

**MODIFYING METACOGNITIVE STRATEGY INSTRUCTION  
BASED COGNITIVE ACADEMIC LANGUAGE LEARNING  
APPROACH (CALLA) FOR WRITING CLASS IN RELATION  
TO STUDENTS' LEVEL OF CRITICAL THINKING**

**(A Thesis)**

**By  
MELINA SARI**



**MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM  
LANGUAGE AND ARTS EDUCATION DEPARTMENT  
TEACHER TRAINING AND EDUCATION FACULTY  
LAMPUNG UNIVERSITY  
BANDAR LAMPUNG  
2017**

**MODIFYING METACOGNITIVE STRATEGY INSTRUCTION  
BASED COGNITIVE ACADEMIC LANGUAGE LEARNING  
APPROACH (CALLA) FOR WRITING CLASS IN RELATION  
TO STUDENTS' LEVEL OF CRITICAL THINKING**

**By:  
MELINA SARI**

A Thesis

Submitted in a partial fulfillment of  
The requirements for S-2 Degree



**MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM  
LANGUAGE AND ARTS EDUCATION DEPARTMENT  
TEACHER TRAINING AND EDUCATION FACULTY  
LAMPUNG UNIVERSITY  
BANDAR LAMPUNG  
2017**

## **ABSTRACT**

### **MODIFYING METACOGNITIVE STRATEGY INSTRUCTION BASED COGNITIVE ACADEMIC LANGUAGE LEARNING APPROACH (CALLA) FOR WRITING CLASS IN RELATION TO STUDENTS' LEVEL OF CRITICAL THINKING**

**MELINA SARI**  
melinasari30@gmail.com  
university of lampung

This study aimed at investigating the effect of modified CALLA on students' writing achievement and the use of metacognitive strategies, finding out the effect of students' critical thinking level on their writing achievement, and discovering the process of implementing modified CALLA in the language classroom.

This research was experimental research based on one-group pretest-posttest design. Science classes (XI IPA 1 and XI IPA 2) were taken as the subject of the research by using purposive random sampling. There were three classifications consisting of: 17 low critical thinker, 31 middle critical thinker, and 4 high critical thinker. There were four instruments administered in this study, namely: Academic Potency Test (APT), Metacognitive Strategy Use in Writing (MSUW), Writing Test, and observation. The researcher collected the data by conducting three stages of activities. They were distributing Academic Potency Test (APT), Metacognitive Strategy Use in Writing (MSUW) and Writing Test, conducting treatment and employing observation sheet, administering Metacognitive Strategy Use in Writing (MSUW), and Writing Test. In analyzing the data, the researcher used Statistical Package for Social Science (SPSS) version 21 program. The data obtained from Metacognitive Strategy Use in Writing (MSUW) and writing test were calculated before and after treatment. Repeated Measures t-test was used to compare the means score from the result of pretest and posttest. Since this study dealt with the effect of students' critical thinking level on their writing achievement, Univariate Analysis of Variance (One Way Anova) was used to see whether there was correlation between students' critical thinking level toward their writing achievement. The significance level was in 0.05 even the hypothesis was approved if  $\text{sign} < p$ . Therefore the probability of error in the hypothesis was only about 5%.

Related to the implementation of modified CALLA in language classroom, the finding of this present study showed that statistically significant increase both in students' writing achievement and their metacognitive strategies uses. The total mean of the Pre Test score in writing was 63.75 meanwhile the total mean of the Post Test score in writing was 80.36. The result of Paired Sample T- Test indicated the influence of the treatment on the students' scores was significant, since the value of variable sig. (2-tailed) was *.000*. The total mean of the Pre Test score in metacognitive strategies was 3.47 meanwhile the total mean of the Post Test score in metacognitive strategies was 4.34. The result of Paired Sample T- Test showed the influence of the treatment on the students' scores was significant, since the value of variable sig. (2-tailed) was *.000*. Furthermore, this study also dealt with the effect of students' critical thinking level on their writing achievement. The means score of low critical thinker students was 80.88, middle critical thinker students was 81.14, and high critical thinker students was 75.50. The result of Univariate Analysis of Variance (One Way Anova) revealed the influence of the students' critical thinking level in their writing scores was not significant, since the value of variable sig. (2-tailed) was *.168*. As the result showed the middle critical thinker students and the low critical thinker students got higher score rather than the high critical thinker students. From the field notes which were included in the observation sheet, clearly, the teaching and learning process through modified CALLA run well as expected by the researcher. The students in both classes (XI A1 and XI A2) actively participated in those five steps of CALLA: preparation step, presentation step, practice step, evaluation step and expansion step.

The training of metacognitive strategies has benefits for classroom practices since it can optimize the learners' awareness to use the strategies. Besides that, the metacognitive strategies instruction promotes the learners' ability to select appropriate strategies for a particular task. Concerning the relationship between critical thinking and writing achievement, it was found that levels of students' critical thinking have no significant effects toward their writing achievement. There might be some underlying reasons which clarify this phenomenon. The possible reasons deal with language proficiency, component of learning, and students' motivation.

**Research Title : MODIFYING METACOGNITIVE STRATEGY INSTRUCTION BASED COGNITIVE ACADEMIC LANGUAGE LEARNING APPROACH (CALLA) FOR WRITING CLASS IN RELATION TO STUDENTS' LEVEL OF CRITICAL THINKING**

**Student's Name : Melina Sari**

**Student's Number : 1523042017**

**Study Program : Master in English Language Teaching**

**Department : Language and Arts Education**

**Faculty : Teacher Training and Education**



**Advisor**

**Co-Advisor**

**Prof. Ag. Bambang Setiyadi, M.A. Ph.D.**  
NIP 19590528 198610 1 001

**Hery Yufrizal, M.A., Ph.D.**  
NIP 19600719 198511 1 001

**The Chairperson of Department  
of Language and Arts Education**

**The Chairperson of Master  
in English Language Teaching**

**Dr. Mulyanto Widodo, M.Pd.**  
NIP 19620203 198811 1 001

**Dr. Flora, M.Pd.**  
NIP 19600713 198603 2 001

**ADMITTED BY**

**1. Examination Committee**

Chairperson : **Prof. Ag. Bambang Setiyadi, M.A. Ph.D.** .....

Secretary : **Hery Yufrizal, M.A., Ph.D.** .....

Examiners : **I. Dr. Muhammad Sukirlan, M.A.** .....

**II. Dr. Tuntun Sinaga, M.Hum.** .....

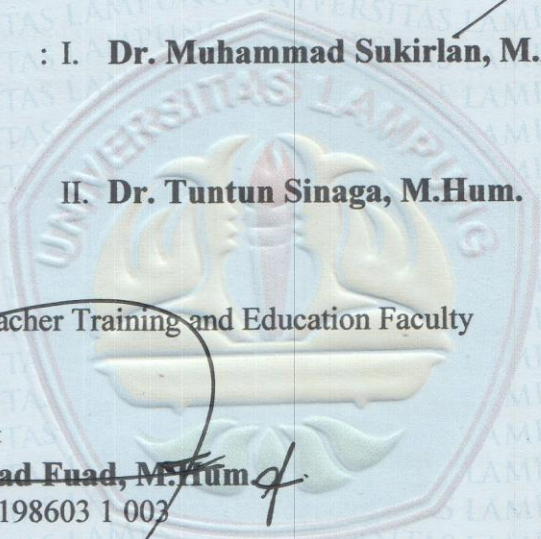
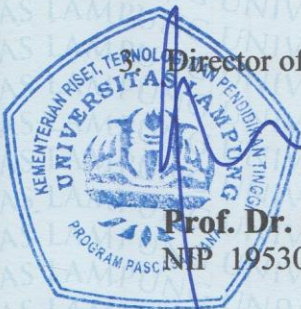
**2. The Dean of Teacher Training and Education Faculty**

**Dr. Muhammad Fuad, M.Hum.**  
NIP. 19590722 198603 1 003

**3. Director of Postgraduate Program**

**Prof. Dr. Sudjarwo, M.S.**  
NIP. 19530528 198103 1 002

**4. Graduated on : October 20<sup>th</sup>, 2017**



## LEMBAR PERNYATAAN

Dengan ini saya menyatakan dengan sebenarnya bahwa:

1. Tesis dengan judul “Modifying Metacognitive Strategy Instruction Based Cognitive Academic Language Learning Approach (CALLA) for Writing Class in Relation to Students’ Level- of Critical Thinking” adalah hasil karya sendiri dan saya tidak melakukan penjiplakan atau pengutipan atas karya penulis lain dengan cara tidak sesuai tata etika ilmiah yang berlaku dalam masyarakat akademik atau yang disebut plagiatisme
2. Hal intelektual atas karya ilmiah ini diserahkan sepenuhnya kepada Universitas Lampung

Atas pernyataan ini, apabila dikemudian hari ternyata ditemukan adanya ketidakbenaran, saya bersedia menanggung akibat dan sanksi yang diberikan kepada saya, saya bersedia dan sanggup dituntut sesuai hukum yang berlaku.

Bandar Lampung, 27 Oktober 2017  
Yang membuat pernyataan,



Melina Sari  
NPM 1523042017

## CURRICULUM VITAE

The writer, Melina Sari, was born on May 27<sup>th</sup> 1992 in Metro City. She was the first child from the lovely couple Juair and Sinar Wati. She started her study at State Elementary School 1 Metro Pusat in 1998 and graduated in 2004. Thereafter, she was enrolled as a student of State Junior High School 3 Metro and graduated in 2007. In the same year, she registered at Senior High School of Kartikatama Metro, she studied in Social Studies as her major and graduated in 2010.

She entered University of Lampung and major in English Education Study program as her major in the Faculty of Teacher Training and Education in 2010 through PKAB. In July – September 2013 she accomplished her teaching practice at State Junior High School 1 Lambu Kibang, Tulang Bawang Barat. After finishing her S1 degree, in 2015, she registered as a post graduate student at English Education Master Degree Program at University of Lampung. On March 2017 she participated as paper presenter at national seminar and workshop of SEMNASTA 3 in University of Lampung.



# **DEDICATION**

This thesis would humbly be dedicated to:

My beloved parents: Mother and Father

My big family

My beloved Kpopers partners: Iskadina Eka Putri, Isna Yuningsih, Kartika

Wulandari, Nurul Aulia, Ria Ayu Pratiwi, Shirtha El Rusyda

My comrades, the Third Batch of MPBI Unila 2015

My lecturers and my almamater, University of Lampung

## **MOTTO**

Which favor of your Lord would you deny?

(QS: Ar – Rahman, 55)

Miracle is another word for hard work.

(To the Beautiful You, 2012)

## ACKNOWLEDGEMENTS

*Alhamdulillah* *alamin*, praise is merely to Allah SWT, the most gracious, the most merciful and tremendous blessing that enables the writer to accomplish this thesis proposal. This thesis proposal entitled “Modifying Metacognitive Strategy Instruction based Cognitive Academic Language Learning Approach (CALLA) for Writing Class in Relation to Students’ Level of Critical Thinking” is submitted as one of the requirements in accomplishing S-2 Degree in English Education Study Program, Faculty of Teaching Training and Education, University of Lampung.

It is important to know that this research would never come into existence without any supports, encouragements and guidance by several generous people. Therefore, the writer would like to express her sincere gratitude and deep respect to Prof. Ag. Bambang Setiyadi, M.A., Ph.D., as her first advisor, for his support, ideas, and suggestions for the writer during the thesis process. Her appreciation is also due to her second advisor, Hery Yufrizal, M.A., Ph.D., who gave her his best valuable input, suggestions, and revision in finishing this research. The writer also would like to express her deep gratitude to her examiners, Dr. M. Sukirlan, M.A., and Dr. Tuntun Sinaga, M.Hum., who have given their suggestions and criticisms as well as their constructive ideas in improving the content of this paper.

Her grateful appreciation is also extended to Dra. Hj. Tugirah as the Headmaster of Senior High School of Kartikatama Metro and Mrs. Mel as the English teacher, who have given the opportunity to conduct research at that school and for being so helpful during the research process. Appreciation is also addressed to her beloved students of class XI IPA 1 and XI IPA 2 for their participation in this research.

The greatest honor and sincere thanks would be dedicated to her beloved families, her father Juair and her mother Sinarwati. It is truly undoubted that loves, cares, spirits, motivation, patience and willingness to wait for her graduation and timeless prayers during days and nights are everything for her. Her grateful love and thanks also extended to her big family, uncle, aunt, cousin, and all her family without any exception.

She would like to acknowledge her gratitude to her “partners in crime”: Iskadina Eka Putri, Isna Yuningsih, Kartika Wulandari, Nurul Aulia, Ria Ayu Pratiwi, and Shirtha El Rusyda for their support, motivation, and input. Many thanks are also addressed to Uswatun Hasanah and Fefiyana for their assistance to be her inter-rater. Her appreciation is also dedicated to her beloved “Makgeng” Novita Nurdiana who always motivates, advices, and supports her when she gets down especially in finishing this paper. The writer also would address her thankfulness to her beloved comrades the Third Batch of MPBI Unila 2015. Thank you so much for everything. It will be never forgotten.

Finally, the writer realizes that this thesis proposal still has some weaknesses. Therefore, criticisms and suggestions are invited for its improvement. Hopefully, this thesis proposal can give benefits to the readers and those who want to carry out further research.

Bandar Lampung,     October 2017

Writer

Melina Sari

NPM: 1523042017

## TABLE OF CONTENTS

ABSTRACT .....	i
CURRICULUM VITAE.....	iii
DEDICATION.....	iv
MOTTO .....	v
ACKNOWLEDGEMENTS.....	vi
TABLE OF CONTENTS .....	ix
LIST OF TABLES.....	xiii
LIST OF APPENDICES .....	xv

### I. INTRODUCTION

1.1 Background of Problem .....	1
1.2 Formulation of the Problems.....	7
1.3 Objectives of the Research.....	7
1.4 Uses of the Research .....	7
1.5 Scope of the Research .....	8
1.6 Definition of Terms.....	9

### II. LITERATURE REVIEW

2.1 . Writing Skill.....	11
2.1.1. Writing as the Product and Process.....	12
2.1.2. Aspects of Writing Skill.....	14
2.1.3. Micro and Macro Skills of Writing.....	16
2.1.4. Types of Writing Performance.....	17
2.1.5. Types of Paragraph Writing.....	19
2.2 Teaching Writing .....	22
2.3 . Metacognitive Strategies.....	23
2.4. Cognitive Academic Language Learning Approach (CALLA).....	24

2.4.1. Components of CALLA Model .....	26
2.5 Implementation of Modified CALLA in Language Classroom.....	30
A. The Procedures in the Original CALLA .....	30
B. Justification for Modifying the Procedures of CALLA .....	32
C. The Procedures in the Modified CALLA.....	33
D. The Comparison of Procedures in the Original CALLA and the Modified CALLA .....	35
E. Hand Out of Modified CALLA in While Activities.....	36
2.6 Benjamin Bloom’s Taxonomy of Critical Thinking.....	40
2.6.1. The Revised Version of Bloom’s Taxonomy.....	41
2.7 Critical Thinking and Writing.....	42
2.8 Studies on the Relationship between Critical Thinking and Writing .	44
2.9 CALLA, Metacognitive Strategies, Writing Achievement and Critical Thinking.....	45
2.10Theoretical Assumption .....	48
2.11Hypotheses .....	49

### **III. RESEARCH METHODS**

3.1. Research Design.....	51
3.2. Variables of the Research.....	52
3.3. Population and Sample.....	53
3.4. Research Instruments .....	53
3.4.1. Validity .....	54
A. Validity of Academic Potency Test (APT).....	54
B. Validity of Metacognitive Strategy Use in Writing (MSUW).....	56
C. Validity of Writing Test.....	57
3.4.2. Reliability .....	60
A. Reliability of Academic Potency Test (APT).....	60
B. Reliability of Metacognitive Strategy Use in Writing (MSUW)....	61
C. Reliability of Writing Test.....	61
3.5. Data Collection Technique.....	62
3.6. Data Analysis .....	64

3.7.Hypothesis Testing.....	64
-----------------------------	----

#### **IV. RESULT AN DISCUSSION**

4.1. Results .....	66
4.1.1. Students' Writing Achievement .....	67
A. The Result of Pre Test .....	67
B. The Result of Post Test.....	69
C. Hypothesis Testing RQ 1 .....	71
4.1.2. Students' Metacognitive Strategy Uses .....	73
A. The Result of Pre Test .....	73
B. The Result of Post Test.....	75
C. Hypothesis Testing RQ 2 .....	76
4.1.3. Students' Critical Thinking and Their Writing Achievement ...	78
A. The Result of Students' CT Level Classification .....	78
B. The Result of Students' CT Level Effect toward Their Writing Achievement.....	80
C. Hypothesis Testing RQ 3 .....	81
4.1.4. Teaching and Learning Process through Modified CALLA .....	85
4.2. Discussions.....	89
4.2.1. Students' Writing Achievement .....	89
4.2.2. Aspect of Writing that Mostly Improved after Treatment.....	91
4.2.3. Students' Metacognitive Strategy Uses .....	93
4.2.4. Strategies that Mostly Improved after Treatment.....	95
4.2.5. Students' Critical Thinking and Their Writing Achievement ...	96
4.2.6. Factors Affecting the Development of Critical Thinking and Writing Achievement.....	98
A. Studies of Pujiono (2012) .....	98
B. Studies of Tandiana (2014).....	100
C. Studies of Xiao and Chen (2015).....	101
D. Studies of Ali and Asrori (2016) .....	102



E. Studies of Indah and Kusuma (2016).....	103
F. Studies of Hasan and Marzuki (2017).....	104
4.2.7. The Teaching and Learning Process through Modified CALLA	105
A. Studies of Takallou (Reading Skill, 2011) .....	105
B. Studies of Diaz (Vocabulary Learning, 2015) .....	108
C. Studies of Nejad and Shahrebabaki (Reading Skill, 2015).....	109

## **V. CONCLUSION AND SUGGESTION**

5.1. Conclusions .....	112
5.2. Suggestions .....	114

## **REFERENCES**

## **APPENDICES**

## LIST OF TABLES

### Tables

Table 3.4.1.1. Table Specification of Academic Potency Test (APT) .....	55
Table 3.4.1.2. Table Classification of Students' Critical Thinking Level...	56
Table 3.4.1.3. Table Specification of Metacognitive Strategy Use in Writing (MSUW).....	57
Table 4.1.1.1. The Average Score of Pre Test Students' Writing Achievement Aspect.....	68
Table 4.1.1.2. The Average Score of Pre Test Students' Writing Achievement .....	68
Table 4.1.1.3. The Average Score of Post Test Students' Writing Achievement Aspect.....	70
Table 4.1.1.4. The Average Score of Post Test Students' Writing Achievement .....	70
Table 4.1.1.5. Descriptive Statistical Values Concerning Pre Test and Post Test Scores of Students' Writing Aspect .....	72
Table 4.1.2.1. The Average Score of Students' Metacognitive Strategies Use Aspect.....	73
Table 4.1.2.2. The Average Score of Pre Test Students' Metacognitive Strategies Use .....	74
Table 4.1.2.3. The Average Score of Students' Metacognitive Strategies Use Aspect.....	75
Table 4.1.2.4. The Average Score of Post Test Students' Metacognitive Strategies Use .....	75

Table 4.1.2.5.Descriptive Statistical Values Concerning Pre Test and Post Test Scores of Students' Metacognitive Strategies Use.....	77
Table 4.1.3.1. The Frequency of Students' Critical Thinking Score .....	78
Table 4.1.3.2. The Classification of Students' Critical Thinking Level .....	79
Table 4.1.3.3. The Number of Students' Critical Thinking Level Classification .....	79
Table 4.1.3.4. The Means Score of Writing Aspect regarding to Students' Level of Critical Thinking.....	80
Table 4.1.3.5. The Means Score of Writing Achievement regarding to Students' Level of Critical Thinking.....	81
Table 4.1.3.6. Descriptive Statistic Values Concerning Writing Achievement regarding to Students' Level of Critical Thinking .....	82

## LIST OF APPENDICES

### Appendices

1. Academic Potency Test (APT).....	123
2. Metacognitive Strategy Use in Writing (MSUW) English Version....	132
3. Metacognitive Strategy Use in Writing (MSUW) Bahasa Version ...	133
4. Writing Instrument (Pre Test) .....	134
5. Writing Instrument (Treatment) .....	135
6. Writing Instrument (Post Test).....	140
7. Observation .....	141
8. Teaching Plan .....	142
9. Scoring Criteria .....	147
10. The Result of Students' Pre Test Metacognitive Strategies Score .....	148
11. The Result of Students' Post Test Metacognitive Strategies Score ....	150
12. The Result of Students' Pre Test Writing Score .....	152
13. The Result of Students' Post Test Writing Score .....	154
14. Table of Rating Sheet Students' Writing Score of Pre Test .....	156
15. Table of Rating Sheet Students' Writing Score of Post Test .....	158
16. Gain of Students' Writing Score from Pre Test to Post Test .....	160
17. The Result of Students' Critical Thinking Score .....	162
18. Observation Sheets .....	164
19. CALLA Hand Out .....	174
20. Reliability Statistics of Academic Potency Test (APT) .....	178
21. Reliability Statistics of MSUW Questionnaire .....	179
22. Reliability Statistics of Writing Test.....	180
23. Table of Paired Samples T Test for Metacognitive Strategies .....	186

24. Table of Paired Samples T Test for Aspects of Metacognitive.....	188
25. The Histogram of Metacognitive Strategies Pre Test Score .....	172
26. The Histogram of Metacognitive Strategies Post Test Score.....	193
27. Table of Paired Samples T Test for Writing Achievement .....	194
28. Table of Paired Samples T Test for Aspects of Writing .....	195
29. The Histogram of Writing Achievement Pre Test Score .....	200
30. The Histogram of Writing Achievement Post Test Score.....	201
31. Table of Frequencies for Critical Thinking .....	202
32. Table of One Way Anova for Critical Thinking and Writing .....	203
33. Table of Manova for Critical Thinking and Writing Aspects .....	207
34. Table of Gain Writing .....	218

## **I. INTRODUCTION**

This chapter presents the background of problem followed by the formulation of problem and the objectives of the research. Next, the uses of the research are stated and the scope of research is presented along with the definitions of terms.

### **1.1. Background of Problem**

Writing as a productive language skill plays an essential role in promoting language acquisition as learners experiment with words, sentences, and large chunks of writing to communicate their ideas effectively and to reinforce the grammar and vocabulary they learn in class (Bello, 1997 cited in Ibnian 2011). Writing is a skill in which we express ideas, concept, thought, or feeling through written language. In other words, writing is an activity which is done by person to express his or her thoughts in written form, such as paragraph, letter, message or invitation. Huy (2015) states that writing is a complex metacognitive activity that draws on an individual's knowledge, basic skill, strategies, and ability to coordinate multiple processes. Graham (1997) cited in Huy (2015) identified the following four vital areas in the writing process: (1) knowledge of writing and writing topics, (2) skill for producing and crafting text, (3) processes for energizing and motivating participants to write with enthusiasm, and (4) directing thought and actions through strategies to archive writing goals.

Moreover, Golpour (2014) states that writing is an important skill that needs higher critical thinking and its role in language learning cannot be ignored. Guo (2013) mentions critical thinking is broadly seen as the kind of logical thinking that helps us to analyze and make sense of, or interpret, all forms of situations or information so that the conclusions we draw from our interpretations are sound. The links between critical thinking and writing go beyond the process of getting the content of the critical mind onto paper or screen (Fahim and Ghamari, 2011). The production of a written version of thoughts provides a chance for review. So the writer of a text can judge whether the material on paper or screen says what she/he needs to say, and s/he duly revises it, or not. Once thinking is represented in writing, it can be seen, assessed and judged by others. Exercises in writing skills may concern the skills of writing that are associated with critical thinking or critical thinking as represented in writing. Related to this, it can be inferred that there is a link between critical thinking and writing. Thus, based on the theory, the researcher is interested to highlight whether or not critical thinking has effect on the students' writing achievement. Therefore, at the first meeting the researcher will distribute Academic Potency Test (APT) to classify the students based on their level of critical thinking, in terms of: low level, middle level and high level.

Although writing is an essential skill, many students at high school are not interested in it (Huy, 2015). Study done by Carroll (1990) in United States revealed that many students were never required to learn proper spelling or grammar. These poor students come to think that "English" and "writing" are nothing but spelling and

grammar. According to them, writing means inevitable failure. Good writing is sometimes believed as something that they will never be able to achieve because they not only identify good writing with proper spelling and grammar, but also they are governed by the self-serving and false notion that they cannot learn how to spell correctly or how to construct grammatically correct sentences. Huy (2015) emphasizes the students are even not aware of the importance of writing skill in their learning in the EFL context in Vietnam. They often get low marks when doing the tests on writing skill and it affect their learning's result. In fact, students often have many basic mistakes in written works about spelling, grammar, punctuation and organization. Besides that, learning writing at high school has many problems at the present such as lack of experienced writing skill teacher and lack of time to study and the time for teaching writing skill is not enough for students to improve their ability. In addition, students do not know the principles of writing. Due to the problem in the previous study, the current research proposes an approach to teach writing through strategy training, especially in term of writing strategy. By employing certain strategies in writing, the students are expected to develop their writing achievement.

Setiyadi, et al (2016) describes an important issue in to what extent language learning strategies contribute to the success of EFL learning. It is assumed that the students who have employed certain strategies would report better language achievement. Since 1980s, learning strategies have been divided into different categories. According to the theoretical framework put forward by O'Malley & Chamot, learning strategies consist of metacognitive strategies, cognitive strategies and social



strategies, among which metacognitive strategies concern the knowledge about cognitive process (O'Malley & Chamot, 1990) cited in Chen and Xiao (2016). To be specific, metacognitive strategies include the following subcategories, such as beforehand planning, selective attention, self-monitoring, and self-evaluation and etc. They serve the function of adjusting or managing cognitive processes. Metacognitive strategies are essential for successful planning, monitoring and evaluation of learning activities, which play a significant role in improving learning quality.

Under this context, some scholars have introduced the concept of metacognition into second/foreign language writing pedagogy and several studies have been conducted on the relationship between metacognition and second/foreign language writing. According to the study carried out by Devine et al., the data collected from the subjects of the 20 freshmen indicated that there was a positive correlation between metacognitive strategy and writing performance. Moreover, it was pointed out that metacognition or metacognitive strategy played a more important role than linguistic competence in developing second language writing skills (Devine, Railey, & Boshoff, 1993) cited in Chen and Xiao (2016). According to Kasper's (1998) cited in Chen and Xiao (2016) research, which took 120 learners from different cultural backgrounds as the participants, it was found that there was a significant connection between metacognitive strategy and English writing score. Related to the previous studies, hence, metacognitive strategies will be employed in this research.

Anderson (2005) emphasizes within the context of methodologies, strategies play a central role in two approaches: Styles and Strategies-Based Instruction (SSBI) and the Cognitive Academic Language Learning Approach (CALLA). In this study, the researcher applies the Cognitive Academic Language Learning Approach (CALLA) as a model of instruction to train learners' metacognitive strategies. The Cognitive Academic Language Learning Approach (CALLA) was originally developed in 1986 and has continued to be expanded as it has been implemented in bilingual and ESL classrooms (Chamot & O'Malley, 1986; 1987; 1989; 1994) cited in Chamot (1995). The CALLA model seeks to assist students learning English become more successful academically by providing them with opportunities to learn grade-appropriate content, develop the listening, reading, speaking, and writing proficiencies needed for grade-level classrooms, and—most importantly—by focusing on explicit instruction in learning strategies.

Furthermore, Chamot (1995) defines CALLA based on cognitive learning theory in which learners are viewed as mentally active participants in the teaching-learning interaction. The mental activity of learners is characterized by the application of prior knowledge to new problems, the search for meaning in incoming information, higher level thinking, and the developing ability to regulate one's own learning. The CALLA model suggests ways in which the teacher can capitalize on this mental activity by asking students to reflect on their own learning, and develop a strategic approach to learning and problem solving. Since CALLA incorporates what current research and practice identifies as effective instruction for all students, it can be used by teachers

with mixed classes of native and non-native English speakers. CALLA programs are currently being implemented in over 25 locations in the United States and in several other countries in a variety of educational contexts. These include bilingual and ESL programs, elementary and secondary school levels, and teacher education.

Nevertheless, numerous studies have revealed that learners from different cultures may learn a foreign language in different ways. The students learning a foreign language in Asian contexts have been proved to use different learning strategies compared to those who learn the same language in Western countries (Setiyadi, et al 2016). Since English is taught as foreign language or EFL context in Indonesia, the implementation of CALLA will be different from the original one. It means that the researcher attempts to modify the procedures or steps in CALLA in order it can be applicable in the language classroom. Not only will the modification be on the use of specific strategy that is metacognitive strategies but also the learning activities and the learning materials which are selected and applied by the teacher. This paper hence intends to investigate whether or not there is significant effect of modified CALLA on students' writing achievement and the use of metacognitive strategies before and after conducting the treatment at the second grade students of SMA Kartikatama Metro. In addition, this study also find out whether or not there is any significant effect of students' critical thinking level on their writing achievement and discover the teaching and learning process through modified CALLA.

## **1.2. Formulation of Problems**

Related to the background of the problem mentioned above, the formulation of the problems cited as follows:

- 1) In what aspect of writing does modified CALLA improve students' writing achievement?
- 2) Is there any significant improvement on the use of metacognitive strategies after being taught through modified CALLA?
- 3) Is there any significant effect of students' critical thinking level on their writing achievement?
- 4) What are the steps taken in implementing modified CALLA?

## **1.3. Objectives of the Research**

The objectives of the research are to find out: 1) whether or not aspect of writing improve after treatment, 2) whether or not there is significant improvement on the use of metacognitive strategies after treatment, 3) whether or not there is significant effect of students' critical thinking level on their writing achievement, and 4) what steps are taken in implementing modified CALLA.

## **1.4. Uses of the Research**

Broadly, this research is expected to be able to yield the following uses, namely:

- 1) Theoretically, this research is conducted to verify the previous studies dealing with CALLA and the effect of students' critical thinking level on their writing

achievement. In addition, it aims at contributing useful information for the future research to modify the procedure of CALLA.

- 2) Practically, this study can provide consideration for: 1) English teachers in terms of employing language learning strategy instruction in classroom, 2) Learners about how to use metacognitive strategies during learning process in order to develop their language skills, particularly in writing achievement.

### **1.5. Scope of the Research**

This study is intended to utilize modified Cognitive Academic Language Learning Approach (CALLA) as a model of language learning strategy instruction at the second grade students of SMA Kartikatama Metro. The researcher promotes CALLA to be applicable in developing students' writing achievement. Related to the category of written performance, this study deals with extensive writing performance. In extensive writing, the students have to: attain their objective of writing, organize and develop their ideas logically, and use supporting detail or illustration to emphasize their ideas. For the materials, exposition text will be taken as the material especially in term of hortatory exposition. The generic structure of Hortatory Exposition usually has three components: (1) Thesis, (2) Arguments and (3) Recommendation.

Then, the researcher applies modified CALLA to raise the students' awareness in using strategy, in this case is metacognitive strategies. The types of strategies employed by the students consisted of: planning, monitoring, and evaluating. Moreover, this study also wants to investigate the effect of students' critical thinking

level toward their writing achievement. Therefore, there will be three classifications of student, namely: low critical thinker students, middle critical thinker students, and high critical thinker students. In addition, the researcher also wants to discover the teaching and learning process through modified CALLA in the language classroom.

### **1.6. Definition of Terms**

The following definition of terms are clarified here in order to avoid ambiguity:

#### 1) Writing

Writing is an activity of producing written text consists of three major processes namely: planning, translating, and reviewing.

#### 2) Metacognitive Strategies

Metacognitive strategies are regarded as high order executive skills that make use of knowledge of cognitive processes and constitute an attempt to regulate ones' own learning by means of planning, monitoring, and evaluating.

#### 3) Critical Thinking

Critical thinking is, very simply stated, the ability to analyze and evaluate information. Bloom identified six levels within the cognitive domain namely: remembering, understanding, applying, analyzing, evaluating and creating.

#### 4) Cognitive Academic Language Learning Approach (CALLA)

CALLA is based on the cognitive learning theory and focuses on explicit language learning strategy instruction. CALLA has five phases namely: preparation, presentation, practice, evaluation and expansion.

This chapter has discussed about background of the problem, formulation of the problem, objectives of the research, uses of the research, scope of the research and definition of terms.

## **II. LITERATURE REVIEW**

This chapter elaborates the frame of theories related to the research. It consists of notion of writing skill, writing as the product and process, aspects of writing skill, types of writing, micro and macro skills of writing, types of writing performance, teaching writing, metacognitive strategies, Cognitive Academic Language Learning Approach (CALLA), components of CALLA model, implementation of modified CALLA in language classroom, Benjamin Bloom's taxonomy of critical thinking, the revised version of Bloom's taxonomy, critical thinking and writing. At the end of this chapter the writer provides the theoretical assumption and hypotheses.

### **2.1. Writing Skill**

Writing is one of the four language skills after listening, speaking, and reading (Pulverness, Spratt, and William, 2005: 26) cited in Muflikhati (2013). Moreover, writing is also a productive skill which is meant for communication to deliver messages in the forms of letters and symbols. In a message, there is something which is needed to be informed to others called a purpose. In other words, the activity of writing aimed at creating a written product which is containing a certain message or information. Writing concerns on some aspects such as: content, organization,



originality, style, fluency, accuracy and the appropriate use of rhetorical forms of discourse.

According to Nunan (2003: 88) as cited in Utami (2014), writing can be defined by a series of contrast. The first, writing is both a physical and a mental act. At the most basic level, writing is the physical act of committing words or ideas to some medium. On the other hand, writing is the mental work of investing ideas, thinking about how to express them, and organizing them into statements and paragraphs that will be clear to a reader. The second, its purpose is both to express and impress. Writers typically serve two masters: themselves, and their own desires to express an idea or feeling, and readers also called the audience, who need to have ideas expressed in certain ways. Writers must then choose the best form for their writing, depending on its purpose. The third, it is both a process and a product. The writer imagines, organizes, drafts, edits, reads, and rereads. This process of writing is often cyclical and sometimes disorderly. Ultimately, what the audience sees, whether it is an instructor or a wider audience is a product.

### **2.1.1. Writing as the Product and Process**

#### **A) Product Approach**

The product approach is one of the most practiced approaches in schools around the world. This writing approach encourages students to produce an end product which may be likened to a model essay or the essay normally provided by teachers. The main aim of the approach is to provide some linguistic knowledge about to language

student (Pincas, 1982) cited in Palpanadan et al (2014). Writers explain that in this type of wiring approach, the students are expected to have knowledge about language. As a result, students merely imitate some simple sentences to get familiarity with the content. They also copy and finally transform the models into a new essay to be as perfect as the one that they have imitated by focusing on the correct language as instructed by the teachers. After that, the students are required to submit their written essays to the teacher to be marked and graded rather than evaluated. Interestingly, the students are asked to resubmit the essays to the teacher after doing the necessary corrections. A typical product approach comprises four stages before students produce the end-product for evaluation, namely: familiarization, controlled writing, guided writing, and free writing.

In short, product-based approaches see writing as mainly concerned with knowledge about the structure of language, and writing development as mostly the result of the imitation of input, in the form of texts provided by the teacher (Hashemnezhad and Hashemnezhad, 2012).

#### B) Process Approach

Onozawa, 2010 states that process writing is an approach to writing, where language learners focus on the process by which they produce their written products rather than on the products themselves. In the end, learners surely need to and are required to complete their products, yet the writing process itself is stressed more. By focusing on the writing process, learners come to understand themselves more, and find how to

work through the writing. They may explore what strategies conform to their style of learning. The writing process usually involves several steps. A typical sequence is comprised of three steps: prewriting, drafting, and, revising. Some sequences, however, use four steps, such as thinking, planning, writing, and editing, while others use five steps, prewriting, drafting, revising, editing, and evaluating. In other words, each writer has a preferred way of approaching the writing process, from simpler to more complex depending on the level of the learners, and the purpose of writing.

In short, process-oriented writing pedagogies focused particular attention on procedures for solving problems, discovering ideas, expressing them in writing, and revising emergent texts—typically, in isolation from any cultural, educational, or sociopolitical contexts in which writing might take place (Hashemnezhad and Hashemnezhad, 2012).

### **2.1.2. Aspects of Writing Skill**

In writing activity, writers can be said successful in their writing contains some aspects of writing according to Jacob et al (1981: 90) cited in Widiyanti (2012), they are classified as follows:

#### 1) Content

Content refers to the substance of writing, the experience of the main idea, i.e. groups of related statements that a writer presents as unit in developing a subject. Content

paragraph does the work of conveying ideas rather than fulfilling special function of transitions, restatements, and emphases.

## 2) Organization

Organization refers to arrangement of ideas. It is scarcely more than attempt to piece together all collection of facts and jumbled ideas. Even in early drafts it may still be searching for order, trying to make out patterns in each material and working to bring particulars of its subject in line with what is still only a half-formed notion of purpose.

## 3) Vocabulary

Vocabulary refers to the selection of words that are suitable with the content. It begins with the assumption that the writer wants to express the ideas as clearly and directly as he or she can. As a general rule, clarity should be his or her prime objective, choosing words that express his or her meaning precisely rather than skews or blurs it.

## 4) Language Use

Language use refers to the use of correct grammatical form and synthetic patterns of separating, combining, and grouping ideas in words, phrases, clauses, and sentences to bring out logical relationship in paragraph writing.

### 5) Mechanic

Mechanic refers to the use of graphic conventional of the language, i.e. the steps of arranging letters, words, paragraphs, by using knowledge of structure and some others related to one another.

In short, it is obvious that the quality of effectiveness in writing requires only content dealing with the main idea, organization related to arrangement of ideas, vocabulary dealing with choosing words, language use concerning grammatical accuracy, and mechanic concerned with arrangement of letters, words and paragraph among conventional graphical punctuation and spelling.

### **2.1.3. Micro and Macro Skills of Writing**

The earlier micro skills apply more appropriately to imitative and intensive types of writing task, while the macro skills are essential for the successful mastery of responsive and extensive writing. Here are the illustration of micro skills and macro skills of writing according to Brown (2004: 221):

#### Micro Skills

1. Produce graphemes and orthographic patterns of English.
2. Produce writing at an efficient rate of speed to suit the purpose.
3. Produce an acceptable core of words and use appropriate word order patterns.
4. Use acceptable grammatical systems (e.g., tense, agreement, pluralization), patterns, and rules.
5. Express a particular meaning in different grammatical forms.
6. Use cohesive devices in written discourse.

#### Macro Skills

7. Use the rhetorical forms and conventions of written discourse.
8. Appropriately accomplish the communicative functions of written texts according to form and purpose.

9. Convey links and connections between events, and communicate such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
10. Distinguish between literal and implied meanings when writing.
11. Correctly convey culturally specific references in the context of the written text.
12. Develop and use a battery of writing strategies, such as accurately assessing the audience's interpretation, using prewriting devices, writing with fluency in the first draft, using paraphrases and synonyms, soliciting peer and instructor feedback, and using feedback for revising and editing.

#### **2.1.4. Types of Writing Performance**

According to Brown (2004: 220) there are four categories of written performance that capture the range of written production cited as follows:

- Imitative*. To produce written language, the learner must attain skills in the fundamental, basic tasks of writing letters, words, punctuation, and very brief sentences. This category includes the ability to spell correctly and to perceive phoneme–grapheme correspondences in the English spelling system. It is a level at which learners are trying to master the mechanics of writing. At this stage, form is the primary if not exclusive focus, while context and meaning are of secondary concern.
  
- Intensive (controlled)*. Beyond the fundamentals of imitative writing are skills in producing appropriate vocabulary within a context, collocations and idioms, and correct grammatical features up to the length of a sentence. Meaning and context are of some importance in determining correctness and appropriateness, but most

assessment tasks are more concerned with a focus on form, and are rather strictly controlled by the test design.

- ☑ *Responsive*. Here, assessment tasks require learners to perform at a limited discourse level, connecting sentences into a paragraph and creating a logically connected sequence of two or three paragraphs. Tasks respond to pedagogical directives, lists of criteria, outlines, and other guidelines. Under specified conditions, the writer begins to exercise some freedom of choice among alternative forms of expression of ideas. The writer has mastered the fundamentals of sentence-level grammar and is more focused on the discourse conventions that will achieve the objectives of the written text. Form-focused attention is mostly at the discourse level, with a strong emphasis on context and meaning.
  
- ☑ *Extensive*. Extensive writing implies successful management of all the processes and strategies of writing for all purposes, up to the length of an essay, a term paper, a major research project report, or even a thesis. Writer focus on achieving a purpose, organizing and developing ideas logically, using details to support or illustrate ideas, demonstrating syntactic and lexical variety, and in many cases, engaging in the process of multiple drafts to achieve a final product. Focus on grammatical form is limited to occasional editing or proofreading of a draft.

Related to the four categories of written performance above, hence, this study deals with extensive writing performance. In extensive writing, the students have to: attain their objective of writing, organize and develop their ideas logically, and use supporting detail or illustration to emphasize their ideas. Besides that, five aspects of writing in terms of content, organization, vocabulary, language use, and grammar will be elaborated in the process of writing.

### **2.1.5. Types of Paragraph Writing**

According to Huy (2015), there are four types of paragraph writing cited as follows:

#### 1) Exposition

Exposition is one of four rhetorical modes of discourse, along with argumentation, description and narration. It is also used for speeches. The purpose of exposition is to provide some background and inform the readers about the plot, character, setting and theme of the essay, story or motion picture.

#### 2) Argumentation

Argumentation theory, or argumentation, also called persuasion, is the interdisciplinary study of how humans should, can, and do reach conclusions through logical reasoning that is claims based, soundly or not, on premises. It includes the arts and sciences of civil debate, dialogue, conversation, and persuasion. It studied rules of inference, logic and procedural rules in both artificial and real world setting.



Argumentation includes debate and negotiation, which are concerned with reaching mutually acceptable conclusion. It is used in law, for example in trial, in preparing an argument to be presented to court, and in testing the validity of certain kind of evidence.

### 3) Description

Description is one of four rhetorical modes (also known as modes of discourse). It is also the fiction – writing mode for transmitting a mental image or the particulars of a story.

#### Description as a Rhetorical Mode

The purposes of description are to re-create or visually present a person, place, event, or action so that the reader may picture that which is being described. Descriptive writing may be found in the other rhetorical modes.

#### Description as a Fiction - Writing Mode

Fiction is a form of narrative, fiction – writing also has distinct forms of expression, or modes, each with its own purposes and conventions. Agent and author Even Marshall identifies five fiction – writing modes, action, summary, dialogues feeling/ thoughts and background (Marshall 1988, p.143-165) cited in Huy (2015). Author and writing instructor Jessica Page Morrell lists six delivery modes for fiction – writing: action, exposition, description, dialogues, summary and transition (Morrell 2001, p.127) cited in Huy (2015). Author Peter Selgin refers to methods, including

action, dialogue, thoughts, summary, scene and description (Selgin 2007, P.38) cited in Huy (2015). Together with dialogue, narration, and exposition, and summarization, description is one of the most widely recognized of the fiction – writing modes?

#### 4) Narration

Narration is some kind of retelling, often in words (though it is possible to mime a story), of something that happened (a story). Narration recounts events, perhaps leaving some occurrences out because they are from some perspective insignificant, and perhaps emphasizing others. Narration thus shapes history (the scene of events, the story of what happened).

Among those four types of paragraph writing, exposition text will be taken as the material especially in term of hortatory exposition. According to Purnomowati (2010) hortatory exposition is a type of spoken or written text that is intended to explain the listeners or readers that something should or should not happen or be done. To strengthen the explanation, the speaker or writer needs some arguments as the fundamental reasons of the given idea. In other words, this kind of text can be called as argumentation. Hortatory exposition text can be found in scientific books, magazines, newspaper, letters to editor, advertising, speeches, research report, etc. Hortatory expositions are popular among science, academic community and educated people. The generic structure of Hortatory Exposition usually has three components: (1) Thesis, (2) Arguments and (3) Recommendation.

## **2.2. Teaching Writing**

According to Ambarita (2013) one of the objectives of English language teaching is to give students an effective writing ability. Learning to write is a process of discovering and organizing the ideas, putting them on a paper, reshaping, and revising them. For EFL context especially in Indonesia, teaching writing for students of senior high schools is important because English is one of the compulsory subjects that have to be taught for students of senior high schools (Puspitasari, 2013). In addition, English is also one of the skills that being examined in the National Examination. English learning in senior high schools is targeted to make the students reach informational level to communicate both spoken and written. One scope of English learning at senior high schools is that students can understand and produce a short functional text and short essays in the form of procedure, descriptive, recount, narrative, report, news item, analytical exposition, hortatory exposition, spoof, explanation, discussion, review, and public speaking. The teaching materials gradation appears in using vocabulary, grammar, and rhetoric steps. It means that the students should know what they are expected to do in each text. Therefore, the students are expected to understand on how to make a good paragraph with good arrangement based on the genre or texts that they should master.

### 2.3. Metacognitive Strategies

According to Guo (2012) metacognitive strategies may be thought of as core learning strategies because they are applicable to a variety of learning tasks and also because they are overarching strategies above cognitive strategies and social/affective strategies. Metacognitive strategies are higher order executive skills entailing goal identification, planning, monitoring and evaluation.

*Planning: refers to choosing the proper learning strategies and make sensible use of resources that can have an effect on performing the learning task. Planning includes goal setting, material reading, and questioning and task analysis. Planning or preparation is one of most important meta-cognitive strategies one can use to improve learning. Taking planning strategy, students are thinking about what their goals are and how they can accomplish those goals efficiently and effectively.*

*Monitoring: refers to supervision of activities in progress to ensure that everything is under control, thus performance goal can be met. Monitoring is what we take to keep track of how learning process is going. These strategies help learners notice that they may have problems on comprehension and concentration, so that they can find problems out and correct them.*

*Evaluating: refers to evaluating the outcome of a task, how well the task was accomplished, and the strategies used during the learning process. Evaluating is connected with monitoring. For instance, when the learner realize the fact that he doesn't understand a part of reading material, he would go back reading that paragraph again; when confused about a question, they would skip it and finish the easier ones first. Students' learning behaviors can be corrected through evaluating so that they can have better comprehension.*

Sun (2013)

The metacognitive category of language learning strategies has been introduced in two of the previous studies, O'Malley et al's study (1985 and 1990) and Oxford's work (1990) cited in Setiyadi, et al (1999). O'Malley and Chamot (1990) cited in

Setiyadi, et al (1999) suggests that metacognitive strategies include selective attention for special aspects of a learning task, planning the organization of either written or spoken discourse, monitoring information to be remembered and production while it is occurring, and evaluating comprehension of receptive language activity and language production. The metacognitive strategies in Oxford's work include strategies for evaluating one's progress, planning for language tasks, consciously searching for practice opportunities, paying attention, and monitoring errors. By using metacognitive strategies, learners are aware of and control their efforts to use particular skills and strategies. The learners use their capacity to monitor and direct the success of the task at hand, such as recognizing that comprehension has failed, using fix-up strategies, and checking an obtained answer against an estimation (Jones et al, 1987, p.15) cited in Setiyadi, et al (1999).

In short, metacognitive strategies are regarded as high order executive skills that make use of knowledge of cognitive processes and constitute an attempt to regulate ones' own learning by means of planning, monitoring, and evaluating (Zhang and Seepho, 2013).

#### **2.4. Cognitive Academic Language Learning Approach (CALLA)**

CALLA (pronounced /kalá/) combines English language development with content based ESL and with instruction in special learner strategies that will help students understand and remember important concepts (Chamot and O'Malley, 1987). Richards (1984) as cited in Chamot and O'Malley (1987) has pointed out that second

language methods can be based on a syllabus (or curriculum) or on a theory of learning processes and instructional procedures and that many current methodological approaches reflect one assumption but not the other. CALLA makes these two approaches to language teaching methods interdependent by integrating language learning and teaching theory and the specification of content to be taught.

Richards has also indicated the importance of addressing the needs of second language learners in program planning. CALLA is designed to meet the educational needs of three types of LEP students: (a) students who have developed social communicative skills through ESL or exposure to an English-speaking environment but who have not developed academic language skills appropriate to their grade level; (b) students exiting from bilingual programs who need assistance in transferring concepts and skills learned in their native language to English; and (c) bilingual, English dominant students who are even less academically proficient in their native language than in English and need to develop academic English language skills.

Chamot and O'Malley (1987) stated CALLA is intended for students at the intermediate and advanced levels of English proficiency who need additional experiences in English language development specifically related to three academic areas: science, mathematics, and social studies.

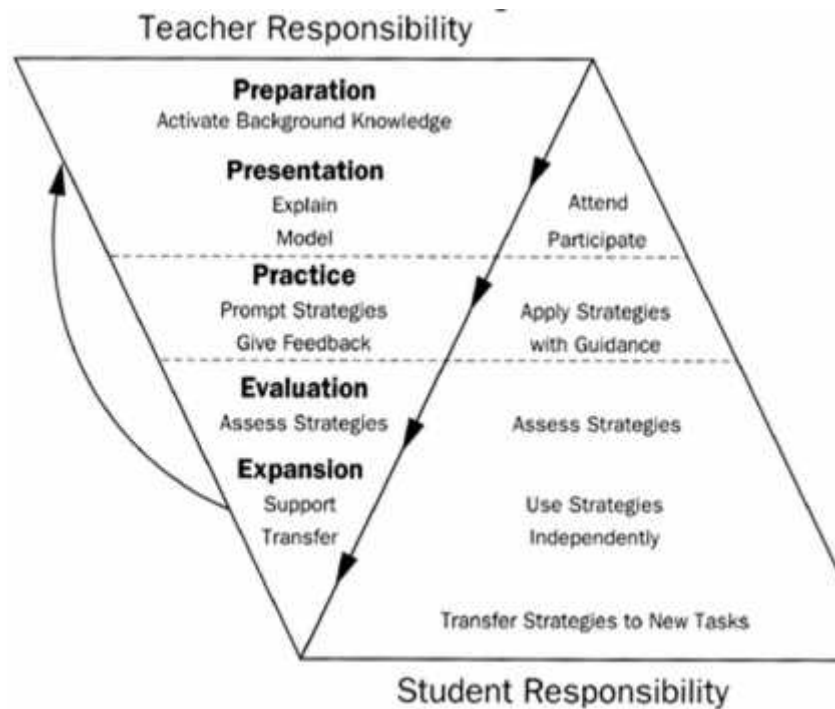


Figure 1. framework for strategies instruction  
(Amin, et al., 2011)

#### 2.4.1. Components of CALLA Model

According to Chamot and O'Malley (1987) the CALLA model has three components: (a) a curriculum correlated with mainstream content areas, (b) English language development integrated with content subjects, and (c) instruction in the use of learning strategies.

##### A) The Content-Based Curriculum

Content-based English language development is not only important for developing academic language skills, but it is also inherently more interesting to many students than ESL classes which focus on language only. Content areas such as science, mathematics, and social studies present numerous topics related to a variety of

personal interests. LEP students can be motivated not only by the topics presented but also by knowing that they are developing the concepts and skills associated with these subjects— in other words, that they are actually doing “real” school work instead of merely learning a second language for applications that have yet to be revealed.

To select content topics for CALLA lessons, ESL teachers can coordinate with classroom teachers and consult subject-area textbooks for the grade level concerned. Classroom teachers can identify the most important concepts and skills taught in the content areas they teach. Science, mathematics, and social studies textbooks can be used as a source of specific information to be presented. Having used these resources to identify lesson topics, the ESL teacher can build language development activities onto the content information selected.

To sum up, the CALLA content-based curriculum is based on authentic subject matter from the mainstream curriculum which has been selected as central to the concepts and skills that are developed at particular grade levels.

#### B) English Language Development

The purpose of English language development, the second component of the CALLA model, is to provide students with practice in using English as a tool for learning academic subject matter. Reading and language arts can be taught as part of content area subjects such as social studies, mathematics, and science. The language demands



of the different content subjects, which include the language of curriculum materials and of classroom participation, need to be analyzed so that students can be taught the actual language functions, structures, and subject-specific vocabulary that they will need when they enter the mainstream content class. These language demands, which are different from those of the beginning-level ESL class or the type of language used for social interaction, need to be specifically taught and practiced in the context of actual subject-matter learning.

The following aspects of language should be included in the language development component of the CALLA model (Chamot, 1985) cited in Chamot and O'Malley (1987): development of the specialized vocabulary and technical terms of each content area; practice with the language functions used in academic communication, such as explaining, informing, describing, classifying, and evaluating; development of the ability to comprehend and use the language structures and discourse features found in different subject areas; and practice in using the language skills needed in the content classroom, such as listening to explanations, reading for information, participating in academic discussions, and writing reports. By integrating these types of language activities with grade-appropriate content, a curriculum based on the CALLA model can provide LEP students with the conceptual knowledge and language skills they will need to participate successfully in the mainstream classroom.

### C) Learning Strategy Instruction

The CALLA model uses learning strategy instruction as an approach to teaching the content-based language development curriculum described in the preceding sections. Learning strategy instruction is a cognitive approach to teaching that helps students learn conscious processes and techniques that facilitate the comprehension, acquisition, and retention of new skills and concepts. The use of learning strategy instruction in second language learning is based on four main propositions (see Chipman, Sigel, & Glaser, 1985; Derry & Murphy, 1986; Weinstein & Mayer, 1986) cited in Chamot and O'Malley (1987):

- 1) Mentally active learners are better learners. Students who organize new information and consciously relate it to existing knowledge should have more cognitive linkages to assist comprehension and recall than do students who approach each new task as something to be memorized by rote learning.
- 2) Strategies can be taught. Students who are taught to use strategies and provided with sufficient practice in using them will learn more effectively than students who have had no experience with learning strategies.
- 3) Learning strategies transfer to new tasks. Once students have become accustomed to using learning strategies, they will use them on new tasks that are similar to the learning activities on which they were initially trained.

4) Academic language learning is more effective with learning strategies. Academic language learning among students of English as a second language is governed by some of the same principles that govern reading and problem solving among native English speakers.

Studies in learning strategy applications indicate that students taught to use new strategies can become more effective learners (O'Malley, 1985) cited in Chamot and O'Malley (1987). In a recent experimental study, second language learners were taught to use learning strategies for vocabulary, listening comprehension, and formal speaking tasks using academic content (O'Malley, Chamot, Stewner-Manzanares, Russo, & Küpper, 1985) cited in Chamot and O'Malley (1987). The results showed that learning strategy instruction was most effective for the more integrative language tasks which involved the use of academic language skills to understand or produce extended text.

## **2.5. Implementation of Modified CALLA in Language Classroom**

### **A) The Procedures in the Original CALLA**

The lessons in the original CALLA are divided into five phases: Preparation, Presentation, Practice, Evaluation, and Follow-Up Expansion (Chamot and O'Malley, 1987).

- ☑ In the Preparation phase, teachers provide advance organizers about the lesson, and students identify what they already know about a topic, using elaboration as a strategy.
  
- ☑ In the Presentation phase, teachers provide new information to students, using techniques which make their input comprehensible. Teachers can use advance organizers and encourage the use of selective attention, self-monitoring, inferencing, summarizing, and transfer.
  
- ☑ In the Practice phase, students engage in activities in which they apply learning strategies, often in cooperative small-group sessions. During this phase, the teacher should encourage the use of strategies such as grouping, imagery, organizational planning, deduction, inferencing, and questioning for clarification.
  
- ☑ In the Evaluation phase, students reflect on their individual learning and plan to remedy any deficiencies they may have identified.
  
- ☑ Finally, in the Follow-Up Expansion phase, students are provided with opportunities to relate and apply the new information to their own lives, call on the expertise of their parents and other family members, and compare what they have learned in school with their own cultural experiences.

## **B) Justification for Modifying the Procedures of CALLA**

Setiyadi, et al (2016) emphasizes numerous studies have revealed that learners from different cultures may learn a foreign language in different ways. The students learning a foreign language in Asian contexts have been proved to use different learning strategies compared to students that learn the same language in Western countries. By identifying how the use of English learning strategies is correlated to their language skills, language teachers in the country may expect their students to learn a foreign language more successfully. Language teachers can condition their teaching processes in order for their students to use their effective strategies or training their students to use the strategies when language learners learn individual skill (Setiyadi, et al, 2016).

As stated before that The Cognitive Academic Language Learning Approach (CALLA) is designed for Limited English Proficient (LEP) students who are being prepared to participate in mainstream content-area instruction (Chamot and O'Malley, 1987). Due to Indonesia students are categorized as Limited English Proficient (LEP) students, it means that CALLA can be implemented in Indonesia. Chamot and O'Malley (1987) add CALLA provides transitional instruction for upper elementary and secondary students at intermediate and advanced ESL levels. Related to this, the implementation of CALLA definitely will be different from the original one since English is taught as foreign language or EFL context in Indonesia. Hence, the researcher will modify the procedures or steps in CALLA in order it can be applicable in the language classroom. The modification not only will be on the use of

specific strategy that is metacognitive strategies but also the learning activities and the learning materials which are selected and applied by the teacher.

### **C) The Procedures in the Modified CALLA**

Five lesson phases of the modified CALLA can be illustrated as follows:

- ☑ Preparation: The purpose of this phase was to help students identify the strategies they are already using and to develop their metacognitive awareness of the relationship between their own mental processes and effective learning.

Activities: discussions about learning strategies that students already use for specific tasks, small group interviews in which students describe and share their special techniques for completing a task successfully.

- ☑ Presentation: This phase focused on modeling the learning strategy. Learners were explicitly taught about the variety of strategies to use when they do not know a vocabulary word they encounter in paragraph writing. But more importantly, they received explicit instruction on how to use these strategies.

Activities: modeling how to use metacognitive strategies in writing skills with a specific academic task, giving the strategy a name (metacognitive strategies) and referring to it consistently by that name, explaining to the students how the strategy (metacognitive strategies) will help them in composing a paragraph writing and describing when, how and for what kinds of tasks they can use the strategy.

- ☑ Practice: In this phase, students had the opportunity of practicing the learning strategies with an authentic learning task. They were asked to make conscious effort using the metacognitive strategies.

Activities: integrating critical thinking activity in language teaching through “practice” step of modified CALLA, for example, 1) developing a critical mindset, 2) critical questioning, 3) opinion and reason generator, 4) recognizing context, and 5) practicing the language for expressing critical thinking.

- ☑ Self-evaluation: The main purpose of this phase was to provide students with opportunities to evaluate their own success in using learning strategies, thus developing their metacognitive awareness of their own learning processes.

Activities: debriefing discussions after using strategies (metacognitive strategies), comparing their own performance on a task completed without using metacognitive strategies and a similar task in which they applied the strategies, and open-ended questionnaires in which students expressed their opinions about the usefulness of metacognitive strategies.

- ☑ Expansion: In this final phase students were encouraged to: a) use the strategies that they found most effective, b) apply these strategies to new contexts, and c) devise their own individual combinations and interpretations of metacognitive learning strategies.

Activities: praise for independent use of metacognitive strategies, thinking skills discussions in which students brainstorm possible uses for metacognitive strategies they are learning, and follow-up activities in which students apply metacognitive strategies to new tasks and contexts.

#### **D) The Comparison of Procedures in the Original CALLA and the Modified CALLA**

Here are the illustrations of the procedure in the original CALLA and the modified CALLA which will be implemented in the language classroom:

<b>The Original CALLA</b>	<b>The Modified CALLA</b>
<b>Preparation Step</b> <input checked="" type="checkbox"/> Teachers provide advance organizers about the lesson, and students identify what they already know about a topic, using elaboration as a strategy.	<b>Preparation Step</b> <input checked="" type="checkbox"/> The teacher asks students to identify the strategy that had already used for writing task.
<b>Presentation Step</b> <input checked="" type="checkbox"/> Teachers provide new information to students, using techniques which make their input comprehensible. <input checked="" type="checkbox"/> Teachers can use advance organizers and encourage the use of selective attention, self-monitoring, inferencing, summarizing, and transfer.	<b>Presentation Step</b> <input checked="" type="checkbox"/> The teacher introduces the new strategy that is “metacognitive strategies”. <input checked="" type="checkbox"/> The teacher explains and gives modeling the new strategy. <input checked="" type="checkbox"/> The teacher describes the characteristics, usefulness, and application of strategy.
<b>Practice Step</b> <input checked="" type="checkbox"/> Students engage in activities in which they apply learning strategies, often in cooperative small-group sessions. <input checked="" type="checkbox"/> The teacher should encourage the use of strategies such as grouping, imagery, organizational planning, deduction, inferencing, and questioning for clarification.	<b>Practice Step</b> <input checked="" type="checkbox"/> The teacher provides opportunities for strategy practice with an authentic learning tasks guided by the teacher. <input checked="" type="checkbox"/> The teacher integrates critical thinking activity for example, 1) developing a critical mindset, 2) critical questioning, 3) opinion and reason generator, 4) recognizing context, and 5) practicing the language for expressing critical



	thinking.
<p>Evaluation Step</p> <p><input checked="" type="checkbox"/> The students reflect on their individual learning and plan to remedy any deficiencies they may have identified.</p>	<p>Evaluation Step</p> <p><input checked="" type="checkbox"/> The teacher asks the students to evaluate their success in using strategy.</p> <p><input checked="" type="checkbox"/> The teacher debriefs discussions after strategy practice.</p>
<p>Expansion Step</p> <p><input checked="" type="checkbox"/> The students are provided with opportunities to relate and apply the new information to their own lives, call on the expertise of their parents and other family members, and compare what they have learned in school with their own cultural experiences.</p>	<p>Expansion Step</p> <p><input checked="" type="checkbox"/> The teacher asks the students to transfer and apply their strategy to the new tasks.</p>
(Chamot and O'Malley, 1987)	

### E) Hand Out of Modified CALLA in While Activities (Practice Step)

METACOGNITIVE STRATEGIES
<p><input checked="" type="checkbox"/> <b>PLANNING STRATEGY:</b> Pre-Writing (BEFORE you write your paragraph)</p> <p>1. SELECTING THE TOPIC (you can choose one of the topic given) For example: you choose topic "SOCIAL MEDIA BRINGS MORE HARMS THAN GOODS"</p> <p>2. LIST YOUR IDEAS For example: if you choose topic "SOCIAL MEDIA BRINGS MORE HARMS THAN GOODS" you have to state your opinion whether you <i>agree</i> or <i>disagree</i>. Here are the illustrations.</p> <p>DEFINITION : Social media is an online media in which the users can easily participate, share, and create the content of blog, social networking, and the virtual world.</p> <p>EXAMPLE : The examples of social media are Facebook, Twitter, Path, Instagram, Blog, Line, Whatsapp, and many others.</p> <p>YOUR POSITION (if you <i>agree</i> with the topic) Social media, with its various features which are provided, certainly brings positive impacts for the users. On the other hand, social media can also cause negative</p>

impacts. The followings are negative impacts of social media:

**YOUR POSITION** (if you *disagree* with the topic)

Social media, with its various features which are provided, certainly brings positive impacts for the users. Here are the positive impacts of social media:

If you *agree* with the topic, you have to state *the negative impacts* of social media. For example

**NEGATIVE IMPACTS:**

1. First, children and teenagers become lazy to communicate in real world.
2. Second, social networking sites will make children and teenagers more self-interested.
3. Third, the assumption that internet is identical with pornography is not wrong.
4. Fourth, social networking site is fertile land for the predators to commit a crime.

If you *disagree* with the topic, you have to state *the positive impacts* of social media.

**POSITIVE IMPACTS:**

1. First, children and teenagers can communicate and share with their friends around the world.
2. Second, social networking sites will provide the newest issues or information for children and teenagers.
3. Third, through social media, it can make people become famous and popular.
4. Fourth, social networking site is fertile land for earning money from online shop and endorsement.

At the end of your paragraph, you have to persuade the reader “to do something” related to the topic by giving suggestion.

If you *agree* with the topic:

**RECOMMENDATION** : In conclusion, social media has many negative impacts to children and teenagers. They have to be restricted in using social media due to many negative impacts of it.

If you *disagree* with the topic:

**RECOMMENDATION** : In conclusion, social media has many positive impacts to children and teenagers. They should use it wisely and should be monitored by their parents and their family.

### 3. MAKE AN OUTLINE AND ORGANIZE YOUR IDEAS

Here is the illustration if you agree with the topic.

“SOCIAL MEDIA BRINGS MORE HARMS THAN GOODS”

Social media is an online media in which the users can easily participate, share, and

create the content of blog, social networking, and the virtual world. The examples of social media are Facebook, Twitter, Path, Instagram, Blog, Line, Whatsapp, and many others. Social media, with its various features which are provided, certainly brings positive impacts for the users. On the other hand, social media can also cause negative impacts. The followings are negative impacts of social media:

First, children and teenagers become lazy to communicate in real world. Their understanding of the language is disturbed. If a child *are* too much communicating in the virtual world, *so* their knowledge about the details of communicating in real life, like body language and tone of voice, will be declined. Second, social networking sites will make children and teenagers more self-interested. They *do* not conscious of the environment around them, because most of their time is spent on the internet. This can *causing* children to be less empathetic in the real world. Third, the assumption that internet is identical with pornography is not wrong. With its ability of information dissemination owned by the internet, pornography is rampant. To anticipate it, the producers of browser complete their program with the ability to *choosing* a home page that can be accessed. On the internet, there *is* many images of pornography and violence that can be the impulse to someone to do criminal acts. Fourth, social networking site is fertile land for the predators to commit a crime. We will never *knows* if someone new whom our children just know on the internet, uses the real identity or not. The internet is not excluded from an impostor's attack. The best ways is not to heed or confirm any information you *gets* from the information provider.

In conclusion, social media has many negative impacts to children and teenagers. They have to be restricted in using social media due to many negative impacts of it. That is not good yet for them since they cannot decide which one is good or bad.

*The example above is called "FIRST DRAFT"*

**MONITORING STRATEGY:** During Writing (when you finish your FIRST DRAFT)

#### 1. CHECKING AND CORRECTING YOUR FIRST DRAFT

After you write a paragraph, you have to check and correct your first draft in terms of:

CONTENT (isi)

ORGANIZATION (organisasi/struktur kalimat, e.g. penggunaan kata penghubung)

VOCABULARY (kosa kata yang digunakan harus sesuai dengan topik)

GRAMMAR (penggunaan tenses)

MECHANIC (susunan kalimat)

#### 2. EDITING YOUR FIRST DRAFT

After your friends check and correct your first draft you have to revise it.

**EVALUATING STRATEGY** : Post-Writing (after you revise your FIRST DRAFT)

1. REWRITE YOUR DRAFT

You have to rewrite your paragraph after you get some correction from your friends.

“SOCIAL MEDIA BRINGS MORE HARMS THAN GOODS”

Social media is an online media in which the users can easily participate, share, and create the content of blog, social networking, and the virtual world. The examples of social media are Facebook, Twitter, Path, Instagram, Blog, Line, Whatsapp, and many others. Social media, with its various features which are provided, certainly brings positive impacts for the users. On the other hand, social media can also cause negative impacts. The followings are negative impacts of social media:

First, children and teenagers become lazy to communicate in real world. Their understanding of the language is disturbed. If a child *is* too much communicating in the virtual world, *then* their knowledge about the details of communicating in real life, like body language and tone of voice, will be declined. Second, social networking sites will make children and teenagers more self-interested. They *are* not conscious of the environment around them, because most of their time is spent on the internet. This can *cause* children to be less empathetic in the real world. Third, the assumption that internet is identical with pornography is not wrong. With its ability of information dissemination owned by the internet, pornography is rampant. To anticipate it, the producers of browser complete their program with the ability to *choose* a home page that can be accessed. On the internet, there *are* many images of pornography and violence that can be the impulse to someone to do criminal acts. Fourth, social networking site is fertile land for the predators to commit a crime. We will never *know* if someone new whom our children just know on the internet, uses the real identity or not. The internet is not excluded from an impostor's attack. The best ways is not to heed or confirm any information you *get* from the information provider.

In conclusion, social media has many negative impacts to children and teenagers. They have to be restricted in using social media due to many negative impacts of it. That is not good yet for them since they cannot decide which one is good or bad.

*The example above is called “FINAL DRAFT”*

2. COMPARING THE RESULT WHEN YOU USE THE STRATEGY AND WHEN YOU DON'T USE THE STRATEGY

## **2.6. Benjamin Bloom's Taxonomy of Critical Thinking**

Human thinking skills have been classified by Benjamin Bloom (1956) cited in Marzban and Barati (2016) into six important classes of knowledge, comprehension, application, analysis, synthesis, and evaluation which composed his cognitive domain. 'Knowledge' is the lowest level in the cognitive domain and is the ability to remember the previously learned materials either by recall or recognition. Knowledge is classified from the specific and concrete materials to the intricate and abstract ones. 'Comprehension' is the lowest level of understanding which comes after knowledge. It is the ability to understand the meaning of the materials and use them without necessarily relating them to other materials. 'Application' is the ability to use abstract materials in concrete situations, in other words, the ability to apply the previously learned materials to appropriate situations in life. 'Analysis' is the ability to breakdown materials into its separate parts in order to make ideas clear. It enables one to distinguish between facts and inferences. 'Synthesis' refers to the ability to put parts together in order to make a new whole. It contains the process of working with parts and then arranging and combining them in order to make a clear pattern. This category stresses creative behaviors on the part of the learner. 'Evaluation' is the last level of the taxonomy and the most complex one because it involves the combination of all the other levels of knowledge, comprehension, application, analysis, and synthesis. Evaluation is the ability to judge the value of the materials and ideas for a given purpose based on some criteria and standards to make sure about the accuracy and effectiveness of the materials (Bloom, 1956) cited in Marzban and Barati (2016).

### **2.6.1. The Revised Version of Bloom's Taxonomy**

Xu (2011) exclaims during the 1990s, a former student of Bloom, Lorin Anderson, led a new assembly which met for the purpose of updating the taxonomy, hoping to add relevance for 21st century students and teachers. The new version of the taxonomy changed the word form of the old version, from noun to verb. Knowledge becomes remember. Evaluation in the old version was changed to Evaluate and was put in the second from the bottom in the new version. Comprehension and synthesis were changed to understand and create. The following table is a detailed explanation of each component. The terminology in the revised version is more clear and exact to analyze the critical thinking skills in literature. The new terms are explained in the following. This paper will combine the two models to analyze *the History of the Peloponnesian War* by Thucydides as an example to show how critical thinking functions in a piece of text.

- 1) Remembering: Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
  
- 2) Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
  
- 3) Applying: Carrying out or using a procedure through executing, or implementing.

4) Analyzing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.

5) Evaluating: Making judgments based on criteria and standards through checking and critiquing.

6) Creating: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. (Anderson & Krathwohl, 2001, p.67-68) cited in Xu (2011).

## **2.7. Critical Thinking and Writing**

Golpour (2014) states that writing is an important skill that needs higher critical thinking and its role in language learning cannot be ignored. In terms of skills, producing a connected, meaningful and extended piece of writing is the most difficult thing for language learners. Written products need insightful thinking, and writing and revising procedures require specialized skills, skills that not every person earns naturally (Brown, 2001) cited in Golpour (2014).

According to Fahim and Ghamari (2011) the links between critical thinking and writing go beyond the process of getting the content of the critical mind onto paper or screen. The production of a written version of thoughts provides a chance for review. So the writer of a text can judge whether the material on paper or screen says what

s/he needed to say, and s/he duly revises it, or not. Once thinking is represented in writing, it can be seen, assessed and judged by others. Exercises in writing skills may concern the skills of writing that are associated with critical thinking or critical thinking as represented in writing. Below appear some areas of writing tasks:

1) Writing tasks that aim to improve the representation and process of CT in the early stages

Moon (ibid.) cited in Fahim and Ghamari (2011) introduces five exercises that, she believes, are particularly useful for students in the early stages of critical thinking.

- Summarizing and the ability to write a conclusion.
- Summarizing the evidence.
- Taking different disciplinary perspectives.
- Making a judgment.
- Making a judgment, starting from another perspective.

We do not see any problems with the above exercises. However, we don't know the reason behind the number of exercises. There is no need to introduce the last two exercises. In all processes of critical thinking the element of judgment is present and all exercises involving critical thinking contain judgment (Fahim and Ghamari, 2011).



## 2) Writing tasks to further the capacity in critical thinking

The next set of exercises appears useful for students in the middle or towards the end of their undergraduate studies.

- The use of concept maps
- A fictitious debate
- Practice of peer review skills
- Mark an essay in which critical thinking is represented
- Recognition of the roles of referencing in the written form of CT
- Recognition and development of the 'playing with ideas' form of writing
- Compare and contrast' tasks
- Finding different perspectives on the same issue

### **2.8. Studies on the Relationship between Critical Thinking and Writing**

Writing can be used to improve critical thinking where students use problem-solving strategies and critical reasoning. Writing possesses those characteristics which are employed in critical thinking; that is, “clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness” (Paul & Elder, 2003, 3) cited in Bazrafkan and Bagheri (2014). As Chaffee (1999) cited in Bazrafkan and Bagheri (2014) argues, critical thinking facilitates thoughtful writing, gives way to thoughtful writing, helps ideas to flourish and generates substantive ideas. Hence, a critical thinking framework permits students to understand the reciprocal relationships between the process of thinking and the process of writing. Additionally, the emphases of critical thinking on actively exploring ideas, listening to others, and evaluating opinions and arguments,

provide a context for cooperative learning and writing. Bereiter and Scardamalia (1987) cited in Bazrafkan and Bagheri (2014) viewed writing as an act of problem solving that involves continuous reflectivity, in which the writer seeks to explore options and decide on solutions as to what to say and how to say it. This model of reflective processes conceives of composition planning as taking place in two types of problem spaces: the content space and the rhetorical space. The former, made up of knowledge states that may be broadly characterized as beliefs, is the space in which one works out opinions and decisions, while the latter, containing mental representations of actual or intended text, is specially tied to text production.

## **2.9. Cognitive Academic Language Learning Approach (CALLA), Metacognitive Strategies, Writing Achievement and Critical Thinking**

Writing as a productive language skill plays an essential role in promoting language acquisition. Writing is a skill in which we express ideas, concept, thought, or feeling through written language. In other words, writing is an activity which is done by person to express his or her thoughts in written form, such as: paragraph, letter, message or invitation. Moreover, Golpour (2014) states that writing is an important skill that needs higher critical thinking and its role in language learning cannot be ignored. The links between critical thinking and writing go beyond the process of getting the content of the critical mind onto paper or screen (Fahim and Ghamari, 2011). Based on the theory, it can be inferred that there is a link between critical thinking and writing. Thus, related to this, the researcher is interested to highlight whether or not critical thinking has effect on the students' writing achievement.

Although writing is an essential skill, many students at high school are not interested in it (Huy, 2015). Study done by Carroll (1990) in United States revealed that many students were never required to learn proper spelling or grammar. These poor students come to think that “English” and “writing” are nothing but spelling and grammar. According to them, writing means inevitable failure. Good writing is sometimes they believe they will never be able to achieve, because they not only identify good writing with proper spelling and grammar, but also they are governed by the self-serving and false notion that they cannot learn how to spell correctly or how to construct grammatically correct sentences. Due to the problem in the previous study, the current research will propose an approach to teach writing through strategy training, especially in term of writing strategy. By employing certain strategies in writing, the students are expected to develop their writing achievement.

Setiyadi, et al (2016) defines numerous studies have determined that the use of language learning strategies significantly predicts success in learning English, and that some individual strategies are more predictive of success than others. An important issue is to what extent language learning strategies contribute to the success of EFL learning. It is assumed that the students who have employed certain strategies would report better language achievement. According to the theoretical framework put forward by O’Malley & Chamot, learning strategies consist of metacognitive strategies, cognitive strategies and social strategies, among which metacognitive strategies concern the knowledge about cognitive process (O’Malley & Chamot, 1990) cited in Chen and Xiao (2016). Metacognitive strategies are essential for

successful planning, monitoring and evaluation of learning activities, which play a significant role in improving learning quality. Furthermore, metacognitive strategies plays important role in foreign and second language learning since it is considered as the most essential ones in developing learners' skills (Anderson, 1991) and it was emphasized by O'Malley et al. (1985) cited in Coskun (2010) that learners without metacognitive approaches have no direction or ability to monitor their progress, accomplishments, and future learning directions.

The best way to introduce metacognitive strategies in the language classroom is by implementing strategy training. In this study, the researcher applies the Cognitive Academic Language Learning Approach (CALLA) as a model of instruction to train learners' metacognitive strategies. The Cognitive Academic Language Learning Approach (CALLA) was originally developed in 1986 and has continued to be expanded as it has been implemented in bilingual and ESL classrooms (Chamot & O'Malley, 1986; 1987; 1989; 1994) cited in Chamot (1995). The CALLA model seeks to assist students learning English become more successful academically by providing them with opportunities to learn grade-appropriate content, develop the listening, reading, speaking, and writing proficiencies needed for grade-level classrooms, and—most importantly—by focusing on explicit instruction in learning strategies.

Related to theory mentioned above, hence, this study deals with the implementation of Cognitive Academic Language Learning Approach (CALLA) to promote metacognitive strategies in the language classroom. The students are expected able to employ this strategy which can assist them to accomplish their goal in language learning. Besides that, by employing metacognitive strategies the students are expected able to develop their writing achievement. They will utilize the strategy in terms of: planning strategy, monitoring strategy, and evaluating strategy. Planning strategy will be used before the writing activity. In this case, the students determine the topic and make an outline before organizing their ideas into paragraph writing. Monitoring strategy will be used during the writing activity. In this case, the students check and correct their writing related to the aspects of writing in terms of: content, organization, vocabulary, grammar, and mechanic. Evaluating strategy will be used after the writing activity. In this case, the students compare their result of writing when they do not use the strategy and when they use the strategy.

#### **2.10. Theoretical Assumption**

Related to theory above, the researcher assumes that it is important to stimulate the learners to be aware of using metacognitive strategies since it is a way of developing metacognition. Thus, in this study, the researcher will modify and apply one model of language learning strategy instruction that is Cognitive Academic Language Learning Approach (CALLA). By implementing CALLA in the classroom, the learners consciously will use metacognitive strategies during the learning process. The use of metacognitive strategies will activate one's thinking and leads to improved

performance in learning in general. Learners are able to control and manage their learning or problem-solving process via planning, monitoring, evaluating, and modifying their learning approaches. Moreover the application of metacognitive strategies in language learning can develop students' writing achievement.

### **2.11. Hypotheses**

Regarding the theories and the assumptions above, the writer would like to formulate hypothesis as follows:

H<sub>01</sub> : content does not improve better rather than any other aspects of writing after treatment.

H<sub>A1</sub> : content improves better rather than any other aspects of writing after treatment.

H<sub>02</sub> : there is no significant improvement on the use of metacognitive strategies after treatment.

H<sub>A2</sub> : there is a significant improvement on the use of metacognitive strategies after treatment.

H<sub>03</sub> : there is no significant effect of students' critical thinking level on their writing achievement.

H<sub>A3</sub> : there is a significant effect of students' critical thinking level on their writing achievement.

This chapter has described notion of critical thinking: writing skill, writing as the product and process, aspects of writing skill, types of writing, micro and macro skills of writing, types of writing performance, teaching writing, metacognitive strategies, Cognitive Academic Language Learning Approach (CALLA), components of CALLA model, implementation of modified CALLA in language classroom, Benjamin Bloom's taxonomy of critical thinking, the revised version of Bloom's taxonomy, critical thinking and writing followed by theoretical assumption and hypotheses.

### **III. RESEARCH METHODS**

This chapter focuses on the overall design of the current study. It covers the research design, variables of the research, subjects of the research and research instruments. After that data collection technique along with data analysis and hypothesis testing are explained.

#### **3.1. Research Design**

This research was experimental research based on one–group pretest–posttest design. Science classes (XI IPA 1 and XI IPA 2) were taken as the subject of the research. Both of two classes were the experimental class. It meant that the researcher attempted to find out aspect of writing that mostly improved after treatment and the use of metacognitive strategies before and after conducting the treatment by comparing the mean score of the pretest and the posttest result. Furthermore, this study also dealt with the effect of students' critical thinking level on their writing achievement. Then, Univariate Analysis of Variance (One Way Anova) was used to investigate whether or not there is significant effect of students' critical thinking level on their writing achievement. Referring to Setiyadi (2006: 132), the design was presented as follows:



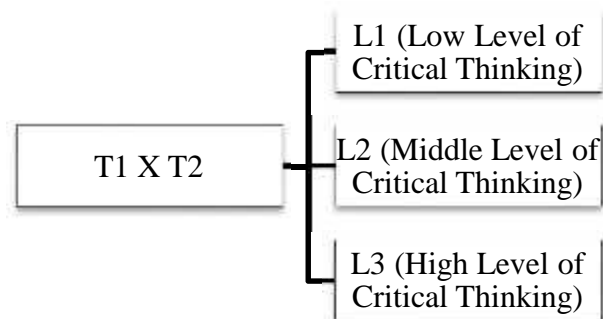
T1 X T2

T1 : Pretest

X : Treatment (CALLA)

T2 : Posttest

Since the researcher wanted to investigate the effect of students' critical thinking level, their level of critical thinking became intervening variable that affected their writing achievement. By adding the intervening variable, the design was adjusted into factorial design as follows cited in Setiyadi (2006: 147):



### 3.2. Variables of the Research

In the current study, there were three variables which were used by the researcher. They were independent variable (X), dependent variable (Y) and intervening variable (Z). The independent variable was Cognitive Academic Language Learning Approach (CALLA) (X) and the dependent variables were students' writing achievement ( $Y_1$ ) and metacognitive strategies ( $Y_2$ ). In addition, students' critical thinking became intervening variable (Z) since it might have effect on the dependent variable (Y), in this case students' writing achievement ( $Y_1$ ).

### **3.3. Population and Sample**

The data sources in this study were the secondary level students in EFL context. The population of the research was the second grade students of SMA Kartikatama Metro. In this study, the researcher took science classes as the experimental group by using purposive sampling, namely XI IPA 1 and XI IPA 2. Both of two classes became the experimental class. At the first meeting, the researcher distributed Academic Potency Test (APT) in order to classify the students based on their level of critical thinking. There were three classification consist of: 17 low critical thinker, 31 middle critical thinker, and 4 high critical thinker. The researcher gave same treatment both in XI IPA 1 and XI IPA 2. The second grade students were chosen since they had already studied vocabulary, grammar, structure, and writing.

### **3.4. Research Instruments**

There were four instruments administered in this study, namely: Academic Potency Test (APT), Metacognitive Strategy Use in Writing (MSUW), Writing Test, and observation. Academic Potency Test (APT) was tested on the first meeting. The researcher distributed Academic Potency Test (APT) to classify students' critical thinking in terms of: low level, middle level, and high level. Meanwhile, both of the instruments (MSUW and Writing Test) were given in pre-test and post-test. The second instrument was adapted from Zhao (2009). There were 28 questions involving 10 planning, 10 monitoring, and 8 evaluating strategies in relation to writing skills. The researcher translated the questionnaire into Bahasa to avoid misunderstanding. Then, writing test was chosen as the instrument since it was required by the students

to express their own idea. The students were asked to organize their ideas in form of paragraph writing based on the direction given. Finally, observation was used to investigate what steps are taken in implementing modified Cognitive Academic Language Learning Approach (CALLA).

### **3.4.1. Validity**

#### **A) Validity of Academic Potency Test (APT)**

According to O'Hare and McGuinness (2009) the notion of critical thinking raises more general questions about the nature of knowledge and reasoning. On the one hand, thinking and reasoning can be seen as a general cognitive processing ability that is readily transferable across different topics and contexts. On the other hand, thinking and reasoning can be seen as highly embedded in knowledge and disciplinary contexts such that it is only worthwhile assessing critical thinking as it relates to particular knowledge areas (e.g., psychology, history, mathematics, and art).

Related to the theory stated before, in this study Academic Potency Test (APT) was tested to examine students' critical thinking. Academic Potency Test (APT) is one type of measurement of the general potency cognitive ability (maximal performance measurement) which is arranged specifically to predict the chances of success in learning. The basic idea in constructing APT deals with the developmental concept of *Graduate Record Examinations* (GRE) that consists of *Verbal Reasoning* (V), *Quantitative Reasoning* (Q), and *Analytical Writing* (AW) (GRE Bulletin, 2008) cited in Azwar (2008). In general, APT in Indonesia consists of three subtests, namely:

Verbal subtest, Quantitative subtest, and Analytical/Logical subtest. APT is not arranged based on the syllabus of the lesson. Therefore, the way to be successful to answer the questions in the test is related to the mastery of particular subject. This is due to the content of the questions in APT are developed in line with that so the chances of success in answering correctly depend on *reasoning, logical or analytical* (Azwar, 2008).

In the current research, expert judgment was employed to determine whether or not the test was appropriate. The expert involved in this study was Mr. Hery Yufrizal. He was the second advisor of the researcher. The researcher chose him since he had a lot of experience in teaching English and he was one of the lecturers in English Education Study Program in Lampung University who had carried out a lot of research in Second Language Acquisition (SLA) and language learning.

**Table 3.4.1.1. Table Specification of Academic Potency Test (APT)**

<b>No</b>	<b>Content</b>	<b>Item Number</b>	<b>Total Item</b>
1	Verbal Ability	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	20
2	Numerical Ability	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40	20
3	Logical Ability	41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60	20
Total			60

There were 60 items that were tested to classify the students based on their level of critical thinking. The maximum score was 100. The researcher calculated the score by using the percentage formula:

$$X = \frac{f}{N} * 100$$

Where:  $X$  = the total score  
 $f$  = the total number of right answer  
 $N$  = the total number of items

To make it clear, here was the classification of the students' critical thinking level:

**Table 3.4.1.2. Table Classification of Students' Critical Thinking Level**

No	Range of Score	Criteria
1	17 up to 38	Low Level
2	39 up to 58	Middle Level
3	59 up to 87	High Level

#### B) Validity of Metacognitive Strategy Use in Writing (MSUW)

Validity indicated how deep the instrument can measure the target of the research. An instrument was valid when it capable to provide the output accord with the researcher's need of data. The researcher used inter-rater to examine whether or not the questionnaire was in line to the theory. Two experts involved in this study were Fefiyana and Uswatun Hasanah. Fefiyana was a senior English teacher at course and Uswatun Hasanah was an English teacher at senior high school. Their experience in teaching English became consideration to choose them as the expert to examine the validity of the questionnaire. In this study the researcher adapted the questionnaires from Zhao (2009) that was Metacognitive Strategy Use in Writing (MSUW). Here was the illustration of questionnaire:

**Table 3.4.1.3. Table Specification of Metacognitive Strategy Use in Writing (MSUW)**

No	Content	Item Number	Total Item
1	Planning	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	10
2	Monitoring	11, 12, 13, 14, 15, 16, 17, 18, 19, 20	10
3	Evaluating	21, 22, 23, 24, 25, 26, 27, 28	8
Total			28

### C) Validity of Writing Test

Since this study need the data of writing score, the instrument must truly examine the students ability in writing a paragraph. It meant that the test construction was already in line with the objective of the learning. Related to this study, the test items should involve the five aspects of writing such as content, organization, vocabulary, language use and mechanics.

Based on ESL Composition Profile (1981) cited in Marzban and Jalali (2016), Compositions were rated through holistic judgment for 21 analytical subcomponents of five major components of writing including:

- Content: knowledge of subject, development of thesis, range of substance, and relevance to assigned topic.
- Organization: fluency of expression, clarity of stated/supported ideas, quality of organization, succinctness, logical sequence of ideas, and cohesion

- ☑ Vocabulary: range of vocabularies, effectiveness of word/idiom choice and usage, register appropriateness, and word form mastery.
  
- ☑ Language use: effectiveness and complexity of constructions, and grammatical correctness including: tense, agreement, articles, prepositions, pronouns, number, words order/function.
  
- ☑ Mechanics: few errors of punctuation, spelling, paragraphing, and capitalization.

The compositions were evaluated by two raters in both languages, based on ESL Composition Profile (Jacobs et al., 1981, p. 91) cited in Marzban and Jalali (2016) for analytical scoring including 21 analytical subcomponents of five major components of writing (Content, Organization, Vocabulary, Language use, and Mechanics). These five major components were differentially weighted. Content as the first component received 30 points, language use was given 25 points, organization and vocabulary were given 20 points, and mechanics received the least emphasis about 5 points. The concepts represented by the Profile criteria are consisted of four mastery levels of "excellent to very good" "good to average" "fair to poor" and "very poor".

<b>Writing Components</b>	<b>Criteria/ Traits</b>	<b>Score</b>
<b>Content</b>	<i>extent, relevance, subject knowledge</i>	30%
<b>Organization</b>	<i>coherence, fluency, clarity, logical sequencing</i>	20%
<b>Vocabulary</b>	<i>richness, appropriate register, word form mastery</i>	20%
<b>Language use</b>	<i>accuracy (a usage of articles, word order, tenses, prepositions, sentence constructions)</i>	25%
<b>Mechanics</b>	<i>paragraphing, spelling, capitalization, punctuation</i>	5%

Klimova (2011)

The researcher puts some following points in the instrument based on the five aspects of writing according to classification from Jacob, et al in Reid (1993) as follows:

#### Content

30 – 27 EXCELLENT TO VERY GOOD: knowledgeable – substantive development of thesis – relevant to assigned topic.

26 – 22 GOOD TO AVERAGE: sure knowledge of subject – adequate range – limited development of thesis – mostly relevant to topic but lacks detail.

21 – 17 FAIR TO POOR: limited knowledge of subject – little substance – inadequate development of topic.

16 – 13 VERY POOR: does not show knowledge of subject – non-substantive – not pertinent – OR not enough to evaluate.

#### Organization

20 – 18 EXCELLENT TO VERY GOOD: fluent expression – ideas clearly stated/supported – succinct – well-organized – logical sequencing – cohesive.

17 – 14 GOOD TO AVERAGE: somewhat choppy – loosely organized but main ideas stand out – limited support – logical but incomplete sequencing.

13 – 10 FAIR TO POOR: non-fluent – ideas confused or disconnected – lacks logical sequencing and development.

9 – 7 VERY POOR: does not communicate – no organization – OR not enough to evaluate.

#### Vocabulary

20 – 18 EXCELLENT TO VERY GOOD: sophisticated range – effective word/idiom choice and usage – word form mastery – appropriate register.

17 – 14 GOOD TO AVERAGE: adequate range – occasional errors of word/idiom form, choice, usage but meaning not obscured.



---

13 – 10 FAIR TO POOR: limited range – frequent errors of word/idiom form, choice, usage – meaning confused or obscured.

9 – 7 VERY POOR: essentially translation – little knowledge of English vocabulary, idioms, word form – OR not enough to evaluate.

#### Language Use

25 – 22 EXCELLENT TO VERY GOOD: effective, complex constructions – few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions.

21 – 19 GOOD TO AVERAGE: effective but simple constructions – minor problems in complex constructions – several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions, but meaning seldom obscured.

17 – 11 FAIR TO POOR: major problems in simple/complex constructions – frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions – meaning confused or obscured.

10 – 5 VERY POOR: virtually no mastery of sentence construction rules – dominated by errors – does not communicate – OR not enough to evaluate.

#### Mechanics

5 EXCELLENT TO VERY GOOD: demonstrates mastery of conventions – few errors of spelling, punctuation, capitalization, paragraphing.

4 GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing, but meaning not obscured.

3 FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing – poor handwriting – meaning confused or obscured.

2 VERY POOR: no mastery of conventions – dominated by errors of spelling, punctuation, capitalization, paragraphing – handwriting illegible – OR not enough to evaluate.

---

### 3.4.2. Reliability

#### A) Reliability of Academic Potency Test (APT)

Reliability was measure of accuracy, consistency, dependability, or fairness of scores resulting from administration of particular examination. The reliability of the critical thinking test items was analyzed by using Coefficient Alpha Formula. The reliability coefficient of the test items should be at least 0.70 and preferably higher (Setiyadi, 2006: 19). If the reliability value of the test items was higher than 0.70 it meant that the critical thinking test items can be used by the researcher to obtain the data. Since

the reliability of APT in this study was 0.83, it meant the test item was good and applicable to measure students' critical thinking skill.

To make it clear, here was the illustration for the reliability of APT test items:

Cronbach's Alpha	N of Items
.832	60

#### B) Reliability of Metacognitive Strategy Use in Writing (MSUW)

The reliability of the questionnaire was analyzed by using Coefficient Alpha Formula. The reliability coefficient of the questionnaire should be at least 0.70 and preferably higher (Setiyadi, 2006: 19). If the reliability value of the questionnaire was higher than 0.70 it meant that the questionnaire can be used by the researcher to obtain the data. Since the reliability of MSUW in this study was 0.89, it meant the questionnaire was good and applicable to measure students' metacognitive strategies.

To make it clear, here was the illustration for the reliability of MSUW questionnaire:

Cronbach's Alpha	N of Items
.893	28

#### C) Reliability of Writing Test

According to Wang (2009) reliability is the extent to which test scores are consistent: if candidates took the test again after taking it today, would they get the same result. There are several ways of measuring the reliability of "objective" tests (test-retest,

parallel form, split-half, KR20, KR21, etc.). The reliability of subjective tests is measured by calculating the reliability of the marking; this is done by several ways (inter-rater reliability, intra-rater reliability, etc.)

In measuring the reliability of writing test, inter-rater reliability was the most appropriate way. Inter-rater reliability refers to the degree of similarity between different examiners: can two or more examiners, without influencing one another, give the same marks to the same set of scripts (Wang, 2009). A research instrument must have the consistency in giving the result. This reliability was used when test score independently estimated by two or more judges or rater. In achieving the reliability of the pretest and posttest of writing, inter-rater was used in this study. The first rater was the English teacher in SMA Kartikatama Metro and the second rater was the researcher. All of them discussed and put in mind of the writing criteria in order to obtain the reliable result of the test.

### **3.5. Data Collection Technique**

The researcher collected the data by conducting three stages of activities. They were distributing Academic Potency Test (APT), Metacognitive Strategy Use in Writing (MSUW) and Writing Test, conducting treatment and employing observation sheet, administering Metacognitive Strategy Use in Writing (MSUW), and Writing Test. The activities were described as follows:

1) Distributing Academic Potency Test (APT), Metacognitive Strategy Use in Writing (MSUW) and Writing Test

The objective of this step was to investigate the prior knowledge of students about their metacognitive strategy use and their writing achievement before giving treatment. The researcher conducted Academic Potency Test (APT) to classify the students based on their level of critical thinking. The items were completed in the first meeting. The students were asked to fill in Metacognitive Strategy Use in Writing (MSUW) then they had to compose a paragraph writing based on the topic given.

2) Conducting Treatment and Observation

The treatment was given for three meetings in the experimental class. The researcher conducted the treatment to raise the students' awareness in using metacognitive strategies and to develop students' writing achievement by implementing language learning strategy instruction that was CALLA. After having treatment, the students were hoped can use their metacognitive strategies that can also develop their writing achievement. Then, during the meeting, the researcher employed observation sheet to investigate the implementation of modified CALLA in the language classroom.

3) Administering Metacognitive Strategy Use in Writing (MSUW), and Writing Test

After giving treatment, the students were asked to complete Metacognitive Strategy Use in Writing (MSUW) and writing test. The aim of this step was to investigate the subsequent knowledge of students about their metacognitive strategy use and their

writing achievement after the treatment. The items were completed in the last meeting.

### **3.6. Data Analysis**

In analyzing the data, the researcher used Statistical Package for Social Science (SPSS) version 21 program. The data obtained from Metacognitive Strategy Use in Writing (MSUW) and writing test were calculated before and after treatment. Repeated Measures T-test was used to compare the means score from the result of pretest and posttest. Since this study dealt with the effect of students' critical thinking level on their writing achievement, Univariate Analysis of Variance (One Way Anova) was used to see whether there was effect between students' critical thinking level toward their writing achievement.

### **3.7. Hypothesis Testing**

The data were collected and analyzed to determine whether there was significant difference of writing achievement and students' metacognitive strategies use after being taught through modified CALLA. This study used Repeated Measures t-test in comparing the mean scores of writing achievement and metacognitive strategies use. Meanwhile, Univariate Analysis of Variance (One Way Anova) was used to investigate whether or not there is significant effect of students' critical thinking level and their writing achievement. The significance level was in 0.05 even the hypothesis

was approved if  $\text{sign} < p$ . Therefore the probability of error in the hypothesis was only about 5%.

This chapter has explained seven components namely: research design, variables of the research, subject of the research, research instruments, data collection technique, data analysis and hypothesis testing.

## **V. CONCLUSION AND SUGGESTION**

This chapter presents the conclusions of the result of the research and suggestions from the researcher to the English teachers and the other researchers who want to conduct the research about the application of language learning strategy instruction that is modified CALLA to train certain types of strategies and also to teach students' language skills.

### **5.1. Conclusions**

In line with the analysis of the data gained during the research, the findings and the result of the present study in the previous section, the researcher draws to these following conclusions:

- 1) In relation to the students' writing achievement, the analysis of the collected data showed statistically significant positive relationship between metacognitive strategy instruction through modified CALLA and improving students' writing achievement. Particularly, it was found that content aspect increased more significantly than the other aspects of writing.
- 2) In terms of the usage of metacognitive strategies, the analysis of the collected data revealed statistically significant positive relationship between

metacognitive strategy instruction through modified CALLA and improving students' metacognitive strategies use. Specifically, this current study found that monitoring strategies was the highest one employed by the students after the treatment.

- 3) Concerning the relationship between critical thinking and writing achievement, the analysis of the collected data showed statistically no significant impact of the students' critical thinking level toward their writing achievement since the result showed the middle critical thinker students and the low critical thinker students got higher score rather than the high critical thinker students. The researcher assumed that there were some factors that might affect the students' critical thinking and other factors also had impact in their writing achievement. The possible reasons deal with language proficiency, component of learning, and students' motivation.
- 4) Regarding to the teaching and learning process through modified CALLA, from the field notes which were included in the observation sheet, clearly, the teaching and learning process through modified CALLA run well as expected by the researcher. The students in both classes (XI A1 and XI A2) actively participated in those five steps of CALLA: preparation step, presentation step, practice step, evaluation step and expansion step.



## **5.2. Suggestions**

Related to the problem of this research and the information from the discussion of this research, the researcher would like to suggest:

### **Suggestion for the teacher:**

- 1) The findings of the current study have implications for teachers and educators regarding to Teaching English as Foreign Language (TEFL). It assists teachers to accomplish their challenging task of teaching English in EFL contexts in which learners have less exposure to language compared to ESL contexts. Therefore, it is suggested for teachers to train the learners and help them to use metacognitive strategies to facilitate their language learning in the classroom.
  
- 2) This study provides further evidence for the benefits of metacognitive strategy training. The findings have confirmed that students' writing achievement could be developed through systematic instruction in metacognitive strategies. Specifically, teachers can help learners to apply these metacognitive strategies in improving their writing skills. In other words, teaching students to use metacognitive strategies has produced good results in their achievement, especially in writing skill.

**Suggestion for further research:**

- 1) The present study has limitation of time in training the learners. Moreover, it is also recommended that the period of training should be extended. Therefore, further studies should explore the effectiveness of metacognitive strategy training by allocating a longer period of time than only two weeks as the researcher did in this study to promote more students' practice in the use of metacognitive strategies.
  
- 2) To continue exploring the effect of metacognitive strategies training on language learning areas, it is suggested to extend the procedures carried out in the other studies. This extension can be employed by using interviews, diaries and journal, think aloud protocols, and many others in order to identify the other factors related to the use of certain strategies that can be useful for the researcher to collect more valid and reliable data.
  
- 3) It is necessary to emphasize that this study needs to be repeated with different instruments in terms of measuring critical thinking skill. As this study found there is no effect of students' level of critical thinking toward their writing achievement. In line with the current study, it will be interesting to construct other instruments that may possibly to examine students' critical thinking skill related to language studies. In addition, other studies should be conducted with participants from the higher level of education that is in tertiary level of students.

## REFERENCES

- Ali, M. and Asrori, M. (2016). *Psikologi Remaja: Perkembangan Peserta Didik*. Jakarta: Bumi Aksara.
- Ambarita, M. R. (2013). *Developing Students' Writing Achievement of Narrative Text through Precis Writing at SMK Negeri 2 Metro*. Unpublished Thesis: Lampung State University.
- Amin, et al (2011). The Effectiveness of Using an Explicit Language Learning Strategy-based Instruction in Developing Secondary School Students' EFL Listening Comprehension Skills. Benha University. Publication Date: 01 December 2011. Retrieved on February, 10<sup>th</sup> 2016.
- Anderson, N. J. (2005). L2 Strategy Research. In E. Hinkel (Ed.), *Handbook of Research in Second Language Teaching and Learning* (pp. 757–772). Mahwah, NJ: Lawrence Erlbaum Associates.
- Azwar, S. (2008). The Quality of the Tes Potensi Akademik (TPA) 07A. *Jurnal Penelitian dan Evaluasi Pendidikan*, Vol, 12, No. 2, pp. 231–250.
- Bazrafkan, N. and Bagheri, M. S. (2014). The Relationship between Critical Thinking, Autonomy and Writing Skill of the Iranian EFL Learners. *International Journal of Language Learning and Applied Linguistics World (IJLLALW)*, Vol. 7, No. 3, pp. 379–392. EISSN: 2289---2737 & ISSN: 2289--3245. Available at: [www.ijllalw.org](http://www.ijllalw.org)
- Brown, H. D. (2004). *Language Assessment: Principles and Classroom Practices*. New York: Pearson Education, Inc.
- Caroll, R. T. (1990). *Students Success Guide – Writing Skills* [Accessed 8<sup>th</sup> October 2016]. Available at: <http://www.skepdic.com/refuge/writingskills.pdf>
- Chamot, A. U. and O'Malley, J. M. (1987). The Cognitive Academic Language Learning Approach: A Bridge to the Mainstream. *TESOL Quarterly*, Vol. 21, No. 2, pp. 227–249.
- Chamot, A. U. (1995). Implementing the Cognitive Academic Language Learning Approach: CALLA in Arlington, Virginia. *The Bilingual Research Journal*, Vol. 19, No. 3 & 4, pp. 379–394.

- Chen, X. and Xiao, G. (2016). A Survey Study of Chinese College Engineering Students' Use of Metacognitive Strategies in English Writing. *Theory and Practice in Language Studies*, Vol. 6, No.7, pp. 1390–1395. ISSN: 1799-2591. DOI: <http://dx.doi.org/10.17507/tpls.0607.09>.
- Coskun, A. (2010). The Effect of Metacognitive Strategy Training on the Listening Performance of Beginner Students. *Novitas-ROYAL (Research on Youth and Language)*, Vol. 4, No. 1, pp. 35–50.
- Diaz, I. (2015). Training in Metacognitive Strategies for Students' Vocabulary Improvement by Using Learning Journals. *PROFILE Issues in Teachers' Professional Development*, Vol. 17, No. 1, pp. 87–102. <http://dx.doi.org/10.15446/profile.v17n1.41632>.
- Fahim, M. and Ghamari, M. R. (2011). Critical Thinking in Education: Globally Developed and Locally Applied. *Theory and Practice in Language Studies*, Vol. 1, No. 11, pp. 1632-1638. ISSN: 1799-2591. DOI: 10.4304/tpls.1.11.1632-1638.
- Gafoordeen, N. and Abubakar, K. (2014). A Case Study on Metacognitive Learning Strategies Employed by Sri Lankan Learners in Arabic Composition. *First International Symposium, FIA, SEUSL*, pp. 22–25.
- Golpour, F. (2014). Critical Thinking and EFL Learners' Performance on Different Writing Modes. *Journal of Pan-Pacific Association of Applied Linguistics*, Vol. 18, No. 1, pp. 103–119.
- Guo, H. (2012). An Empirical Study on the Relation between Meta-cognitive Strategies and Listening Autonomous Learning Ability. *Theory and Practice in Language Studies*, Vol. 2, No. 11, pp. 2446–2451. ISSN: 1799-2591. DOI: 10.4304/tpls.2.11.2446-2451.
- Guo, M. (2013). Developing Critical Thinking in English Class: Culture-based Knowledge and Skills. *Theory and Practice in Language Studies*, Vol. 3, No. 3, pp. 503–507. ISSN: 1799-2591. DOI: 10.4304/tpls.3.3.503-507.
- Hasan, J. and Marzuki, M. (2017). An Analysis of Student's Ability in Writing at Riau University Pekanbaru – Indonesia. *Theory and Practice in Language Studies*, Vol. 7, No. 5, pp. 380-388. ISSN: 1799-2591. DOI: <http://dx.doi.org/10.17507/tpls.0705.08>.
- Hashemnezhad, H. and Hashemnezhad, N. (2012). A Comparative Study of Product, Process, and Post-process Approaches in Iranian EFL Students' Writing Skill. *Journal of Language Teaching and Research*, Vol. 3, No. 4, pp. 722–729. DOI:10.4304/jltr.3.4.722-729.

- Hassani, et al. (2013). The Relationship between Iranian EFL Learners' Critical Thinking and Reading Comprehension Performance in Journalistic Texts. *Theory and Practice in Language Studies*, Vol. 3, No. 10, pp. 1873-1878. ISSN: 1799-2591. DOI:10.4304/tpls.3.10.1873-1878.
- Huy, N. T. (2015). Problems Affecting Learning Writing Skill of Grade 11 at Thong Linh High School. *Asian Journal of Educational Research*, Vol. 3, No. 2, pp. 53–69. ISSN: 2311-6080. Available at: [www.multidisciplinaryjournals.com](http://www.multidisciplinaryjournals.com).
- Ibnian, S. S. K. (2011). Brainstorming and Essay Writing in EFL Class. *Theory and Practice in Language Studies*, Vol. 1, No. 3, pp. 263–272. ISSN: 1799-2591. DOI: 10.4304/tpls.1.3.263-272.
- Indah, R. N. (2009). Developing Students' Critical Thinking Awareness through Interest-based Claims Writing Publication. TEFLIN 56th Responding to Global Challenges through Quality English Language Teaching. Malang: UIN.
- Indah, R. N. and Kusuma, A. W. (2016). Factors Affecting the Development of Critical Thinking of Indonesian Learners of English Language. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, Vol. 21, No. 6, pp. 86–94. e-ISSN: 2279-0837, p-ISSN: 2279-0845. DOI: 10.9790/0837-2106088694. Available at: [www.iosrjournals.org](http://www.iosrjournals.org).
- Indah, R. N. (2017). Critical Thinking, Writing Performance and Topic Familiarity of Indonesian EFL Learners. *Journal of Language Teaching and Research*, Vol. 8, No. 2, pp. 229–236. DOI: <http://dx.doi.org/10.17507/jltr.0802.04>.
- Kamali, Z. and Fahim, M. (2011). The Relationship between Critical Thinking Ability of Iranian EFL Learners and Their Resilience Level Facing Unfamiliar Vocabulary Items in Reading. *Journal of Language Teaching and Research*, Vol. 2, No. 1, pp. 104–111. ISSN: 1798-4769. DOI:10.4304/jltr.2.1.104-111.
- Khodashenas, M. R. and Farahani, S. K. (2014). The Effect of Critical Thinking on Iranian EFL Learners' Speaking Ability. *Modern Journal of Language Teaching Methods (MJLTM)*, Vol. 4, No. 4, pp. 196–202. ISSN: 2251-6204.
- Kiasi, M. A. and Alavi, S. L. (2016). Procedural Rhetoric: An Alternative to Traditional Academic Writing Programs. *Theory and Practice in Language Studies*, Vol. 6, No. 12, pp. 2309–2319. DOI: <http://dx.doi.org/10.17507/tpls.0612.11>.
- Klimova, B. F. (2011). Evaluating Writing in English as a Second Language. *Journal of Social and Behavioral*, Vol. 8, pp. 390–394. DOI: 10.1016/j.sbspro.2011.11.074.

- Mahmoudi, A. (2017). Effect of Planning on Iranian Intermediate EFL Learners' Mastery of Writing Skill. *Theory and Practice in Language Studies*, Vol. 7, No. 3, pp. 219-226. DOI: <http://dx.doi.org/10.17507/tpls.0703.08>.
- Marzban, A. and Barati, Z. (2016). On the Relationship between Critical Thinking Ability, Language Learning Strategies, and Reading Comprehension of Male and Female Intermediate EFL University Students. *Theory and Practice in Language Studies*, Vol. 6, No. 6, pp. 1241–1247. ISSN: 1799-2591. DOI: <http://dx.doi.org/10.17507/tpls.0606.14>.
- Marzban, A. and Jalali, F. E. (2016). The Interrelationship among L1 Writing Skills, L2 Writing Skills, and L2 Proficiency of Iranian EFL Learners at Different Proficiency Levels. *Theory and Practice in Language Studies*, Vol. 6, No. 7, pp. 1364–1371. ISSN: 1799-2591. DOI: <http://dx.doi.org/10.17507/tpls.0607.05>.
- Mekala, et al. (2016). The Role of Metacognitive Strategies in Second Language Writing. *GSTF Journal on Education (JEd)* Vol.4 No.1, pp. 11–19. DOI: 10.5176/2345-7163\_4.1.92.
- Muflikhati, A. (2013). *Improving Students' Writing Skills on Recount Texts through the Use of Dialogue Journal Writing of the Tenth Grade Students of SMA IT Abu Bakar Yogyakarta in the Academic Year of 2012/2013*. Unpublished Thesis: State University of Yogyakarta.
- Nejad, B. S. and Shahreabaki, M. M. (2015). Effects of Metacognitive Strategy Instruction on the Reading Comprehension of English Language Learners through Cognitive Academic Language Learning Approach (CALLA). *International Journal of Languages' Education and Teaching*, Vol. 3, No. 2, pp. 133–164. ISSN: 2198 – 4999.
- O'Hare, L. and McGuinness, C. (2009). Measuring Critical Thinking, Intelligence, and Academic Performance in Psychology Undergraduates. *The Irish Journal of Psychology*, Vol. 30, No. 3–4, pp. 123–131. ISSN: 0303-3910.
- Onozawa, C. (2010). A Study of the Process Writing Approach. *Research Note*, 共愛学園前橋国際大学論集, No. 10, pp. 153–163.
- Palpanadan, et al. (2014). Comparative Analysis of Process versus Product Approach of Teaching Writing in Malaysian Schools: Review of Literature. *Middle-East Journal of Scientific Research*, Vol. 22, No. 6, pp. 789–795. DOI: 10.5829/idosi.mejsr.2014.22.06.21943.

- Panahandeh, E. and Asl, S. E. (2014). The Effect of Planning and Monitoring as Metacognitive Strategies on Iranian EFL Learners' Argumentative Writing Accuracy. *Procedia – Social and Behavioral Sciences*, pp. 1409–1416. DOI: 10.1016/j.sbspro.2014.03.559. Available online at [www.sciencedirect.com](http://www.sciencedirect.com).
- Pujiono, S. (2012). Berpikir Kritis dalam Literasi Membaca dan Menulis untuk Memperkuat Jati Diri Bangsa. *Prosiding Bahasa dan Sastra Indonesia (PIBSI XXXIV Unsoed)*, pp. 778–783. ISBN: 978-979-9204-76-9.
- Purnomowati, D. A. (2010). *Improving the Ability in Writing Hortatory Exposition Texts through a Group Discussion for Grade XI Students of Senior High School (An Experimental Research of Grade XI Students of SMA Negeri 3 Demak in the Academic Year of 2008/2009)*. Unpublished Thesis: Semarang State University.
- Puspitasari, P. W. (2013). *Improving Students' Skills of Writing Hortatory Exposition Texts through Portfolio Assessment for the Eleventh Grade Students of SMA Negeri 4 Yogyakarta in the Academic Year of 2012/2013*. Unpublished Thesis: State University of Yogyakarta.
- Reid, J. M. (1993). *Teaching ESL Writing*. New York: Prentice Hall Regents.
- Santoso, H. (2014). *Pengembangan Berpikir Kritis dan Kreatif Pustakawan dalam Penulisan Karya Ilmiah*. Unpublished Article: State University of Malang.
- Setiyadi, et al (1999). A Survey of Language Learning Strategies in a tertiary EFL in Indonesia. Paper Presented at the Australian Association for Research in Education (AARE) Annual Conference, Melbourne.
- Setiyadi, Ag. (2006). *Metode Penelitian untuk Pengajaran Bahasa Asing*. Yogyakarta: Penerbit Graha Ilmu.
- Setiyadi, et al (2016). How Successful Learners Employ Learning Strategies in an EFL Setting in the Indonesian Context. *English Language Teaching*, Vol. 9, No. 8, pp. 28–38. ISSN: 1916-4742. URL: <http://dx.doi.org/10.5539/elt.v9n8p28>. Available at: [elt.ccsenet.org](http://elt.ccsenet.org).
- Sun, L. (2013). The Effect of Meta-cognitive Learning Strategies on English Learning. *Theory and Practice in Language Studies*, Vol. 3, No. 11, pp. 2004–2009. ISSN: 1799-2591. DOI: 10.4304/tpls.3.11.2004-2009.
- Takallou, F. (2011). The Effect of Metacognitive Strategy Instruction on EFL Learners' Reading Comprehension Performance and Metacognitive Awareness. *Asian EFL Journal*, Vol. 13, No. 1, pp. 272–300. <http://dx.doi.org/10.4304/tpls.3.11.2004-2009>.

- Tandiana, S. T. (2014). *Pengaruh Teknik Pembelajaran dan Kemampuan Berpikir terhadap Keterampilan Menulis Argumentatif*. Unpublished Article: University of Siliwangi.
- Utami, T. A. A. (2014). *Improving the Ability in Writing Descriptive Texts through Brainstorming Technique for Grade VIII Students at SMP N 1 Piyungan*. Unpublished Thesis: Yogyakarta State University.
- Wang, P. (2009). The Inter-rater Reliability in Scoring Composition. *English Language Teaching*, Vol. 2, No. 3, pp. 39–43. Available at: [www.ccsenet.org/journal.html](http://www.ccsenet.org/journal.html).
- Widiyanti, Y. (2012). *Teaching Writing Narrative Text through Learning Community at the Second Grade of SMAN 8 Bandar Lampung*. Unpublished Thesis: Lampung State University.
- Xiao, G. and Chen, X. (2015). English Academic Writing Difficulties of Engineering Students at the Tertiary Level in China. *World Transactions on Engineering and Technology Education*, Vol. 13, No. 3, pp. 259–263.
- Xu, J. (2011). The Application of Critical Thinking in Teaching English Reading. *Theory and Practice in Language Studies*, Vol. 1, No. 2, pp. 136–141. ISSN: 1799-2591. DOI: 10.4304/tpls.1.2.136-141.
- Zhang, L. and Seepho, S. (2013). Metacognitive Strategy Use and Academic Reading Achievement: Insights from a Chinese Context. *Electronic Journal of Foreign Language Teaching*, Vol. 10, No. 1, pp. 54–69. Available at: <http://e-flt.nus.edu.sg/>.
- Zhao, N. (2009). Metacognitive Strategy Training and Vocabulary Learning of Chinese College Students. *English Language Teaching*, Vol. 2, No. 4, pp. 123–129. Available at: [www.ccsenet.org/journal.html](http://www.ccsenet.org/journal.html).