-based Learning gives opportunity to the students to expand their knowledge and stimulate them to have ability in solving problem. According to the curriculum of 2013

which emphasizes collaborative learning in which students should build knowledge by themselves independently. In Problem-Based Learning, teacher also plays active role in facilitating and guiding learning process. One way to guide the students in comprehending the material is giving stimulant with problem oriented. This way can build students' motivation. By directing and guiding from the teacher and discuss activity, the students are trained to be able to solve the problem scientifically and logically. Considering to this reason, The researcher believes that Problem-based Learning strategy gives opportunities for the students to extend the difficulty or the problem in writing application letter, and solve the problem together.

Based on the description above, the researcher interests to conduct research in SMKN 1 Pandeglang. Therefore, the research is entitled "The Effectiveness of Problem-based Learning in Improving Students' Writing on Application Letter at the Eleventh Grade of Software

Engineering Major in SMKN 1 Pandeglang" in the Academic Year of 2017/2018.

B. Identifications of the Problem

Based on the background above, the problems are :

1. The most students do not pay attention to the structure of letters.

2. Students usually do not put the ideas and information clearly and properly.

3. They often use ungrammatical sentences.

4. They are often confused in using right punctuation.

C. Formulations of the Problem

Formulations of The Problem

1. How is students' writing skill on Application Letter in SMKN 1 Pandeglang?

2. How is the application of Problem-based Learning Strategy in teaching Application Letter?

3. Is there significant effect of Problem-based Learning Strategy in improving students' writing on Application Letter in SMKN 1 Pandeglang?

D. Objectives of The Study

The objectives of the research are:

1. To find out the students' Application Letter writing skill of the eleventh graders in SMKN 1 Pandeglang.

2. To find out the process of teaching Application Letter through Problem-based Learning in SMKN 1 Pandeglang.

3. To find out the influence of Problem-based Learning on students' writing Application Letter.

E. Significance of The Study

1. For Students

   The result of this study may help the students to improve their ability in writing Application Letter. Besides that, it may help them to disappear their bored in learning.

2. For Teachers

   The result of this research is useful for English teachers in Senior/ Vocational High School level to get

information about improving students' writing on application letter.

3. For the school

   It will make a right decision to use some strategy for support teaching and learning process.

4. For other researchers

   For further researches who are interested in improving students' writing on application letter at Senior or Vocational High School can get the basic information from this study to do the further research, and also for researcher who wants to use Problem-based Learningas one of variables.

F. The Hypothesis

Hypothesis is the statement which the researchers create when they estimate assumption from the research that they will execute. The hypothesis of study could be stated as follow:

a. The experimental hypothesis (Ha) is: there is significance influence of Problem-based Learning Strategy on teaching writing Application Letter.

b. The null hypothesis (Ho) is: there is no significance influence of Problem-based Learning Strategy on teaching writing Application Letter.

G. Definition of Key Terms

To avoid misunderstanding about the terms in this research, the terms of this research are defined as follows:

1. Problem-based Learning essentially is learning to think or learning to reason, thingking or reasoning to implement the various of knowledge has been got before (prior knowledge) to solve the various of problem. Therefore, Problem-based Learning should be planned maturely so that it can stimulate students to think and motivate them to use their thinking consciously to solve the problem.

2. According to David Nunan, Experimental Research is a produce for testing a hypothesis by setting up a

situation in which the strength of relationship between variables can be tested.

3. Writing is usefully described as a process, an activity to express ideas, opinion, feeling, experience, thoughts into words and words onto paper.

4. Application Letter, also known as a cover letter, is a document sent with resume to provide additional information on skills and experiences. It typically provides detailed information on why the applicants are qualified for the job they are applying.

H. Organization of the Study

In order to write a good paper, it is necessary to arrange it systematically. This paper is divided into five chapters as follows:

Chapter I (Introduction): It presents the Background of the Study, Identification of The Problem, Formulation of The Problem, Objective of The Study, Significance of The Study, The Hypothesis, the Definition of Key Terms, and Organization of the Study.

Chapter II (Theoretical Review): This chapter presents The Definition of Writing, The Processes of Writing, The Reasons of Writing Business, Teaching English Writing for Senior High School Students, Requirements of Good Writing, The Tasks of Teacher in Teaching Writing, The Definition of Application Letter, Kind of Letter Style, The Guidelines of Application Letter, An Example of Ideal Application Letter, Grade Scale, Introducing to Problem-based Learning, Brief History of Problem-based Learning, The Characteristics of Problem-based Learning, The stages of Problem-based Learning Process.

Chapter III (Methodology of Research): This chapter covers The Research Methodology, The Place of Research, The Population and Sample, Technique of Data Collection, and Technique of Data Analyzing.

Chapter IV (The Result of Research): This chapter covers Data Description, Data Analysis, Data Interpretation, Discussion.

Chapter V (Conclusion and Suggestions): this
chapter covers Conclusion and Suggestions.

CHAPTER II

THEORETICAL REVIEW

This chapter discusses related theories to support the study. This includes:

A. Writing

1. The Definition of Writing

According to Heaton, "writing is a task which involves students to make grammatically correct sentences by manipulating words in the form of a piece of continuous writing with successfully communicates the writers' ideas on a certain topic."[2] The statement shows that the main purpose writing is to express ideas, thoughts, and writing clearly in a written language.

Moreover, writing skill is more complicated than others skills in English language. Writing skill is not only talks about grammars and vocabularies but also of conceptual and judgment elements.[3]

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[2] Heaton, J.B, *Writing English Language Test*, (New York : Longman Group UK Limited, 1989) ,p. 127.

[3] Heaton, *Writing English Language Test*, p. 135.

Based on the definitions above, in my opinion, writing is one way to communicate. Writing is an activity to write something in our mind to give idea, information, or opinion. Writing is the most difficult to be mastered, compared to other skills, those are listening, speaking, and reading. It is because writing is one of productive skills, which contains a symbol and involves a complex process. In making good writing, the students must use correct grammatical rules, choose appropriate vocabularies, and consider the coherent and cohesion.

2. Process of Writing

Writing needs process. It is because writing is a procedure that is well-organized and readable. It is not always easy. Harmer suggests the process of writing into four main elements. They are planning, drafting, editing (reflecting and revising), and final version.[4]

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[4] Jeremy Harmer, *How to Teach Writing,* (Essex: Pearson Education Limited, 2004), p. 4

1. Planning

    The writers plan what they are going to write. Before starting to write or type, they need to figure out what they are going to write about.

2. Drafting

    In this step, the students keep referring back to their notes and the plan that they determine in the planning stage. During the drafting stage, they should concentrate on getting their ideas on paper, organizing their information logically, and developing their topic with enough detail for their audience and purpose.

3. Editing (reflecting and revising)

    Once writers have finished in drafting stage, they usually read through what they have written to see where it works and where it doesn't.

4. Final versions

    Writing is communication. If the students have written something, they must have intended for someone to read it, even if that person is only

themselves. When they publish a document, they are releasing it to the public for others to read.

3. The Reasons of Writing in Business

There are some reasons of writing in business, those are :[5]

a. To inform or record

Writing in business is important to inform or record every particular which is related to various business information. It is important thing if sometime is needed.

b. To seek information

Writing in business is important if sometime need information which is related to business. It can facilitate when looking for related information.

c. To persuade

Writing in business is important to make someone decide to do something. it will give advantages to us. For example, persuading someone to buy our product.

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[5] Fiona Talbot, *How To Write Effective Business English*, (London and Philadephia : Kogan Page, 2009), p. 4-5.

d. To promote services

To promote something or services, it needs creative business writing in order that people can be persuaded.

4. Teaching English Writing for Senior High School Students

"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. Writing has always been used as a means of reinforcing language that has been taught".[6] It means that writing is a good instrument for students to learn English. They can put their ideas on the paper by using grammar and vocabulary which have been studied.

When writing, students need more time to think. Teacher asks students to focus on accurate language use and ideas what they will write. It will provoke their language development by finding ideas which will put on a text. Teaching writing for Senior High School is not an easy job, because the range of age of Senior High School

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[6] Harmer, *How to Teach Writing,* p. 31-32.

students varies between thirteen to seventeen years old. Psycholigically, they start to interact with adult society, they are not in under older people any more, but they are in the same level. Adolescence is the transition of physical and psychological development from childhood to adulthood. It describes the teenage years between 13 and 19. "They are so much less motivated, and they present outright discipline problems".[7]

Based on the statement above, the writer concludes that the teacher's role is very needed to motivate students in teaching learning process while students in transition-period. Therefore, they will have good discipline and responsibility, if a teacher encourages their students to learn to write in the target language.

5. **Requirement of Good Writing**

Good writing is much more than just correct writing. Harmer states that there are two characteristics of an effective paragraph. Those are coherence and cohesion. [8]

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[7] Harmer, Jeremy Harmer, *The Practice of English Language Teaching,* (Cambridge: Longman, 2001), p. 38.

[8] Harmer, *How to Teach Writing,* p. 22-24.

a. Coherence

Coherence means the connection of ideas at the idea level. It means the sentence in the paragraph must be logically arranged and the movement from one sentence to the next sentence must be smooth. When a text is coherence, the reader can understand at least two things:

1) The writer's purpose

A coherent text can make the reader understands what the writer's purposes.

2) The writer's line of thought

The reader should be able to follow the story and should not get confused with the characters of the story, setting, time, and others.

b. Cohesion

Cohesion means the connection of ideas at the sentence level. A paragraph is called cohesion if all supporting sentences can support the topic sentence. The method of connecting sentences to each other called cohesive devices. Five important of cohesive devices are

lexical cohesion (can be achieved by using lexical set chain and repetitions of word), grammatical cohesion (can be achieved by using pronoun and possessive reference and article reference), tenses, linkers, and substitutions.

Alice and Ann add unity as a requirement of an effective paragraph. They state,

"Every good paragraph has unity, which means that in each paragraph only one main idea is discussed. If the writer starts to discuss new idea, he must start a new paragraph. Furthermore, every supporting sentence in the paragraph must be directly related to the main idea".[9]

6. The Tasks of Teacher in Teaching Writing

According to Harmer, there are five tasks that teacher can perform in the class. Those are demonstrating, motivating and provoking, supporting, responding, and evaluating.[10]

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[9] Alice Oshima and Ann Hogue *Writing Academic English*, (New York: Addison Wesley
Publishing Company, 1996), p. 17.
[10] Harmer, *How to Teach Writing*, p. 41-42.

a. Demonstrating

Teacher has to tell the students about the material and demonstrate it in front of class. This is useful to stimulate students' critical thingking and to add their knowledge.

b. Motivating and Provoking

When students get stuck in writing such as "lost for word", teacher can help by provoking the students into having ideas, enthusing them with the value of the task, and persuading them what fun it can be. Sometimes teacher can give students some words they need to start a writing task.

c. Supporting

Supporting is closely related with the teachers' roles as motivator and provoker.

d. Responding

Teacher reacts to the content and the construction of students' writing supportively and makes suggestion for their improvement.

e. Evaluating

When teacher evaluates students' writing, teacher can indicate where students write and where they make mistakes. Teacher may award grades.

Teachers carry complex tasks out, not only to teach, but also to educate and prepare students in order to be able to solve their life problems independently and positively. Teachers should know how the students' characteristics in order to know how to handle them appropriately. Because it influences to learning process. In observing students' characteristic, teacher can do kind of learning method (research) in teaching. And then, teacher can share information each other with other teachers about students' characteristics.

B. Application Letter

1. The Definition of Application Letter

An application form is a document, filled in by all applicants to put themselves forward for a particular job. [11] The

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[11] Rebecca Corfield, *Preparing the Perfect Job Application*, (London Philadelphia : Kogan Page, 2009), p.2.

letter of application is likely to be the first correspondence you will have with an employer.

Shalaby explains that application letter is a letter that is usually attached to the applicant's curriculum vitae to summarize the information related to that particular job.[12] It contains basic information about applicants' expertise and qualifications. Fisrt, it catches the reader's attention positively; second, it convinces the reader; third, it requests an interview.

A cover letter is a written list that describes your education and the jobs you have had. A cover letter intorduces you to the person who is hiring for the job.[13] The applicants have to describe their educational background and their current position if they have ever worked before. It is important in order to be consideration in deciding to the applicants.

Cover letters are an essential component of your job search. During your search and transition, you will write many different letters or e-mails to "cover" your resume.[14] Application letter tell the employee the reason why you contact

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[12] H. A. Shalabi. *Automatic Cover Letter Generator System from CVs (ACLGS)*. *Global Journal of Computer Science and Technology*, 13 (13), 8

[13] Lin Lougheed, *Business Correspondence*, (USA : Longman, 2003), p.1.

[14] Michael Farr and Louise Kursmark, *15 Minute Cover Letter*, (America : JIST Publishing, 2009), p. 1.

them. This letter is the first opportunity to make an impression on a hiring decision-maker.

> A cover letter is a business letter, albeit a very important and specialized one. It is specialized because it is designed to accompany your resume and introduce you to your potential employer. It will be the first information about you that a potential employer receives, so you should be sure that it is polished and professional.[15]

From the explanations above, the researcher concludes the application letter is the very first thing the employer sees when applying for a job. An application letter typically provides detailed information on why you are qualified for the job you are applying for. Effective application letter explain the reasons for your interest in the specific organization and identify the most relevant skill or experiences. The application letter should let the employer know what position you are applying for, why the employer should select you for an interview, and how you will follow-up.

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[15] Felice Primeau Devine, Resumes and Cover Letters, (New York : Learning Express, 2003), p.75.

2. Kind of Letter Styles

Kinds of letter style : [16]

1. Full block style

   Full block style format means all the text is left justified. This varies from semi-modified block style format in which some elements are right justified. Full block format is a formal style that is common for business letter.

2. Block style

   Block style is a letter (usually business letter) format where all typed content is aligned with the left margin and no indetation.

3. Semi-block style

   A semi-block style letter is a less formal version of a block or a full block style with the differences being the sender's address, date, reference or attention line and complimentary closing. In addition, the signature lines are located direct enter or slightly right of center, along with indented paragraphs. The semi-block style is also called modified

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[16] Kementerian Pendidikan dan Kebudayaan. *Korespondensi 1*. (Depok : Direktorat Pembinaan SMK, 2013), p. 204-219.

semi-block because it is a modified version of the block or full block style.

4. Indented style

An indented style letter is a letter-writing style where the paragraphs are indented, and the date, closing and signature start at the center of the line. The paragraphs are tpically indented by half an inch.

5. Hanging style

In a hanging format letter, second and subsequent lines of a paragraph start leaving aone or two words from the first word of the first line. Parts of letter can be arranged according to the block or indented style. This style is identical to the semi-block style with one exception. Instead of the first line being indented all other lines in each paragraph is aligned wit the left margin.

In this reasearch, the researcher ask students to use full block style for the letter style. It is because, full block style is usually used to write application letter and it is easy to do.

3. **The Guidelines of Application Letter** [17]

1. The return address

It may include the applicants' complete address and phone number. For example :

> PT. Maju Jaya
>
> Jl. Raya Jakarta Km. 10 Ciruas, Serang-Banten
>
> (0254)100200/ 08714253638

2. The date

The date of the letter should be typed two lines underneath the return address. There are two style in writing the date, those are British Style and American style.

Example of British Style : on April 1st, 2017

Example of American Style : 1st of April, 2017

3. The addressee or inside address

It is the address of receiver. It must be two lines underneath the date and must state the full name of addressee. On the next line must be stated individual's formal business title. Then, on the subsequent line is the name of the company,

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[17] Lougheed, *Business Correspondence*, p.2-3.

followed by the company's address which generally takes two lines.

4. The salutation

The salutation is a greeting that used at the beginning of letter. It should be appear two lines underneath the address. The salutation nearly always begin with "Dear" followed by person's name. Then, put comma in the end of the salutation. If the writers do not knot the name of the person and whether is male or female, they may write a title instead "Dear Sir, Dear Madam,".

5. The body of letter[18]

   a. Paragraph One

   Extending the reason you write the letter. If it is in reply to an advertised vacancy, include the title of the job you are applying for and where you saw the advertisement. If it is speculative letter, start with a brief paragraph giving your reason for writing. Make it topical and relevant. For example :

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[18] Lynn Williams, Ultimate Job Search, (London : Kogan Page, 2008), p. 89-91.

I am writing to apply the position of Personal Assistant as advertised in today's Evening Post.

b. Paragraph Two

This is the persuasive part that tells what you can contribute to the company. Include relevant skills, experience and achievements. If this is a speculative letter, mention the sort of job you are interested in. You can split this section into two or three short paragraphs if it makes it easier to read. For example :

I have been IT Manager at ABC Company for five years and have experienced of large-scale software changeover, having restructured the finance department during that time. The problems I've effectively handled include :

1. Maintaining turn-around rate during departemental change

2. Designing effective training manuals

3. Taking staff successfully through the change process

c. Paragraph three

Write the reason for applying for a job. Make it positive and persuasive, emphasizing what you can bring to a new position, rather than what you hope the company will do for you. For expamle :

I am presently working at the software engineering organization ABC. However, I would very much like to return to production, where I feel my skills and experience could be used more effectively, and would welcome opportunity this position offers to do so.

d. Paragraph four

This should be a short paragraph to close the letter, confirming your interest in the job. For example :

I would welcome the opportunity to discuss my application with you further, and look forward to hearing from you.

6. Closing

It is written two lines of space after the last body of letter. It must be ended with comma. If it is written person's name, for example, Dear Margareth, then the writer should

end the letter, Yours sincerely, followed by the writer's name. Vice versa, if the writer does not know the person's name and it is written Dear Sir/Madam, then the writer should end the letter, Yours faithfully, followed by the writer's name.

7. Signature

   It is written ink, immediately below the closing, followed by applicant's name underneath the signature.

8. The enclosure line

   It required when some documents like CV or other materials are attached with application letter.

4. An Example of Ideal Application Letter[19]

Application letter is the first chance which have to impress an employer. It is an opportunity for standing out the crowd and persuade the recruiter. So, we have write the application well. Here the ideal application letter :

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[19] Kementerian Pendidikan dan Kebudayaan, *Bahasa Inggris Kelas XII SMA/ SMK/ MA/ MAK,* (Jakarta : Balitbang, 2015), p.40.

On April 19th, 2016

Lilis Handayani
Jl. A. Yani 389
Surabaya, 65151

Mr. Frank Peterson, Personnel Manager
Jeans and Co.
Jl. Raya Pandaan 186
Pandaan Pasuruan, Jawa Timur, 98502

Dear Mr. Peterson,

I am writing to you in response to your advertisement for a local branch manager, which appeared in the Jawa Pos on Sunday, June 15th. As you can see from my enclosed resume, my experience qualificaitons match this position's requirements. I am a bachelor of Technology and Communication.

My current position, managing the local branch of a national shoe retailer, has provided the opportunity to work under a high-pressure, team environment, where it is essential to be able to work closely with my colleagues in order to meet sales deadlines. In addition to my resposibilities as manager, I also developed time management tolls for staff using Acess and Excel from Microsoft's Office Suit.

Thank you for your time and consideration. I look forward to the opportunity to personally discuss why I am particularly suited for this position. Please call me after 4.00 p.m. to suggest a time we may meet. I can be reached via telephone number 031-858564 or by email at lilish@yahoo.com.

Sincerely yours,

Lilis Handayani

5. Grade Scale

To score writing test, the researcher use assessment of Marcea K. Seible. In the Marcea scale, scripts are rated on four aspects of writing application letter : function, form and content, effectiveness, grammar and mechanics. [20] This is specific criteria :

ASPECT	SCORE	INDICATOR
Function	4	Audience and purpose of the cover letter are strong and clear.
	3	Audience and purpose are present but could be stronger.
	2	Audience and purpose are less clear, and weak parts remain.
	1	Audience and purpose are not clear.
Form and Content	4	Format of the letter is clear. Each major section includes all required information (address, date, salutation, body, closing, signature).
	3	Format is mostly clear. Each major section includes most required information (address, date, salutation, body, closing,

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[20] Marcea K. Seible, "*Resumes and Cover Letter for High School*", http://www.readwritethink.org>30847_rubric.

		signature).
	2	Format is confusing. Major sections are missing information (address, date, salutation, body, closing, signature).
	1	Format is hard to see. Major sections are missing information (address, date, salutation, body, closing, signature)
Effectiveness	4	Letter shows a very professional appearance, tone, and style.
	3	Letter shows an appropriate appearance, tone, and style. Some inconsistencies remain.
	2	Letter shows a less professional appearance, tone, and style. Several weaknesses need attention or revision.
	1	Letter does not have a professional appearance, tone, or style. Much revision is needed

Grammar and Mechanics	4	Writer follows all guidelines for spelling, grammar, usage, mechanics, etc. Sentences are strong and varied.
	3	Writer follows most guidelines, but some sentences are unclear, uneven, or contain errors.
	2	Writer follows some guidelines, but sentences contain multiple errors and are difficult to understand.
	1	Writer has difficulty following guidelines; most sentences contain numerous errors and cannot be understood.

No.	Name	Func	F & C	Eff	G & M	Total	Total x 25 : 4
1.							
2.							
3.							
4.							
5.							
6.							

C. Problem-based Learning

1. Introduction to Problem-based Learning

Problem-based learning (PBL) is perhaps the most innovative pedagogical method ever implemented in education. Its effectiveness in facilitating student problem-solving and self-directed learning skills has been widely reported in medical education. Problem-based learning (PBL) is a teaching method in which complex real-world problems are used as the tool for students to learn. Problem-based Learning can help students to develop their critical thinking skills, problem-solving abilities, and communication skills. It can also provide group working, find and evaluate research.

According to Robert Delishe (1997, 7) :
" ... Problem-based Learning (PBL) works well with all students, making its strategies ideal for heterogeneous classrooms where students with mixed abilities can pool their talents collaboratively to invent a solution. These techniques also lend themselves to an interdisciplinary orientation since answering a problem frequently requires information from several academic areas . . . Teachers . . . say they have seen their

students learn more material, understand more ideas, and enjoy school more ..."[21]

(Depdiknas, 2002:12) stated that Problem-based Learning is one of the learning models which uses real-world problem as a context for the students to learn about think critically and problem solving ability to gain knowledge and concept from the material. It demands the students' mental activity in comprehending a concept, principal, and skill through problem which served in the beginning of the lesson. This method is effective to be implemented, if the teacher wants to make the students being active in the class, stimulating the students' previous knowledge, cooperating in learning. Therefore, the students automatically can create their own knowledge, develop their skill higher and boost their confident. Meanwhile, teacher guides the students to comprehend concept and prepares situation which related to the material that will be taught.

2. **Brief History of Problem-based Learning**

The history of Problem-based learning is actually started in 1920 when Celestine Freinet, a primary school teacher

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[21] Oon-Seng Tan, *Problem-based Learning Innovation*, (Singapore : Cengage Learning, 2003), p. 30.

whom had just been back from World War I to his village in Barsurloup in South-East France. He suffered a serious injury and effected him can not breathe long. He extremely wanted to teach in Primary School, however he was not able to up his voice. As a change, he used another method. He asked his students to learn independently and he facilitated only. This is the early pioneer of Problem-based learning.[22]

The history of modern Problem-based learning was first developed in medical education in the 1950s. The development of PBL is generally credited to the work of medical educators at McMasters University in Canada in the 1970s. Around the same time, other medical schools in various countries, such as Michigan State University in the United States, Maastricht University in the Netherlands, and Newcastle University in Australia were also developing problem-based learning curricula. PBL was conceived and implemented in response to students' unsatisfactory clinical performance that resulted from an emphasis on memorization of fragmented biomedical knowledge in the traditional health science education. This

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[22] dr. Ahmad Aulia Jusuf, PhD, 2009, *Pendekatan Spices dan Problem Based Learning*, (Depok : Bagian Histologi FKUI),p.4.

emphasis was blamed for failing to equip students with clinical problem-solving and lifelong learning skills.[23]

The adoption of PBL in higher education outside of the medical field as well as K−12 settings gradually occurred throughout the 1990s. PBL has been applied globally in a variety of professional schools. In introducing PBL into K−12 education, Barrows and Kelson (1993) systematically developed PBL curricula and teacher-training programs for all high-school core subjects. Since then, PBL has been promoted by a number of scholars and practitioners for use in basic education.

3. The Characteristics of Problem-based Learning

Problem-based Learning is an instructional solution to learning problems. The main goal of Problem-based Learning is to enhance learning by requiring learners to solve problems. These are the following characteristics :[24]

a. It is problem focused, such that students begin learning by seeing simulations of an authentic.

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[23] Woei Hung, David H. Jonasseen, Rude Liu, *Problem Based Learning*, p. 486-487.

[24] Woei Hung, David H. Jonasseen, Rude Liu, *Problem Based Learning*, p. 488-489.

b.   It is students centered

A student-centered classroom is defined as a classroom where the students are actively involved in the learning process. This is a classroom where the focus is not on the teacher teaching, but rather the student learning.[25] Learning process in Problem-based learning is more emphasize to students as studies' person. Therefore, Problem-based learning is supported by theory constructivism where students is motivated to be able to develop his own knowledge.

c.   It is self-directed Learning[26]

Such that students individually and collaboratively assume responsibility for generating learning issues and processes through self-assessment and peer assessment and access their own learning materials. Required assignments are rarely made.

d.   It is self-reflective

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[25] Jeffrey R, Utecht, *Problem-based Learning in the Student Centred Classroom*, (2003), p.1.

[26] Faculty of Dentistry, *Introduction to the Problem-based Learning Process*, (Hong Kong : The University of Hong Kong, 2014). p.25.

Such that learners monitor their understanding and learn to adjust strategies for learning.

e. Teacher is facilitator who support and model reasoning process, facilitate group processes, investigate students' knowledge deeply, never provide direct answers to questions.

4. **Stages of Problem-based Learning Process**

Generelly, there are seven stages in conducting Problem-based Learning:

1) Identifying the problem

The students read through the problem and discuss it. They may be tempted to diagnose the problem right away, and need to be encouraged to think more deeply about all the "why's, how's".

2) Explore pre-existing knowledge

The way to start this step is clarifying terms and the meaning of terms used in the problem, before going on to a more in depth exploration. Students come with an existing knowledge base and many life experiences. We know that people retain newly acquired knowledge more easily when

they already know something about it and this second step allows students to consciously access their own prior understanding and begin to apply it for their own benefit and that of other in the group. Teacher need to ensure that all students participate in this step, and also to help the group consider critically the information that is brought forward by its members.

3) Generate hypotheses and possible mechanisms[27]

According to the discussion which has gone before, students then generate hyphotheses about the nature of the problem, including possible mechanisms. The aim is to have the students focus on understanding the key concepts which are illustrated by each problem, and this requires that they delve deeper into it.

4) Identify learning issues

Learning issues may be defined as questions that can not be answered with current knowledge within the group. At this point, it will have become clear to students what their learning issues are, both as a group and as individuals. It

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[27] Dr. Allyn Walsh, *The Tutor in Problem-based Learning*, (Canada : McMaster University, 2005), p.3

takes considerable work on the part of the tutor to help an inexperienced group come up with clear learning issues, formatted into focused questions, which again relate back to the overall objectives for the problem.

5) Analyzing problem

The teacher guides the students to analyze the problem and helps them in finding the concept based on the problem. In this case, the teacher also ensures that the students comprehend the concept. In analyzing problem, they can use book, internet, to look for information/ knowledge.

6) Developing and presenting work result.

The teacher leads the students in doing worksheet and present their finding. The students explain their work result to other group. The students group can disprove and compare the work result each other when their turn who present.

7) Evaluating

Teacher helps the students re-examining the solution. They are encouraged to join in solving the problem. The last, teacher evaluates material discussed.

CHAPTER III

METHODOLOGY OF RESEARCH

A. Research Method

To investigate the effectiveness of Problem-based Learning (PBL) strategy in increasing students' writing skill on application letter, an experimental study would be suitable to the purpose of the research. In this research, the researcher uses quantitative design to achieve the purpose. It means the method and instrument involves numerical measurement and then statistical quantification is conducted.

The researcher uses time series of experimental method. Experiment is a produce for testing a hypothesis by setting up a situation in which the strength of relationship between variables can be tested.[28]

Good experimental design is separable from the use of statistical tests of significance. It is the art of achieving interpretable comparisons and as such would be required even if

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[28] David Nunan, *Research Methods in Language Learning,* (New York: Cambridge University Press, 1992), p. 230.

the end product were to be graphed percentages, parallel prose case studies, photographs of groups in action, etc.[29]

There are three types of experiment such as:[30]

1. Pre-experiment: may have pre- and post treatment tests, but lack a control group

2. Quasi-experiment: has both pre- and post test and experimental and control groups, but no random assignment of subject

3. True-experiment: has both pre- and post tests, experimental and control groups, and random assignment of subject.

In this research the researcher uses **quasi experiment** research (pre test-post test non-equivalent-group design) to conduct the study. Pre test-post test non-equivalent-group design is an experimental design have two groups; the first group obtain treatment, while the second group is control. In the design, the treatments' group (experimental group) and controls' group before obtain treatment have pre test. In this experimental design no carrying out of random.

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[29] Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental designs for Research*, (Boston : Houghton Mifflin Company), 1963, p. 22.

[30] Nunan, *Research Methods in Language Learning.,* p. 41

The researcher will take two classes for this research. The researcher will conduct six meetings for this research. Three meetings in experiment class and three meetings in control class. The first class is as an experiment class; the class is given pre-test; second, the treatment students practice using Problem-based Learning strategy, and third, students are given post test to measure the treatment is effective or not. And the second class is as a control class; the class is given pre test; second, the control students practice using usual method, and the third the students are given post test to be compared with the result of the experimental research.

Several steps of this research :

1. The researcher will give the pre test either in experiment class or control class.

2. The researcher will implement the treatment of Problem-based Learning strategy in experiment class and implements usual strategy in control class.

3. The researcher will give the post test either in experiment class or control class.

4. The researcher will compare the outcome pre test and post test.

B. The Place of Research

The researcher conduct this research in SMKN 1 Pandeglang. It is located in Jl. Raya Labuan Km. 5 Kadu Lisung, Pandeglang-Banten. The subject in this research is the eleventh graders of Software engineering of SMKN 1 Pandeglang. The reasons of choosing this school are easy to be reached and the researcher wants to give contribution to this school. The researcher hold this research on July 18th until August 20th 2017.

C. The Population and Sample

a. Population

According to David Nunan, "population is all cases, situations, or individuals who share one or more characteristic".[31] The population of this research is the eleventh grade students of SMKN 1 Pandeglang. There are eighteen classes in the eleventh grade consist 670 students in academic year 2017-2018. Looking at the number of

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[31] Nunan, *Research Methods in Language Learning*, p. 231

population, the researcher does not take all of them as respondent, because it will take long time and much cost for finishing this study. So, the researcher takes samples from the population or part of population.

b. Sample

Sample is a subset of individuals or cases from within a population. In this research, the researcher uses cluster sampling. Cluster sampling is a technique in which clusters of the participants that represent the population are identified and included in the sample (have been made group). There are eighteen classes in the eleventh grade of SMKN 1 Pandeglang. The researcher takes two classes as sample research by clustering from the eleventh grade (XI Software engineering 1 and XI Software engineering 2). Class of XI Software engineering 1 consist of 31 students as experimental class and class of XI Software engineering 2 consist of 31 students as controlled class.

D. Technique of Data Collection

There are three techniques to get valid data and objective information.

1. Observation

The researcher collects information that happened in the class during learning, and it is focused in how far the effectiveness of Problem-based Learning strategy in students' writing on application letter.

2. Interview

The technique that used by the researcher is interviewing the English teacher. The purpose is to know about student's writing skills and about the strategy which applied, whether it is effective or not.

3. Test

Test is any procedure for measuring ability, knowledge, or performance.[32] Test is used to measure the students' mastery in writing Application Letter.

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[32] Jack C Richards and Richard Schmidt, *Longman Dictionary of Language Teaching and Applied Linguistics*, 3rd Ed., (London: Pearson Education Limited, 2002), p. 546

The researcher chooses test for the technique of data collection. Test is the way to examine or measure a hypothesis. The researcher needs to make criteria from the data that will be tested. The result of the test can be acquired in form the score. And It is more transparent.

a. Pre-test

The pre test is aimed to know the students mastery in writing application letter before the treatments carried out. Before the researcher teaches the material by using Problem-based Learning, the teacher asked students to make an application letter based on job vacancy which has been decided. Pre-test is given to the experiment class and control class in same way. This result of the test becomes the evaluation before the use of Problem-based Learning in teaching Application Letter is applied in the class.

b. Post-test

Post-test is given to the experiment class and control class. It is given in order to know students' achievement after they are taught by using Problem-based Learning

and without Problem-based Learning in control class. In this case, students are asked to make an Application Letter based on job vacancy which is decided. The result of the scoring then is compared with pre-test. In this case, the researcher knows how far is the effectiveness of using Problem-based Learning in improving students' writing on Application Letter.

E. Technique of Analyzing Data

1. To score writing test, the researcher use assessment of Marcea K. Seible.[33] In the Cxiong scale, scripts are rated on five aspect of writing application letter : presentation/ format, content – introduction, content – main body, content - closing, spelling and grammar.

2. To analyze the data, the researcher uses T observation t-test. This is the following steps:

   a. The result of pre test in experiment and control class.

   b. The result of post test in experiment and control class.

   c. Statistical approach for quantitative data.

      1) Collecting and scoring the students' test sheet.

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[33] Marcea K. Seible, *"Resumes and Cover Letter for High School"*, http://www.readwritethink.org>30847_rubric.

To analyze the data use t-test, as follow : [34]

$$t_o = \frac{M_x - M_y}{SE_{Mx} - SE_{My}}$$

The procedures of calculation are as follows :

1. Determine the standard deviation of experimental and control class, as follow:

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

2. Determining mean of difference (MD) of experimental and control class to get the result of the pre test and post test:

$$M_D = \frac{\sum D}{N}$$

3. Determining the mean of differences (SE_{MD}) from experimental and control class, by formula:

$$SE_{MD} = \frac{SD_D}{\sqrt{N - 1}}$$

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[34] Anas Sudijono, Pengantar Statistik Pendidikan, (Jakarta : PT Raja Graifndo Persada, 1999), p.345.

4. Determining Standard Error of Different Mean of Experimental and Control Class :

$$SE_{Mx\text{-}My} = \sqrt{SE_{Mx^2} + SE_{My^2}}$$

5. Determining t_o with formula :

$$t_o = \frac{M_x - M_y}{SE_{Mx} - SE_{My}}$$

6. Determining the degree of freedom:

$$Df = N_1 + N_2 - 2$$

CHAPTER IV

THE RESULT OF THE RESEARCH

A. Data Description

In this chapter, the researcher would show the result of the students test score. The researcher conducted experimental research. The researcher takes 62 students at the eleventh grade of SMKN 1 Pandeglang in academic year of 2017/2018. The goal of the research is intended to find out the accurate data in according to the research title. The sample of this study divided into two classes. They are 31 students from class XI Software Engineering 1 as experimental class and 31 students from class XI Software Engineering 2 as control class.

For instrument, the researcher used test. There are pre-test and post-test for experimental class and control class. The researcher uses statistic calculation of "t" test in analyzing the data. "t" test is formula to know the different means of pre-test and post-test result and pre-test and post-test treatment.

1. The Score of Pre-test and Post-test of Experimental Class

Based on research conducted, the result of pre-test at experiment class got the score 1468,75. The average score of

pre-test was 47,38. The score of pre-test will be describes in the following table :

Table 4.1

No.	Initial Name	Func	F & C	Eff	G & M	Score
1	AGRZ	**1**	**1**	**1**	**1**	**25**
2	AHF	2,5	2,5	2	2	56,25
3	AH	1	2	1	1	31,25
4	AAN	3	3	2	3	68,75
5	ABJ	2	2	1	2	43,75
6	Ari	2	3	2	3	62,5
7	Aro	2	2	2	2	50
8	AN	2,5	2,5	2	2	56,25
9	DeH	**1**	**1**	**1**	**1**	**25**
10	DM	1	2	2	2	43,75
11	DiH	**1**	**1**	**1**	**1**	**25**
12	ES	2	2	2	2	50
13	ESM	3	3	3	3	75
14	FO	3	3	2	3	68,75
15	FR	1	1	2	1	31,25
16	HS	2	2	2	2	50

17	HF	3	3	3	3	75
18	MHA	1	1	2	1	31,25
19	MIAT	1	2	1	1	31,25
20	MAU	2	2	2	2	50
21	MEH	2	3	2	2	56,25
22	MF	1	2	1	2	37,5
23	No	2	1,5	1,5	1	37,5
24	Os	2	2	2	2	50
25	RAS	2	2	2	1	43,75
26	SA	1	2	2	1	37,5
27	Sa	2	2	1	1	37,5
28	SANB	3	3	3	2	68,75
29	UY	2	1	1	1	31,25
30	WF	1	2	2	2	43,75
31	YA	**3**	**3**	**3**	**3**	**75**
Total						**1468,75**
Average/ Mean						**47,38**

The table 4.1 above showed the results of the students' pre-test score at the experimental class. The data showed the maximum score was 75 and the minimum score was 25. One

student get maximum score and three students get minimum score. The average score of pre-test was 47,38.

While the result of post-test at the experimental got better score it can be described as follow:

Table 4.2

The students' score of post-test at the experimental class

No.	Initial Name	Func	F & C	Eff	G & M	Score
1	AGRZ	4	2,5	2,5	2,5	71,87
2	**AHF**	**2,5**	**2**	**2**	**2**	**53,12**
3	AH	2,4	5	2,5	3	75
4	AAN	4	4	3,5	3,5	93,75
5	ABJ	4	2,5	2,5	2,5	71,87
6	Ari	4	3,5	3,5	3	87,5
7	Aro	2	2,5	2,5	3	75
8	AN	4	3,5	3,5	3	87,5
9	DeH	4	3	3,5	3	84,37
10	DM	4	4	3,5	3,5	93,75
11	DiH	4	3	3	3	81,25
12	ES	4	3,5	3,5	3	87,5

13	ESM	**4**	**4**	**4**	**3,5**	**96,87**
14	FO	4	3	3	3	81,25
15	FR	4	3	3	3	81,25
16	HS	4	4	3	3	87,5
17	HF	**4**	**4**	**4**	**3,5**	**96,87**
18	MHA	4	4	3	3	87,5
19	MIAT	4	3	3	3	81,25
20	MAU	4	3,5	3	3	84,37
21	MEH	**4**	**4**	**4**	**3,5**	**96,87**
22	MF	4	3	3	3	81,25
23	No	3	2,5	2,5	3	68,75
24	Os	4	4	4	3	93,75
25	RAS	4	3	3,5	3	84,37
26	SA	2	3	3	3	68,75
27	Sa	2,5	4	3,5	3	81,25
28	SANB	4	2,5	3	2,5	75
29	UY	4	2,5	2,5	2,5	71,78
30	WF	4	2,5	2,5	3	75
31	**YA**	**4**	**4**	**4**	**3,5**	**96,87**
Total						**2552,98**
Average/ Mean						**82,35**

The table 4.2 above showed the results of the students' post-test score at the experimental class. The data showed the maximum score was 96,87 and the minimum score was 53,12. Four students get maximum score and one student get minimum score. The average score of post-test was 82,35.

2. **The Score of Pre-test and Post-test of Control Class**

Based on research conducted, the result of pre-test at experiment class got the score 1312,5. The average score of pre-test was 42,34. The score of pre-test will be describes in the following table :

Table 4.3

No.	Initial Name	Func	F & C	Eff	G & M	Score
1	**ANR**	**2**	**1**	**1**	**1**	**31,25**
2	AdB	2	2	1	1	37,5
3	ABai	2	2	1	2	43,75
4	AR	2	2	1	1	37,5
5	ASB	2	2	2	2	50
6	**AA**	**1**	**2**	**1**	**1**	**31,25**
7	**DaM**	**1**	**2**	**1**	**1**	**31,25**

8	DA	1	2	1	1	31,25
9	DoM	1	1	1	2	31,25
10	ENMA	2	2	1	1	37,5
11	KDS	2	2	2	2	50
12	MH	2	2	2	1	43,75
13	MJa	3	2	1	1	43,75
14	MRA	3	2,5	2,5	2	62,5
15	MFiA	2	1	1	1	31,25
16	MBI	1	2	2	2	43,75
17	MFS	3	2	1	2	50
18	MFaA	2	1	2	1	37,5
19	MJu	3	2	2	2	56,25
20	MM	2	2	2	2	50
21	NYT	2	1	1	2	37,5
22	NAW	2	1	1	2	37,5
23	Nu	2	1	2	1	37,5
24	RaA	2	3	2	2	56,25
25	RTM	2	2	1	2	43,75
26	RiA	1	1	1	2	31,25

27	Ru	3	3	2	2	62,5
28	SY	2	1	1	1	31,25
29	SA	3	2	1	1	43,75
30	UN	2	2	2	3	56,25
31	YA	2	2	1	2	43,75
Total						1312,5
Average/ Mean						42,34

The table 4.3 above showed the results of the students' pre-test score at the control class. The data showed the maximum score was 62,5 and the minimum score was 31,25. One student get maximum score and eight students get minimum score. The average score of pre-test was 42,34.

While the result of post-test at the control got better score it can be described as follow:

Table 4.4

No.	Initial Name	Func	F & C	Eff	G & M	Score
1	ANR	4	3	3	3	75
2	AdB	3	3	3	3	75
3	ABai	3	3	3	3	75
4	**AR**	**1**	**2**	**1**	**1**	**31,25**
5	ASB	4	3	3	3	81,25
6	AA	4	2,5	1,5	2	62,5
7	DaM	3	3	2	2	62,5
8	DA	2	3	3	3	68,75
9	DoM	4	2,5	2	2,5	68,75
10	ENMA	4	2,5	2,5	3	75
11	KDS	2,5	2,5	4	2,5	68,75
12	MH	3	2	2	2	56,25
13	**MJa**	**1**	**2**	**1**	**1**	**31,25**
14	MRA	2	2	2	3	56,25
15	MFiA	3	2	2	3	62,5
16	MBI	3	3	3	3	75

17	**MFS**	**4**	**4**	**4**	**3**	**93,75**
18	MFaA	1	2	1	2	37,5
19	MJu	4	3,5	3,5	3	87,5
20	MM	4	3	3	3	81,25
21	NYT	4	3	3	2	75
22	**NAW**	**1**	**2**	**1**	**1**	**31,25**
23	Nu	3	1,5	1,5	1	43,75
24	RaA	2	3	2	2	56,25
25	RTM	2	2	1	1	37,5
26	**RiA**	**1**	**2**	**1**	**1**	**31,25**
27	Ru	4	3	3	3	81,25
28	**SY**	**2**	**1**	**1**	**1**	**31,25**
29	SA	4	3	2,5	2,5	75
30	UN	4	3,5	3	2,5	81,25
31	YA	4	2,5	2,5	2	68,75
Total						**1937,5**
Average/ Mean						**62,5**

The table 4.4 above showed the results of the students' post-test score at the control class. The data showed the maximum score was 93,75 and the minimum score was 31,25. One student get maximum score and five students get minimum score. The average score of post-test was 62,5.

B. **Data Analysis**

1. **Comparing the Pre Test and the Post Test in Experimental Class (Variable X)**

In this part, the researcher compares the pre-test score and the post test score to find out the effectiveness of using Problem-based Learning strategy in improving students' writing on application letter. The researcher compares both of them by using test calculation, and the data of the pretest and the post test can be seen on the table below:

Table 4.5

No.	Initial Name	Pre Test	Post Test	Deviation $(D = x_2 - x_1)$	Square Deviation (D^2)
1	AGRZ	25	71,87	46,87	2196,80
2	AHF	56,25	53,12	-3,13	9,80
3	AH	31,25	75	43,75	1914,06

4	AAN	68,75	93,75	25	625
5	ABJ	43,75	71,87	28,12	790,73
6	Ari	62,5	87,5	25	625
7	Aro	50	75	25	625
8	AN	56,25	87,5	31,25	976,56
9	DeH	25	84,37	59,37	3524,80
10	DM	43,75	93,75	50	2500
11	DiH	25	81,25	56,25	3164,063
12	ES	50	87,5	37,5	1406,25
13	ESM	75	96,87	21,87	478,30
14	FO	68,75	81,25	12,5	156,25
15	FR	31,25	81,25	50	2500
16	HS	50	87,5	37,5	1406,25
17	HF	75	96,87	21,87	478,30
18	MHA	31,25	87,5	56,25	3164,06
19	MIAT	31,25	81,25	50	2500
20	MAU	50	84,37	34,37	1181,30
21	MEH	56,25	96,87	40,62	1649,98
22	MF	37,5	81,25	43,75	1914,06

23	No	37,5	68,75	31,25	976,56
24	Os	50	93,75	43,75	1914,06
25	RAS	43,75	84,37	40,62	1649,98
26	SA	37,5	68,75	31,25	976,56
27	Sa	37,5	81,25	43,75	1914,06
28	SANB	68,75	75	6,25	39,06
29	UY	31,25	71,78	40,53	1642,68
30	WF	43,75	75	31,25	976,56
31	YA	75	96,87	21,87	478,30
Total		**1468,75**	**2552,98**	**1084,23**	**44354,40**
Average		**47,38**	**82,35**	**34,98**	**1430,79**

From the table above we can make the graphic improving score result for the experimental class before and after applying Problem-based Learning strategy to make easier in seeing the improving score of the experimental class.

Graphic 4.1
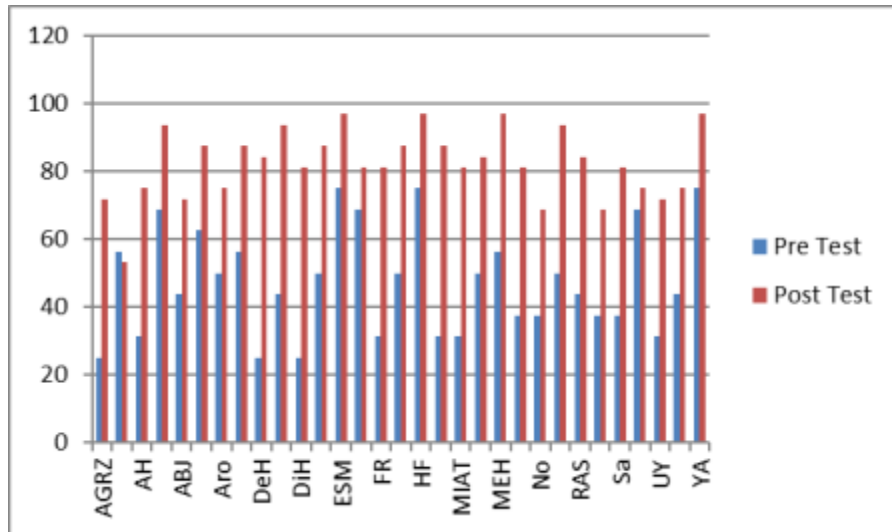
2. **Comparing the Pre Test and the Post Test in Control Class**

    (Variable Y)

Table 4.6

No.	Initial Name	Pre Test	Post Test	Deviation $(D = x_2 - x_1)$	Square Deviation (D^2)
1	ANR	31,25	75	43,75	1914,06
2	AdB	37,5	75	37,5	1406,25
3	ABai	43,75	75	31,25	976,56
4	AR	37,5	31,25	-6,25	39,06
5	ASB	50	81,25	31,25	976,56

6	AA	31,25	62,5	31,25	976,56
7	DaM	31,25	62,5	31,25	976,56
8	DA	31,25	68,75	37,5	1406,25
9	DoM	31,25	68,75	37,5	1406,25
10	ENMA	37,5	75	37,5	1406,25
11	KDS	50	68,75	18,75	351,56
12	MH	43,75	56,25	12,5	156,25
13	MJa	43,75	31,25	-12,5	156,25
14	MRA	62,5	56,25	-6,25	39,06
15	MFiA	31,25	62,5	31,25	976,56
16	MBI	43,75	75	31,25	976,56
17	MFS	50	93,75	43,75	1914,06
18	MFaA	37,5	37,5	0	0
19	MJu	56,25	87,5	31,25	976,56
20	MM	50	81,25	31,25	976,56
21	NYT	37,5	75	37,5	1406,25
22	NAW	37,5	31,25	-6,25	39,0625
23	Nu	37,5	43,75	6,25	39,0625
24	RaA	56,25	56,25	0	0

25	RTM	43,75	37,5	-6,25	39,06
26	RiA	31,25	31,25	0	0
27	Ru	62,5	81,25	18,75	351,56
28	SY	31,25	31,25	0	0
29	SA	43,75	75	31,25	976,56
30	UN	56,25	81,25	25	625
31	YA	43,75	68,75	25	625
Total		**1312,5**	**1937,5**	**625**	**22109,38**
Average		**42,34**	**62,5**	**20,16**	**713,21**

From the table above we can make the graphic improving score result for the control class before and after applying one man show and discussion method to make easier in seeing the improving score of the control class:

Graphic 4.2
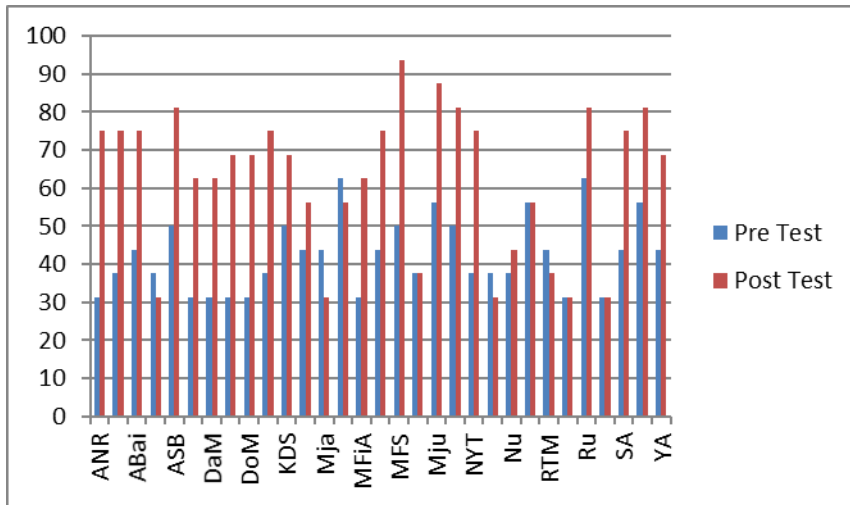
3. Analysis "t" / "t$_o$"

To find out the result of test (pre-test and post-test) the researcher makes the table of the students' score, the researcher mention of respond's number and their result as follow:

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

SD$_D$ of experimental class :   SD$_D$ of control class :

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2} \qquad SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

$$= \sqrt{\frac{44354,40}{31} - \left(\frac{1084,23}{31}\right)^2} \qquad = \sqrt{\frac{22109,38}{31} - \left(\frac{625}{31}\right)^2}$$

$$= \sqrt{1430,79 - 1223,60} \qquad = \sqrt{713,21 - 406,43}$$

$$= \sqrt{207,19} \qquad = \sqrt{306,78}$$

$$= 14,40 \qquad = 17,52$$

After finding the result of SD_D we can seek SE_{MD} (standard error of the mean of different) using formula:

SE_{MD} for experimental class : SE_{MD} for control class :

$$SE_{M1} = \frac{SD_D}{\sqrt{N-1}} \qquad SE_{M2} = \frac{SD_D}{\sqrt{N-1}}$$

$$= \frac{14,40}{\sqrt{31-1}} \qquad = \frac{17,52}{\sqrt{31-1}}$$

$$= \frac{14,40}{\sqrt{30}} \qquad = \frac{17,52}{\sqrt{30}}$$

$$= \frac{14,40}{5,48} \qquad = \frac{17,52}{5,48}$$

$$= 2,63 \qquad = 3,20$$

Determining standard error of different mean of experimental and control class :

$$\text{SE }_{\text{Mx-My}} = \sqrt{SE_{Mx^2} + SE_{My^2}}$$

$$= \sqrt{2,63^2 + 3,20^2} = \sqrt{6,92 + 10,24}$$

$$= \sqrt{17,16}$$

$$= 4,14$$

The last calculation is determining the result of t_o (t observation) of the test with formula:

$$t_o = \frac{M_1 - M_2}{SE_{M1} - SE_{M2}}$$

$$= \frac{34,98 - 20,16}{4,14} = \frac{14,82}{4,14}$$

$$= 3,58$$

Then in order to complete the result of the researcher tried to find out the degree of freedom (*Df*) with the formula:

$$\mathrm{D}f = (N_1 + N_2) - 2$$

$$= (31 + 31) - 2$$

$$= 60$$

There is degree of freedom for 60, so the researcher uses *Df* from 60. D*f* 60 (see the table of "t" values degree of significant of 5% and 1%) are t table of significant level 5% is 2,00 and 1% is 2, 66. So, the result is 2,00 < 3,58 > 2,66. It means that t_o (t observation) is higher than t_t (t table).

C. Data Interpretation

The data showed that the highest score in the two classes in pretest was different that class of XI Software Engineering 1 as an experimental class got 75 and XI Software Engineering 2 as control class got 62,5. The lowest score of pretest in experimental class is 25 and control class is 31,25.

The highest score of post test of XI Software Engineering 1 as experimental class is 96,87 and XI Software Engineering 2 as control class is 93,75. The lowest score in post test of experimental class is 53,12 and the lowest score of control class is 31,25.

From the interpretation above t-count > t table means there is significance effect of using Problem-based Learning strategy toward writing application letter.

Testing hypothesis is to know the significant of both variables, and tested as follow:

Ha = $t_o > t_t$

Ho = $t_o < t_t$

Note:

Ha = Alternative Hypothesis

Ho = Null Hypothesis

To = the value of t-count

Tt = the value of t-table

To prove the data hypothesis, the data obtained from an experimental class and control are calculated by using t-test formula with assumption as follows:

If $t_o > t_t$ = The alternative hypothesis is accepted. It means there is significant effect by using PBL strategy toward students reading comprehension.

If $t_o < t_t$ = The alternative hypothesis is rejected. It means there is no significant effect by using PBL strategy toward students reading comprehension.

From the result calculation above, the value of $t_o = 3{,}58$ the degree of freedom (df) = 60, the writer used the degree of significant 5% = 2,00 and 1% = 2,66. It means that Ha (Alternative Hypothesis) of the writer is accepted and Ho (Null Hypothesis) is rejected.

After getting the data, the writer compared it t_t both degree of significant 5% and 1% $t_o > t_t$ 5% and $t_o > t_t$ 1%, it means $2{,}00 < 3{,}58 > 2{,}66$. It means (Alternative Hypothesis) of the research is accepted.

Based on criteria above, the writer inferred that the alternative hypothesis (Ha) Teaching Writing Application Letter using Problem-based Learning strategy improves students' writing is accepted. On the other hand, null hypothesis (Ho) teaching writing application letter without using Problem-based Learning strategy doesn't improves students' writing application letter is rejected.

Based on the result of the test, the writer has conclusion that is t_o experimental class is bigger than t_o control class, it means that Problem-based Learning strategy has shown the true influence for students' writing application letter ability and this strategy can be used as a good strategy in teaching writing application letter.

Moreover, from the result of writer's view it showed that the students' motivation was good after given a treatment. It could be seen from the students' participation during the teaching learning process and doing the tasks. It was observed their activeness in working in group and in following the activities in teaching. As the result, the teaching and learning process ran well in which all of the students got involved in the activity. Besides, during the class was conducted, all of them were present that made the teaching learning process could be followed by all students.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

A. Conclusions

After analyzing the result of research, the researcher is able to answer the statement problems which have explained in the chapter 1, here are they :

1. In writing application letter's case in pre test, the students often have some mistakes in formatting, planning, and using the language. The most students do not pay attention to the structure of letters, so they cannot write well-formatted letter. For the term planning, students usually do not put the ideas and information clearly and properly, so those matters make the readers cannot understand the letter correctly and persuasively.

   After the students of experimental class were given some treatments by using Problem-based Learning strategy, they achieved better performance than before. Almost of them have paid attention to the structure of letters, they put the points in each paragraph appropriately. Then, they put ideas and

information properly. Their written application letter persuade the reader.

2. Firstly, the teacher/ researcher divides the students into some groups, six people each group maximally or it depends on the total of students.

Secondly, the teacher/ researcher should stimulate the students' prior knowledge and critical thinking. The teacher/ researcher can use video, magazine, newspaper to stimulate their critical thinking.

Then, after the students see the video. The teacher/ researcher asks the students to look for problem (difficult things) from the video.

After they find the difficult things, the teacher/ researcher asks the students to look for the solutions of problems by using internet, book in library, or looking for information to another teacher.

Then, they present their work result in front of other groups, and write down it on the white board in order to be clearer.

The last, the teacher/ the researcher evaluates the students' work result.

3. There is significant effect of Problem-based Learning strategy in improving students' writing on application letter in SMKN 1 Pandeglang. It can be seen on t_o which was higher than t-$_{table}$. According to the result of the research, the researcher concludes that the use of Problem-based Learning (PBL) as strategy in learning writing application letter t is significant. It can be seen from the result of t_o is: 3,58 and the degree freedom (*Df*) = 60, the result of t_t on significant 5% is 2,00 and 1% is 2, 66 so $t_o > t_t$ or (2 < 3,58 > 2, 66). It means that hypothesis research is accepted, or there is a significant influence of using Problem-based Learning (PBL) as a strategy in learning writing application letter.

B. Suggestions

Based on calculation above, the researcher gives suggestions about teaching writing application letter by using Problem-based Learning. The suggestions are follows:

1. The headmaster should give opportunities to teachers in term of developing their competence in writing activities through conducting experiment research to improve their

professionalism in teaching and learning process that can influence the students' quality in learning.

2. The English teacher should apply an active learning in English learning process, the teacher should guide the students on every writing process, so the students will be easy to understand the learning and fun to learn a new knowledge.

3. The English teacher should be creative in developing the teaching learning activities in classroom to make the class alive and the students do not get bored.

4. The English teacher should apply and more explore a various method, technique, or strategy in teaching English. So, the student will be better in understanding the learning.

5. The School's committee should give suggestion about learning process.

6. The head of library should provide books about teaching methods of English fun, so English teachers can upgrade their skills in teaching English, especially in writing skill.

7. The students should enrich their vocabulary, memorize, and practice it, so they will be easier to arrange writing later.

8. The students should know the basic pattern of grammar.

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