INCORPORATING LEARNING STYLE-BASED GROUPING IN COOPERATION PROCEDURE OF TEACHING WRITING TO OPTIMIZE STUDENTS' INTERACTION AND WRITING ABILITY

(Thesis)

By
Fefiyana

ENGLISH EDUCATION MASTER PROGRAM
LANGUAGE AND ARTS EDUCATION DEPARTMENT
TEACHER TRAINING AND EDUCATION FACULTY
UNIVERSITY OF LAMPUNG
BANDAR LAMPUNG
2018

INCORPORATING LEARNING STYLE-BASED GROUPING IN COOPERATION PROCEDURE OF TEACHING WRITING TO OPTIMIZE STUDENTS' INTERACTION AND WRITING ABILITY

(A Thesis)

By
Fefiyana

MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM
LANGUAGE AND ARTS EDUCATION DEPARTMENT
TEACHER TRAINING AND EDUCATION FACULTY
LAMPUNG UNIVERSITY
BANDAR LAMPUNG
2018

ABSTRACT

INCORPORATING LEARNING STYLE-BASED GROUPING IN COOPERATION PROCEDURE OF TEACHING WRITING TO OPTIMIZE STUDENTS' INTERACTION AND WRITING ABILITY

By

Fefiyana

The aims of this research are to investigate the students' writing ability and interaction after incorporating learning style-based grouping in cooperation procedure of teaching writing. This research was carried out quantitatively and qualitatively and involved two classes whotook English 1 subject as a compulsory subject at IBI Darmajaya. The two classes served as the experimental class 1 (X_1) and experimental class 2 (X_2). The used instruments were writing test, observation of documented videos, and learning styles questionaires that served as the important measument for grouping of both two experimental classes.

It was found that there was a significant difference in the students' writing ability and their interaction between the two experimental groupsafter the implementation of incorporating learning style-based grouping in cooperation procedure of teaching writing. The findings prove that the implementation of heterogenous grouping based on learning styles benefits succesfully in optimizing students' writing ability and producing the constructive and promotive interaction.

In essence, heterogeneous grouping using learning styles in cooperative learning procedure is one of the best ways to promote the principle of heterogeneity and it can be used to get long run groups that benefit the students to enhance their academic purpose especially writing class. Moreover, the grouping method of cooperative learning is placed as the prominent part overall to structure and ensure all the elements of cooperative learning procedure run smoothly and ultimately achieve the goal of teaching. Finally, the heterogenous grouping method using learning styles might be taking long time but it is worthy. Once it is assessed, the information can be documented and used for long run to make the variety of heterogeneous grouping in cooperative learning procedure.

Research Title	:	**INCORPORATING LEARNING STYLE-BASED GROUPING IN COOPERATION PROCEDURE OF TEACHING WRITING TO OPTIMIZE STUDENTS' INTERACTION AND WRITING ABILITY**
Student's Name	:	Fefiyana
Student's Number	:	**1523042045**
Study Program	:	**Master in English Language Teaching**
Department	:	**Language and Arts Education**
Faculty	:	**Teacher Training and Education**

APPROVED BY

Advisory Committee

Advisor	Co-Advisor
Prof. Ag. Bambang Setiyadi, M.A. Ph.D.	**Dr. Ari Nurweni, M.A.**
NIP 19590528 198610 1 001	NIP 19630302 198703 2 001

The Chairperson of Department of Language and Arts Education	The Chairperson of Master in English Language Teaching
Dr. Mulyanto Widodo, M.Pd.	**Dr. Flora, M.Pd.**
NIP 19620203 198811 1 001	NIP 19600713 198603 2 001

ADMITTED BY

1. Examination Committee

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

   Secretary : **Dr. Ari Nurweni, M.A.** .....

   Examiners : I. **Dr. Flora, M.Pd.** .....

   II. **Prof. Dr. Patuan Raja, M.Pd.** .....

2. The Dean of Teacher Training and Education Faculty

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

3. The Director of Postgraduate Program

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

4. Graduated on : **December 28th, 2017**

LEMBAR PERNYATAAN

Dengan ini saya menyatakan dengan sebenarnya bahwa:

1. Tesis dengan judul "Incorporating Learning Style-Based Grouping in Cooperation Procedure of Teaching Writing to Optimize Students' Interaction and Writing Ability" 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 di kemudian 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, Januari 2018
Yang membuat pernyataan,

Fefiyana
NPM 1523042045

CURRICULUM VITAE

Fefiyana was born in Kalianda, South Lampung, on Maythe 14th, 1986. Her formal education started in 1992 at the elementary school MIN 6Lampung Utara, a six-year elementary schooling that was continued to the secondary schools, MTsN3 Lampung Utara and MAN 2Lampung Utara. In 2004 she entered University of Lampung, majoring in English Language Education.Her early teaching experience includes a three-month practice teaching program (PPL) at SMAN 3 Bandar Lampung in 2007.She had been given the opportunity to be the coordinator staff of English subject at BKB AL-QOLAM since 2010 until 2015 and finally decided to resign for applying and continuing her study to graduate degree in University of Lampung.Currently, shebecomes a freelance lecturer at IBI Darma Jaya. She enjoys teaching as well as developing her side-business as her day-to-day activities.

QUOTATION

"Without the cooperation of its members society cannot survive, and the society of man has survived because the cooperativeness of its members made survival possible.... It was not an advantageous individual here and there who did so, but the group. In human societies the individuals who are most likely to *survive are those who are best enabled to do so by their group."*

(Ashley Montagu, 1965)

DEDICATION

To my family and friends.
To human knowledge.

ACKNOWLEDGEMENT

Bismillähirrohmänirrohïm. I would like to express my profound gratitude to Prof. Ag. Bambang Setiyadi, M. A. , Ph. D., , Dr. Ari Nurweni, M. A., Dr. Flora Nainggolan, M. Pd., and Prof. Dr. Patuan Raja, M. Pd., as my research advisors and examiners for their contributive feedbacks. My great appreciation also goes to Dr. Flora, M. Pd., as the Chairperson of Master in English Language Teaching Study Program for her earnest support for the most part throughout the latest period of completing my study. I feel much obliged as well for thanking all the lecturers of Master in English Language Teaching Study Program for their invaluable, constructive teachings throughout these two years.

To the lecturers and students of IBI Darmajaya, I'd like to show my acknowledgement of their open cordiality. Then to Emilda Oktaviyani, M. Pd., Novita Nurdiana, M. Pd., Shirta El Rusyda, M. Pd., Novriyani M. Pd., Rinna Slamet, M. Pd. And Aghatha Wuri Yayi S., M. Pd., I consider myself deeply indebted for their help and companionship throughout the latest moment of my study.

The last, but unquestionably not the least, I'd like to thank my family for their enduring love, support, and patience. I must also express extended gratitude—and definitely apology—to the people whose names, due to limited space, cannot be recorded on this paper, for their support and company (I know you're all there, and you're always were).

Bandar Lampung, December the 28th 2017

Fefiyana

CONTENTS

TABLES

Table **Page**

FIGURES

APPENDICES

Appendix **Page**

I. INTRODUCTION

This chapter presents background of the problem, formulation of the problem, objective of the research, uses of the research, scope of the research and the definition of terms. They are elaborated as follows:

1.1.Background of the Problem

Writing is one of the skills that students need to master either at primary, secondary or tertiary level. However, in the ESL and EFL context, the teachers' efforts to produce students who possess the skill of writing seem to be a herculean task. This is because learning to write is a complex task, with difficulties being exacerbated when writing in a second language, where writing conventions may differ considerably from one's first language (Hedge, 2005). Therefore, the students need more great effort to generate and then transfer their ideas into a piece of writing in their second or foreign language.

As writing is complex for the learners' cognitive capability, different approaches are adopted to make teaching writing an effective pedagogy (Harmer, 2006) in (Ali, 2017). According to Khatijah (2004) and Zamel (1985) as cited in Ali (2017), writing approaches are of two types: product approach and process

approach. The focus of the product approach is on the different part of words, sentences, paragraphs but there is not much focus on meaning and the role of the teacher is to examine the finished product focusing more on linguistic accuracy. However, the scholars believed that this approach is inadequate in enhancing the students' writing performance (Ali, 2017).Thus, an appropriate approach is demanded to suffice the complex process of writing and enhance the students' writing ability which comes to the choice of process approach rather than product approach. It focuses on how writer actually do write.

Recently, the paradigm shift from product approach to process approach has redefined and renegotiated the teachers' role (Richards, 1990; Taylor, 1981) in (Ismail and Maasum, 2014). The teacher's role has changed from an evaluator of the written product to a facilitator and co- participant in the process of writing (Ismail and Maasum, 2014). The teacher also has a significant role to perform by providing assistance to the students during the writing process (White and Arndt, 1991) in (Ismail and Maasum, 2014). It is obvious that the teacher's intervention in the class lies on the effort to build the environment of the writing process stages becomes comfortable for the students in facilitating them to work in their writing. Then, the ultimate result is the development of their writing and interaction during the process of writing.

Moreover, writers are seen as active thinkers who employ strategies to compose text. Writing is described as a form of problem-solving which involves such processes as generating ideas, discovering a 'voice' which to write, planning, goal-setting, monitoring and evaluating what is going to be written as well as

what has been written and searching for language with which to express exact meaning (White and Arndt, 1991) in (Alves, 2008).Fortunately, cooperative learning strategies which could be used during the process of writing has been proven to be effective for all types of students because it promotes learning and fosters respect and friendships among diverse groups of students (Ali, 2017). In fact, the more diversity in a team, the higher the benefits for each student (Colorado, 2007) in (Ali, 2017). The predicted benefits could be the positive interaction among the students and their enhancement of the writing ability. It is assumed that diversity promotes the cross-ability exchange among the students.

In order to ensure students' mastery of the writing ability, teachers need to employ methods and approaches which produce positive outcomes in the students' learning. One of the approaches showing positive result in boosting the students' writing ability could be the incorporation of cooperative learning. It is inherent with the statement of Johnson, Johnson and Smith (2013) who stated that cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning. Hence, it is assumed that sequencing the cooperative learning's elements which are incorporated in stages of process writing approach benefits more in developing students' writing ability.

There is no doubt that cooperative learning can be used as an effective approach to encourage students to work together as one team inside the class. Cooperative learning is acknowledged as a set of pedagogical practices in which students are

grouped and encouraged to work together to facilitate active participation in discussing different perspectives on a common topic (Johnson and Johnson, 1999; Hirst and Slavik, 2005; and Chapman *et al.*, 2006) in Arumugam (2011). Furthermore, Department for Education and Skill of Cambridge University (2004) stated that often we are not clear about what to think and write until we hear ourselves say it. Then it is stated that discussing writing in pairs and small groups prompts oral drafting as pupils suggest, modify, confirm, justify, improve and refine their ideas together. It is added that interacting with others stimulates our own powers of expression. The kind of thinking that we would want to be going on in an individual writer's head is what can go on in a discussion as pupils compose together.

In fact, the spirit of competitiveness and the domination of individualism may be reduced and lessened through adopting the approach of cooperative learning that provides a supportive learning environment for students in which they can acquire and exchange ideas, information and knowledge. In writing class, small groups can be used to create communication, interpersonal and team skills as members of each group do not have the same background or ability in writing. This sort of variety helps students within each group support their peers as they can complement each other's strengths and weaknesses in writing; some of them may have strong background in vocabulary or grammar while other students may have good background about the topic they are discussing. Following this way, low level students can benefit from their strong-level peers' feedback with regard to their grammatical, vocabulary, punctuation and spelling mistakes, and at the

same time good students will feel satisfied and proud that they had a significant role in helping their low level classmates. By using the cooperative learning, students could discuss, share ideas, and see how their peers think and react. Therefore, a more relaxing environment of learning can be rendered and more opportunities for students to produce better writing can be provided.

Cultivating the result of the study of cooperative learning on students' writing ability, it is worthwhile mentioning here that the cooperative language learning approach provided opportunities for students to share responsibility with regard to writing (Mahmoud, 2014). He added that everyone inside each group felt responsible and did his best to fulfill his duty. He also found that the cooperative learning approach developed the students' ability of giving feedback concerning the mistakes they made in their writing, whether they were in spelling, punctuation, grammar, or organization. Seeing this power of cooperative learning, it is clear that cooperative learning benefits more in developing students writing ability.

Furthermore, when using the cooperative learning approach inside writing classroom, students felt that they became autonomous learners as they found themselves engaged in doing different types of writing tasks without much help from the lecturer (Mahmoud, 2014). These findings were in line with a number of studies that were carried out in the same field (Astin, 1993; Ellison & Boykin, 1994; Elola and Oskoz, 2010; Barkley et al., 2005) in Mahmoud (2014). Incorporating cooperative learning to teach writing developing the

students' ability in writing and also the process of the writing itself as stated by Mahmoud (2104) that using the cooperative learning approach made writing enjoyable, meaningful, motivating, relevant, and reduces anxiety as students interact with each other in interesting groups. Such findings went with others obtained in similar areas (Millis and Cottell, 1998, Barkley et al., 2005; Nor and Samad, 2003) as cited in Mahmoud (2014).

As some studies had demonstrated, simply putting students in groups did not guarantee positive results. One of the studies that found this kind of phenomena was a study conducted by Mahmoud (2014) who summarized his problems and challenges in applying cooperative learning in his study in which some students complained that members in their groups were somewhat inactive as well as indifferent when one of the group wanted to do the whole task or when members of the group found that a good chance to them to do nothing. Teachers could not simply place students together and expect them to work well with each other. One of central components—heterogeneity principle could be in place so that students could come to feel that they were positive contributors, not only to their teams, but to the class as a whole. Most teachers are faced with large heterogeneous classes, making it difficult to serve the needs of all students in the class. Cooperative learning takes advantages of this heterogeneity, by encouraging students to learn from one another and from more and less knowledgeable peers and they demonstrate more confidence in writing and decrease their apprehensions towards writing. In the respect to this problem, another strong justification could be made dealing with the way the teacher in

putting the students into groups. There must be basic consideration to divide the students into small groups in order to meet real heterogeneity in the license to cooperative learning. Unfortunately, there is still no study which applies the measurements of the distribution of the students' learning style as the basic consideration and information to group the students in teaching writing through cooperative learning. So, the researcher assumes that the distribution of students learning style is needed before grouping the students. It will fulfill the need of making heterogonous group which will maximize the students' strengths as what had found by Melser (1999) as cited in Adodo and Agbayewa (2011) who stated students working in heterogeneous group increase in self-esteem and by Shield (1995) as cited in Adodo and Agbayewa (2011) who stated students' of all ability exhibited greater academic self confidence in heterogeneous group. Thus, it is assumed that by having high self-esteem and greater academic self-confidence, the students will have active interaction in groups of cooperation.

To respond the researcher's point of view above, Felder-Silverman learning style model is used as the basis for learning style measurement, which is assessed using Index of Learning Styles (ILS). This model was selected with consideration as stated by Litzinger et al. (2007) who stated that a reliable and valid instrument which measures learning styles and approaches could be used as a tool to encourage self-development, not only by diagnosing how people learn, but by showing them how to enhance their learning. The information gathered through the students' distribution of learning style is one of consideration in grouping the students in teaching writing using cooperative

learning. For the type of writing, descriptive was selected because the form of descriptive writing is principally present in most, if not all, forms of writing. It has been an inherent part of types of text such as narrative, exposition, and recount, and therefore, is likely to contribute to writing competence in general.

This study will focus on the impact of using the cooperative language learning approach grouped randomly based on the students' dominant preferences of their learning styles on developing students' writing ability and interaction inside an EFL classroom. Grouping the students randomly based on their dominant preferences of learning styles which focus on their personality and interaction mode is considered more beneficial in teaching writing through cooperative learning activities. It is assumed that the previously random grouping of cooperative learning still gives actually the chance to have the homogenous groups otherwise the heterogeneity itself has been clearly defined.

Furthermore, the researcher suggested that what happened in the actual class of cooperative learning activities when the students did not want to cooperate and get the benefits of cooperative learning activities were because of the grouping procedure. Some students did not feel comfortable within the groups in some possibilities which needed to be solved. One of the possibilities that can be illustrated as the example is they meet the students which actually have the same personality in learning called learning styles in which strong active students meet the other strong active students in one group that make them compete each other to be the most dominant participant instead of working

cooperatively and supportively each other. In the other hand, it is possible that the strong intuitive students meet the other strong intuitive students that make them work too far back from the topic because the characteristic of intuitive students is they like to concept many things, to plan, and even to predict the good concept but they hardly put the a lot of ideas into the “earth”. They think much but they hesitate to make it concrete in paper or even only to write down their idea. They badly need the supplementary ability of the other learning styles spectrum; they are sensing students as their help. Sensing students do not like to think much about what behind the “wall”, but they do something realistically. They directly put their idea ignoring whether it is true or not.

Based on the illustration above, it is clear that the heterogeneity should be defined first before grouping the students in cooperative learning activities in order to make the cooperative learning activities run smoothly based on its principles.

1.2. Formulation of the Problems

This study focused on the impact of developing cooperative learning activities grouped based on student’s learning styles to optimize students’ interaction and writing ability. More specifically, the study attempts to answer the following questions:

1) Which grouping of cooperation procedure in teaching writing optimizes students’ writing ability?

2) Which grouping of cooperation procedure in teaching writing produces more students' interaction?

1.3. Objectives of the Research

This study was aimed at identifying:

1. which grouping of cooperative learning activities optimizes students' writing ability.
2. which grouping of cooperative learning activities produces more students' interaction.

1.4. Uses of the Research

Theoretically, the use of this research was:

- To verify the previous theory dealing with the theories in this research.

Practically, this research was used:

- As information to English teachers and also the students whether Cooperative Learning activities heterogeneously grouped based on students' learning styles could optimize students' ability in writing descriptive writing and produce more students' interaction.
- As a consideration for English teachers in finding the best way to optimize students' writing ability of descriptive writing and interaction.

1.5. Scope of the Research

This research attempted to answer two research questions. In the license to answer both research questions, it needed descriptive qualitative method using direct

observation during the treatments and video recording to reveal the students' interaction during the treatment using developed cooperative learning activities grouped based on students' learning styles and to see the effect on the students' writing ability, it used the design of *experimental groups pretest posttest design*(Hatch and Farhady, 1982). This quantitative design was used to investigate which grouping benefits more on students' descriptive writing ability. This experimental method used two groups. One was an experimental class 1 which got treatment of incorporating cooperative learning heterogeneously grouped based on their learning styles and the other was experimental class 2 which was treated also using cooperative learning but the groups of cooperative learning activities was homogenous in term of their learning styles.

1.6. Definition of the Terms

- Writing is a skill in which we express ideas, feeling, and thoughts which are arranged in words, sentences, and paragraph using eyes, brain and hands.
- Cooperative learning is defined as a set of instructional strategies which employ small teams of pupils to promote peer interaction and cooperation for studying academic subjects. The term refers to classroom techniques in which students work on learning activities in small groups and receive rewards or recognition based on their group's performance. Cooperative Learning as a structured and systematic instructional design in which small groups work together to reach a common goal.

- Learning style refers to the ways in which an individual characteristically acquires, retains, and retrieves information and background knowledge to deal with specific problems at hand.
- Felder-Silverman learning style model is a model developed by Richard M. Felder and Linda K. Silverman, originally projected for engineering education setting. The model consists of four dimensions: *sensing/intuitive* (perception), *visual/verbal* (input), *active/reflective* (processing), and *sequential/global* (understanding).
- Descriptive writing is a genre of writing that deals with sensory experience, about how something looks, sounds, tastes. Mostly it is about visual experience, but description also deals with other kinds of perception, as when we are trying to invite the reader to feel the texture of certain material.

In this chapter the researcher provided the reason why she conducted this study and the research questions that she investigated.

II. LITERATURE REVIEW

This chapter presents some theories as the literature review relating to this study. The theories are as follows:

1.1. Writing

Emig (1977) states writing represents a unique mode of learning—not merely valuable, not merely special, but unique. She added writing serves uniquely because writing as process and product possesses a cluster of attributes that correspond uniquely to certain powerful learning strategies. Therefore, it is believed that writing needs a special attention and support of good procedure of teaching.

Heaton (1975) stated writing skills are complex and sometimes difficult to teach, requiring mastery not only of grammatical and rhetorical devices but also of conceptual and judgmental elements. In other words, writing involves how the way students perceive, concept and judge something before making it real in their composition. In addition, Raimes (1983) says writing is a skill in which we express ideas, feeling, and thoughts which are arranged in words, sentences, and

paragraph using eyes, brain and hands. Writing also reinforces the use of structure, idiom, vocabulary, which we have studied in the previous lesson. Thus writing is the ability to express the writers' ideas in written from.

In writing activity, writers are considered successful when their writing fulfills the criteria of some aspects of writing 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 transition, restatement, and emphasis.

2. **Organization**

   Organization refers to the logical organization of the content. It is scarcely more than an attempt to piece together all collection of facts and jumble ideas. Even in early drafts, it may still be searching for order, trying to make out patterns in its material and working to bring the 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 those are suitable with the content. It begins with the assumption that the writer wants to express the ideas as clearly and directly as he can. As a general rule, clarity should be

his prime objective. Choosing words that express his meaning is precisely rather than skew it or blur it.

4. **Grammar**

   Grammar refers to the use of the correct grammatical form and syntactic pattern on separating, combining, and grouping ideas in words, phrases, clauses, and sentences to bring out logical relationships in paragraph writing.

5. **Mechanic**

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

Based on the definition above, the writer can conclude that writing is an important means of indirect unique communication that referred to the productive and expressive activity. In this case students are expected to be able to express their ideas, feeling, and thought in written language.

In evaluating the students' writing score, the researcher and another rater based on their judgment by considering five aspects of writing to be tested; they are content, organization, vocabulary, language use, and mechanic. These criteria are adopted from Jacobs (1981) as cited in Ghanbari et al (2012).

Basically, there are five aspects of writing to be evaluated by the researcher and another rater. They are:

1. Content referring to the substance of writing, the experience of the main idea (unity).
2. Organization analyzing the logical organization of the content (coherence).
3. Vocabularies denoting to the selection of words those are suitable with the content.
4. Language use viewing the use of correct grammatical and syntactic pattern.
5. Mechanic referring to the use of graphic convention of language.

The percentage of scoring from the writing components was derived as follows

1. Content : 30%
2. Organization : 20%
3. Vocabulary : 20%
4. Language use : 25%
5. Mechanic : 5%

The classification of scoring criteria which was adopted from Jacobs et al (1981) in Ghanbari et al (2012), in general listed is as follows:

Content

30-27	Excellent to very good: knowledge substantive, development of thesis/topic, relevant to assign topic.
26-22	Good to average: some knowledge of subject, adequate range, limited development thesis, mostly relevant to topic but lack detail.

21-17 Fair to poor: limited knowledge of subject, little substance, inadequate development of topic.

16-13 Very poor: limited 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, 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, lack 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 words/idiom form, choice, usage, meaning confused or obscured.

9-7 Very poor: essentially translation, little knowledge of English vocabulary, idioms, words form, or not enough to evaluate.

Language use

25-22	Excellent to very good: effective complex construction, few errors of agreement, tense number, word order/function, articles, pronoun, and preposition.
21-18	Good to average: effective but simple construction, minor problems in simple construction, several errors of agreement, tense, word order/function, articles, pronoun, preposition, but meaning seldom obscure.
17-11	Fair to poor: major problems in complex/simple construction, frequent errors of negation, agreement, tense, number, word order/function, articles, pronoun, preposition 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: demonstrated mastery of conventions, few errors 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 hand writing, meaning confused or obscured.

2	Very poor: no mastery convention, dominated by errors of spelling, punctuation, capitalization, paragraphing, hand writing illegible, or not enough to evaluate.

1.2. Cooperative Learning

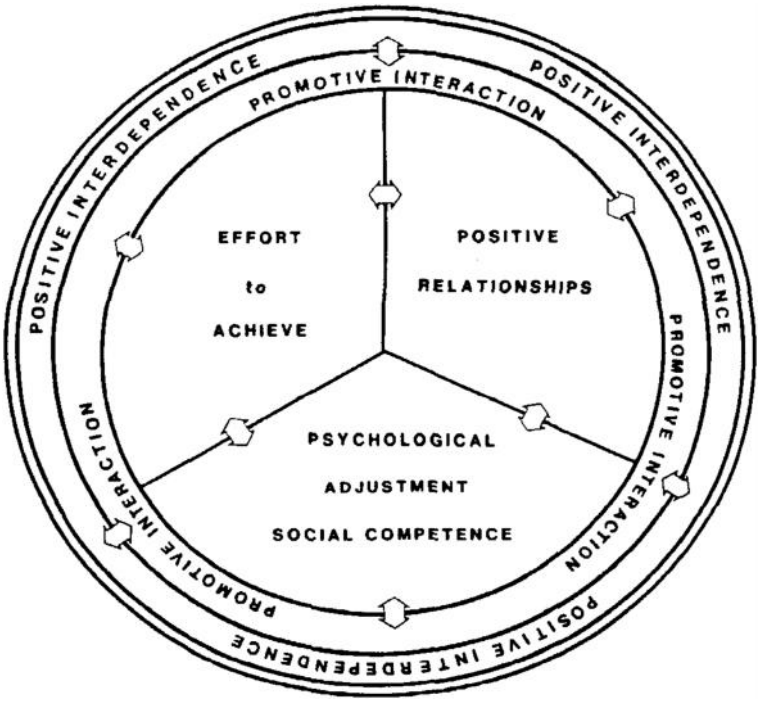
Johnson, Johnson, and Smith (2013) stated that Cooperative Learning is the instructional use of small groups so that the students work together to maximize their own and each other's learning. In Slavin's (1980) view, the outcomes of cooperative learning techniques fall mainly into two categories: academic achievement and group cohesiveness. He added that the effects of the techniques on the group cohesiveness variables, such as mutual concern and race relations, are unquestionably positive. He clarified the achievement results, though usually positive; seem to depend on the particular techniques, settings, measures, experimental designs, or other characteristics. It is clear that cooperative learning brings the benefits on the achievement as the result of the stated goal of learning and on group cohesiveness as the result of positive interaction among the students. Therefore, Cooperative Learning is not simply putting students together in groups and giving them tasks to do, but an environment in which teachers have to guarantee that the subsequent four elements of cooperative learning transpire.

Johnson and Johnson (1994) stated that the first requirement for an effectively structured cooperative lesson is that students believe that they "sink or swim together." When positive interdependence is established, each member's

endeavor in the group is always required and she or he takes different role and responsibility for a part of the given task. The group's successfulness is the contributions from every member in the group.

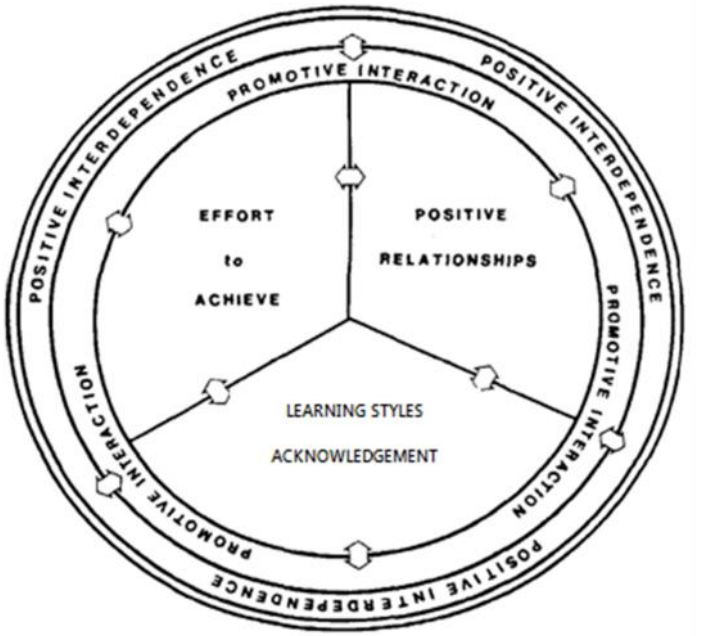
The outcomes model proposed by (Johnson and Johnson, 1991) in which the positive interdependence in and of itself may have some effects on outcomes, they are the face-to-face promotive interaction among individuals fostered by the positive inter-relationships, and psychological adjustment and social competence. The outcomes model is as presented in the following figure:

Figure 1: Johnson's Model of Outcomes



The researcher assumed that the students' psychology that might be adjusted by the cooperative learning procedure should be well defined. Thus, the new proposed model of the outcomes becomes as in the figure below:

Figure 2: The Developed Model of Outcomes



The previous model from the experts is still too general in describing what kinds of psychology will be adjusted from the individuals in their groups in cooperative learning activities. So it is wise for the researcher to choose learning styles as one of the alternatives to define the students psychology by using learning styles instead of only predicting the individual psychology without any certain measurement.

Then, the second basic element is individual accountability, which exists when the performance of each individual student is assessed and the results given back to

the group and the individual (Johnson & Johnson, 1989) in Johnson and Johnson (2016).This means that each member of the group is accountable for completing his or her part of the work (Jolliffe, 2007). He emphasized also that it is important that no one can ‘hitchhike’ on the work of others. It requires each pupil in the group to develop a sense of personal responsibility to learn and to help the rest of the group to learn also. Hence, individual accountability is defined as the result of cooperation which deals with the ultimate success of each member of the groups.

The third is quality of group interaction process. In this process, learners are provided with abundant verbal and face-to-face interaction, where they can explain, argue, elaborate and link current material with what they have learned previously. Thus, it is crucial to let students sit in comfortable places where they can interact face to face easily. Johnson, Johnson, and Smith (2013) suggest that groups should be small when learners are just beginning to work together and develop their skills.

The fourth is teaching social skills. Sufficient social skills entail an explicit instruction on appropriate communication, leadership, trust and conflict resolution skills so that the team can function effectively. Social skills refer to group-related skilled and task-related social skills. The former refers to the way students interact as teammates, such as mediating disagreements, encouraging, and praising. The latter refers to the way students interact with one another to achieve task objectives, such as asking, paraphrasing, explaining and summarizing. Cooperative Learning does not assume that students have already

had the required social skills; hence, as Cooperative Learning techniques are implemented, cooperative skills are often taught.

According to Jolliffe (2007), cooperative learning has two main prerequisites. He stated that tasks need to be structured to ensure pupils are interdependent and individually accountable; just putting pupils into groups does not mean they will work together cooperatively. Considering this view, teacher should select the groups to reflect a diversity of abilities, learning styles, viewpoints, gender, race, and even consistency of attendance, which will be particularly relevant for groups working on a project over time. Heterogeneous groups produce the greatest opportunities for peer tutoring and support as well as improving cross-race and cross-sex relations and integration. Kagan and Kagan (2009) stated that the rationale for heterogeneity is simple: If all students on a team had exactly the same skills and knowledge, they would have nothing to learn from each other. He imposed that to a degree, the greater the team heterogeneity, the greater the learning potential. Letting the students choose their own groups can result in a homogeneity which reduces the acquisition of social skills and increases the possibility of a lack of focus on the learning task (Cooper, 1990) as cited in Herteis, Wright, and MacInnis (1994). Suggested groups contain fewer than six—most likely four. The group of around five or four is large enough to

contain a diversity of perspectives, yet small enough to facilitate useful interaction (Millis, 1993) in Herteis, Wright, and MacInnis (1994).

Benefits of Cooperative Learning

1. Enhancing learners' cognitive growth

Cooperative Learning suggests that learning would be more meaningful if learners should experiment on their own learning instead of listening to the teacher's lectures. Furthermore, conflicts resolution will help promote students' cognitive growth (Murray, 1994) in Li (2012). Students promote each other's success by helping, assisting, supporting, encouraging, and praising each other's efforts to learn (Johnson, Johnson, and Smith, 2013). They added that by doing so results in such cognitive processes as orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates, challenging each other's reasoning and conclusions, and connecting present with past learning. Working in teams, consequently, provides learners with a variety of opportunities to learn from each other and to attain a higher cognition.

2. Enhancing learners' motivation

Cooperative learning benefits in motivating the learners to be successful in their learning as supported by the statement of Iwai (2000); Lancaster and Strand (2001); and Mason (2006) in Arumugam (2011) who have also shown that cooperative learning provides confidence, self-esteem, social skills, and enhances academic achievement to limited English proficiency students who can find positive social benefits in the spirit of cooperation within the classroom. There are

also studies finding an advantage for cooperative learning in promoting meta-cognitive thought, willingness to take on difficult tasks and persist (despite difficulties) in working toward goal accomplishment, intrinsic motivation, transfer of learning from one situation to another, and greater time on task (Johnson & Johnson, 1989) in Johnson, Johnson, and Smith (2013). As matter of fact, it is clear that incorporating cooperative learning could result in the students' positive enhancement of their motivation.

3. Enhancing learners' interaction

Current language teaching methodology strongly supports such communicative techniques such as group and pair work and related interactive activities, all of which can potentially provide social support (Brown, 2000).Teaching activities, moreover, impact the process. In a Cooperative Learning classroom, learners have chance to learn various socials skills, several structures or activities to work together which can maximize the learners' interactions. Subsequent are certain common Cooperative Learning activities:

õ **Think-Pair-Share** (TPS) – This is a cooperative learning strategy developed by Lyman in 1988 and can be defined as "a multi-mode discussion cycle in which students listen to a question or presentation, have time to think individually, talk with each other in pairs, and finally share responses with the larger group".

õ **Numbered Heads Together** –Munawaroh (2015) describes the procedure of Numbered Heads Together as follows:

Step 1: Students number off within teams.

Step 2: The teacher asks a high consensus question.

Step 3: Students put their heads together to make sure everyone on the team knows the answer.

Step 4: The teacher calls a number at random, and students with that number raise their hands to be called upon to answer the question and earn points for their teams.

õ **Jigsaw** – The jigsaw technique was invented and named in 1971 in Austin, Texas by a graduate Professor named Elliot Aronson (Adams, 2013). Students leave their original group and form an “expert group”, in which all persons with the same piece of information get together, study it, and decide how best to teach it to their peers in the original groups. After this is accomplished, students return to their original groups, and each teaches his/her portion of the lesson to the others in the group. As stated by Adams (2013), there are several benefits of jigsaw technique in teaching. Teacher is not the sole provider of knowledge because most of the work is done by the students themselves which makes it an efficient way to learn. Students take ownership in the work and achievement and therefore students are held accountable among their peers. Jigsaw technique is beneficial in teaching because learning revolves around interaction with peers; students are active participants in the learning process and thereby help to build inter-personal and interactive skills among students.

õ **Circle the Sage** – First the teacher polls the class to see which students have a special knowledge to share. For example the teacher may ask who in the class had visited Paris. Those students (the sages) stand and spread out in the room. The teacher then has the rest of the classmates each surround a sage, with no two members of the same team going to the same sage. The sage explains what they know while the classmates listen, ask questions, and take notes. All students then return to their teams. Each in turn, explains what they learned. Because each one has gone to a different sage, they compare notes. If there is disagreement, they stand up as a team. Finally, the disagreements are aired and resolved.

4. Enhancing learners' achievement

Research has found out that cooperative learning strategies enhance students' academic achievement. In 67 studies of the achievement impacts of cooperative learning, 61% found greater achievement in cooperative than in traditionally taught control groups. The achievement results, though usually positive, seem to depend on the particular techniques, settings, measures, experimental designs, or other characteristics (Slavin, 1980). In a meta-analysis of 158 studies of eight methods of cooperative learning: Learning Together and Alone, Constructive Controversy, Jigsaw Procedure, Student teams Achievement Divisions (STAD), Team Accelerated Instruction (TAI), Cooperative Integrated Reading & Composition (CIRC), Teams-Games-Tournaments (TGT), and Group Investigation, Johnson and Johnson (2001) report that cooperative learning results in significantly higher achievement and retention than do

competitive and individualistic learning. Cooperative learning also has some forms of competition among group members, but these forms of competition are intended to promote cohesiveness among group members reflecting group goals and individual accountability. Group goals and individual accountability are factors contributing to achievement effects of cooperative learning. Providing students with an incentive to help each other and encourage each other to put forth maximum efforts increases the likelihood that all group members will learn. Cooperative learning methods can be used by teachers to achieve social and academic goals at the same time (Slavin, 1981).

1.3. Students' Interaction in Cooperative Learning

How students perceive each other and interact with one another is a neglected aspect of instruction. Much training time is devoted to helping teachers arrange appropriate interactions between students and materials (i.e., textbooks, curriculum programs) and some time is spent on how teachers should interact with students, but how students should interact with one another is relatively ignored. It should not be. How teachers structure student-student interaction patterns has a lot to say about how well students learn, how they feel about school and the teacher, how they feel about each other, and how much self-esteem they have.

There are three basic ways students can interact with each other as they learn. They can compete to see who is "best," they can work individualistically toward a goal without paying attention to other students, or they can work cooperatively with a vested interest in each other's learning as well as their own. Of the three

interaction patterns, competition is presently the most dominant. Research indicates that a vast majority of students view school as a competitive enterprise where one tries to do better than other students. Cooperation among students-who celebrate each other's successes, encourage each other to do homework, and learn to work together regardless of ethnic backgrounds or whether they are male or female, bright or struggling, disabled or not, active or reflective based on their learning styles, is still rare (Johnson and Johnson, 1994)

Even though these three interaction patterns are not equally effective in helping students learn concepts and skills, it is important that students learn to interact effectively in each of these ways. Students will face situations in which all three interaction patterns are operating and they will need to be able to be effective in each. They also should be able to select the appropriate interaction pattern suited to the situation. An interpersonal, competitive situation is characterized by negative goal interdependence where, when one person wins, the others lose; for example, spelling bees or races against other students to get the correct answers to a math problem on the blackboard. In individualistic learning situations, students are independent of one another and are working toward set criteria where their success depends on their own performance in relation to established criteria. The success or failure of other students does not affect their score. For example, in writing, with all students working on their own, any student who develops his /her writing in certain criteria passes.

In a cooperative learning situation, interaction is characterized by positive goal interdependence and individual accountability. Positive goal interdependence requires acceptance by a group that they "sink or swim together." A cooperative writing class is one where students are working together in small groups to help each other learn to develop their writing in order to get the good result of writing by getting good feedback during the discussion in their groups and finally when the writing test is administered they can do the test individually on another day. Each student's score on the test is increased by bonus points if the group is successful (i.e., the group totals meet specified criteria). In a cooperative learning situation, a student needs to be concerned with how he or she generates his/her ideas in writing and how well the other students in their group also write. This cooperative umbrella can also be extended over the entire class if bonus points are awarded to each student when the class can write the whole of the piece of the writing task than a reasonable, but demanding, criteria set by the teacher.

There is a difference between simply having students work in a group and structuring groups of students to work cooperatively. A group of students sitting at the same table doing their own work, but free to talk with each other as they work, is not structured to be a cooperative group, as there is no positive interdependence. Perhaps it could be called individualistic learning with talking. For this to be a cooperative learning situation, there needs to be an accepted common goal on which the group is rewarded for its efforts. If a group of students have been assigned to do a report, but only one student does all the work and the others go

along for a free ride, it is not a cooperative group. A cooperative group has a sense of individual accountability that means that all students need to know the material or develop their writing well for the whole group to be successful. Putting students into groups does not necessarily gain a cooperative relationship; it has to be structured and managed by the teacher or instructor. The instructor decides which goal structure to implement within each lesson. The most important goal structure, and the one that should be used the majority of the time in learning situations, is cooperation (Johnson, Johnson & Smith, 2013).

According to Herteis, Wright, and MacInnis (1994), the skills required for successful group interaction are as follows:

- paraphrasing other's words to ensure and verify comprehension (occurrence target: 25);
- giving and receiving feedback (occurrence target: 30);
- allowing everyone to contribute ideas (occurrence target: 30); and
- refraining from taking over the group or allowing another to do so (occurrence target: 15).

They determined and categorized the interaction to be successful if the percentage of the occurrences of the indicators is at least 60%.

Regarding the above phenomena it is wise to think and to generate what kinds of grouping for cooperative learning promote cooperative relationships resulting in good interaction. It suggests that the distributions of students' learning styles could be the best base for grouping the students. By knowing the students' learning styles,

it is recorded that the students have their own preferences of each dimension of the learning styles that relates to their interaction modes which could benefit the interaction. Even they can be trained about their leaning styles to maximize the beneficial aspects for interaction.

1.4. Descriptive Writing

Description, or descriptive writing, is about sensory experience—how something looks, sounds, tastes (Kane, 2000) as cited in Harmenita and Tiarina (2013). Mostly it is about visual experience, but description also deals with other kinds of perception, as when we're describing a chaotic, earsplitting riot at an anti-government demonstration or when we are trying to invite the reader to feel the texture of a wooden statue.

Kane (2000) as cited in Harmenita and Tiarina (2013) divides descriptive writing into two broad kinds: *objective* and *subjective.* In *objective description*, the writer sets aside those aspects of the perception unique to himself and concentrates on describing the percept (that is, what is perceived) in itself. In subjective (also called impressionistic) description a writer projects his or her feelings into the percept. Objective description says, 'This is how the thing is'; subjective, 'This is how the thing seems to one particular consciousness'.

Neither kind of description is more 'honest.' Both are (or can be) true, but they are true in different ways. The truth of objective description lies in its relationship to fact; that of subjective in relationship to feeling or evaluation. Subjective

description is ‘true’ because it presents a valuable response, not because it makes an accurate report. If we do not agree with how a writer feels about something, we cannot say that the description is false. We can say only that it is not true for us—that is, that we do not share his or her feelings.

Nor are these two approaches hard-and-fast categories into which any piece of descriptive writing must fall. Most descriptions involve both, in varying degrees. Generally, however, one mode will dominate and fix the focus. In scientific and legal writing, for instance, objectivity is desirable. In personal writing subjectivity is more likely. But in both kinds, success hinges on three things: (1) details that are sharply defined images, appealing to one or another of the senses; (2) details that are selected according to a guiding principle; and (3) details that are clearly organized.

Knapp and Watkins (2005) point out that the genre of describing is one of the fundamental functions of any language system and one of the first skills emergent language-users learn to control. It is also one of the most widely used genres across all of the learning areas. Description enables the categorization or classification of an almost infinite range of experiences, observations and interactions into a system that orders them for immediate and future reference, and allows us to know them either objectively or subjectively, depending on the learning area or intent of the writer.

Describing is also used extensively in many text types, such as information reports, literary descriptions, descriptive recounts, due to the need to classify and/or describe a process before explaining it, in the opening paragraphs of most explanations. Describing is also a central feature of narrative texts providing the means for developing characterization, sense of place and key themes. Commonly, students describe when they are:

1) talking or writing about a picture: 'This is a beach. These are lots of umbrellas on it and boats on the sea.'
2) writing about a character or place in a story: 'Theo in James Valentine's book Jump Man is an interesting character. He has spiky hair that changes color all the time and he wears a coat that speaks.'
3) reporting on an animal: 'A platypus is a monotreme. It has a bill and sharp claws. It lives in and near streams and isn't seen by people very often.'

While many texts, both factual and non-factual, make use of describing to differing degrees, some texts, like information reports, are predominantly about description. They formally describe phenomena from a technical point of view. To sum up, descriptive writing is a vital measure in various types of writing, or in other words, in writing in general.

1.5. Learning Styles

Felder and Brent (2005) suggest three categories of diversity that have been shown to have important implications for teaching and learning, i.e. differences in students' learning styles (characteristic ways of taking in and processing information), approaches to learning (surface, deep, and strategic), and intellectual

development levels (attitudes about the nature of knowledge and how it should be acquired and evaluated). One of these, learning styles, has received much attention in research, including in this study.

The concept of learning styles is actually controversial. Some argues that learning style models are established on no sound theoretical basis and that the instruments used to assess learning styles have not been appropriately validated (Felder and Brent, 2005). However, the fact in the classroom is different. Felder and Brent (2005) have confirmed that instruction designed to address a broad spectrum of learning styles has consistently proved to be more effective than traditional instruction, which focuses on a narrow range of styles. Furthermore, the most common learning styles models have been used frequently and successfully to help teachers design effective instruction, help students better understand their own learning processes, and help both teachers and students realize that not everyone is like them and the differences are often worth celebrating (Felder, 2010). Such indication presents the worth of learning styles despite considerable challenges against their application in educational setting as a means for identifying learners' characteristics.

To some researchers, like Ellis (1994), the concept of learning styles is vague, overlapping with individual differences of both affective and cognitive natures. Yet to others, learning styles could be well defined. Kinsella (1995) as cited in Pojouh (2014) describes them as individual's natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills. This

notion is similar to what Felder and Henriques (1995) propose, i.e. that learning styles deal with the ways in which an individual characteristically acquires, retains, and retrieves information. These preferred ways are individual differences that may be attributed to cognitive, emotional, and sensory factors (Willing, 1987) as cited in Ellis (1994).

Other researchers have also offered 'confident' explanation. Witkin (1973) as cited in Maghsudi (2007), a pioneer in learning styles, defines learning styles in terms of a process, referring to individual differences in how we perceive, think, solve problems, and learn. Dunn *et al.* (1995) as cited in Kratzig and Arbuthnott (2006), alternatively, take neuropsychological perspective for describing learning style, by characterizing it as a biological and developmental set of personal characteristics that make the identical instruction effective for some students and ineffective for others. All these definitions of learning styles are directed towards the notion of the preferred way(s) applied by individuals to concentrate on, process, internalize and retain new information; a preferred way implies that it will be effective for those who prefer it, and less effective for those who prefer another learning style. However, non-preferred styles are not necessarily exclusive; they can be learned, although it would be probably hard, especially for those who have strong or extreme preferred styles. On the other hand, although learning style is difficult to define (Cassidy, 2004) as cited in Kratzig and Arbuthnott (2006), a person's learning style is hypothesized to be a combination of cognitive, affective, and psychological characteristics that describe how that

individual interacts with his or her environment. It is inferred that the students' interaction in the classroom also depends on their learning styles.

Despite the clear definitions to cope with the vagueness suggested by Ellis (1994), sometimes we raise a question of an overlap between learning styles and learning strategies. Many researchers now distinguish between the terms learning styles and learning strategies. Learning strategies are generally recognized as mental and physical steps taken by a learner to understand, store, and recall appropriate information (Bialystock, 1985; Chamot and Kupper, 1989; O'Malley et al, 1985; Rigney, 1978) in Jones (1998). More specifically, Miller (1997) in Shih et al. (1998) defines learning strategies as the techniques or skills used by an individual in accomplishing a learning task.

To describe the difference clearly, the explanation provided by Mariani (1996) might provide help. Mariani (1996) proposes a tentative definition of learning style as learner´s overall approach to learning, i.e. the individual's typical and consistent way of perceiving and responding to learning tasks, which could also include affective, social, and even physiological behaviors. How the term *learning style* actually relates to other related concepts like *personality* or *learning strategies* is clarified below.

In brief explanation, *personality* is the very general basic individual character structure. How personality works in a learning context is then called *learning styles*; styles reflect the individual's consistent and preferred learning approach, an

approach which a person demonstrates over and over again, in a wide range of situations and contexts. Further down, a person's style affects the kinds of *learning strategies* that they will use—in other words, tendency to prefer certain strategies on a rather permanent basis indicates that probably a particular learning style is used. Finally, a learning strategy consists of a cluster of *tactics* or *techniques*, this being the only visible level, what we see when we look at what a learner actually does in the classroom. As we move from the bottom to the top of this line, we move from specific to general, and also from less stable, more modifiable personal qualities to more stable, less modifiable features.

Let's take an example to clarify the explanation above. It is not very difficult to teach a very specific technique, for instance, how to recognize prefixes and suffixes in a new word. It is certainly less easy to teach a more general strategy like using inference and deduction. But as we go further up the line the effort gets even tougher. It is very difficult to change a person's learning style: if, for example, we are a strong sensor and need to learn something that has apparent connection to the real world, it may be difficult for us to sit in a class in a whole 90 minutes discussing about abstract concepts, because that is exactly the kind of learning tasks that do not come easy to us. If we then reach the top of the line—personality—we are obviously faced with the basic structure of ourselves, something we can hardly hope to change unless we attempt to apply various forms of psychotherapy.

Moreover, compared to learning strategies, learning style is characterized by some notion of more stability. The stability of learning styles is supported by Keefe (1979) in Dangwal and Mitra (1998) who describes them as characteristic cognitive, affective, and psychological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Moreover, learning styles are also defined as "stable and pervasive characteristics of an individual, expresses through the interaction of one's behavior and personality as one approaches a learning task (Garger & Guild, 1984, in Reid, 1995) as cited in Li (2011). Besides stability, there is such a lack of individual control that it may be difficult for learners to change their learning styles; whereas, learners' motivation and use of learning strategies can be controlled by learners and changed through teaching (Pintrich and Johnson, 1990) as cited in Shih and Gamon (2002).

Yet, there are several important things to consider when talking about learning styles and learning style models. According to Mariani (1996):

1) learning styles are *descriptive* and *non-prescriptive* labels; that is, terms like analytical and synthetic, cautious and risk-taking, independent and dependent are *neutral.* In describing styles they do not have positive or negative implications, and they can all be useful and important approaches to learning.

2) learning styles describe *tendencies* rather than *absolute features.* Many people can be placed somewhere along a continuum between, e.g., systematic and intuitive; many people show a *balanced* learning style, even if one feature

may be more or less predominant. This means that many people are actually rather versatile; they can make use of different learning styles according to different tasks and subject matters to be learned. So, under normal conditions, the differences are more likely to be *matters of degree.*

3) it will make sense to bring together the three basic kinds of descriptions, the cognitive, the affective and the social ones, because this reminds us that we are actually talking about a *whole person,* and not just an artificial collection of pieces.

In other words, one learning style is neither preferable nor inferior to another, but is simply different, with different characteristic strengths and weaknesses (Felder and Brent, 2005). A goal of instruction should be to equip students with the skills associated with every learning style category, regardless of the students' personal preferences, since they will need all of those skills to function effectively as professionals. Since learning styles affect how successfully people learn in specific situations, educators should be sensitive to learning style differences (Garger and Guild, 1984) as cited in Shih and Gamon (2002).

2.4 Felder-Silverman Learning Style Model

Felder-Silverman learning style model was first developed in 1987 by Richard M. Felder of North Carolina State University and Linda K. Silverman of the Institute for the Study of Advanced Development. It was based on several other models, particularly on the model in Carl Jung's theory of psychological types, on David Kolb's learning style model, and on the Myers-Briggs Type Indicator (MBTI) (Felder and Silverman, 1988; Felder and Brent, 2005). Felder-Silverman model

was originally projected for engineering education setting; however, like other learning style models, it has potential valuable application in other learning settings, including language learning.

The model initially consisted of five dimensions: *sensing/intuitive* (perception), *visual/auditory* (input), *inductive/deductive* (organization), *active/reflective* (processing), and *sequential/global* (understanding). Yet, at a later time, *inductive/deductive* dimension was dropped and *visual/auditory* changed into *visual/verbal* dimension, leaving four dimensions: *sensing/intuitive* (perception), *visual/verbal* (input), *active/reflective* (processing), and *sequential/global* (understanding) (Felder, 2002).

Felder-Silverman model was not formulated haphazardly. It was constructed on the following questions (Felder and Silverman, 1988; Felder and Henriques, 1995; Felder and Brent, 2005):

1) What type of information does the learner preferentially perceive: sensory (sights, sounds, physical sensations) or intuitive (memories, thoughts, insights)? Sensing learners tend to be concrete, practical, methodical, and oriented toward facts and hands-on procedures. Intuitive learners are more comfortable with abstractions (theories, mathematical models) and are more likely to be rapid and innovative problem solvers. This scale is identical to the sensing/intuitive scale of the Myers-Briggs Type Indicator (MBTI).

2) What type of sensory information is most effectively perceived: visual (pictures, diagrams, flow charts, demonstrations) or verbal (written and spoken explanations)?

3) How does the student prefer to process information: actively (through engagement in physical activity or discussion) or reflectively (through introspection)? This scale is identical to the active/reflective scale of the Kolb model and is related to the extravert-introvert scale of the MBTI.

4) How does the student characteristically progress toward understanding: sequentially (in a logical progression of incremental steps) or globally (in large 'big picture' jumps)? Sequential learners tend to think in a linear manner and are able to function with only partial understanding of material they have been taught. Global learners think in a systems-oriented manner, and may have trouble applying new material until they fully understand it and see how it relates to material they already know about and understand. Once they grasp the big picture, however, their holistic perspective enables them to see innovative solutions to problems that Sequential learners might take much longer to reach, if they get there at all.

Felder-Silverman learning style model is assessed with a set of instrument called *Index of Learning Styles*© (ILS) developed in 1991 by Richard M. Felder and Barbara A. Soloman of North Carolina State University. The first version of the instrument was administered to several hundred students and the data were subjected to a factor analysis. Poor items were then replaced with new items to

obtain the current 44-item version of the instrument. ILS was installed on the Internet in 1996, currently getting close to a million hits per year and having been translated into Spanish, Portuguese, Italian, German, and several other languages. ILS is available at no cost to students and faculty at educational institutions to use for noncommercial purposes, and also to individuals who wish to determine their own learning styles (Felder and Soloman, 1993) as cited in Willems (2011).

ILS assesses the four dimensions of Felder-Silverman learning style model, as described below (Felder and Soloman, 1993) as cited in Willems (2011):

1) Sensing and Intuitive learners
    a) Sensing learners tend to like learning facts; Intuitive learners often prefer discovering possibilities and relationships.
    b) Sensors often like solving problems by well-established methods and dislike complications and surprises; intuitors like innovation and dislike repetition. Sensors are more likely than intuitors to resent being tested on material that has not been explicitly covered in class.
    c) Sensors tend to be patient with details and good at memorizing facts and doing hands-on work; intuitors may be better at grasping new concepts and are often more comfortable than sensors with abstractions and mathematical formulations.
    d) Sensors tend to be more practical and careful than intuitors; intuitors tend to work faster and to be more innovative than sensors.

e) Sensors don't like courses that have no apparent connection to the real world; intuitors don't like 'plug-and-chug' courses that involve a lot of memorization and routine calculations.

2) Active and Reflective learners

a) Active learners tend to retain and understand information best by doing something active with it—discussing or applying it or explaining it to others. Reflective learners prefer to think about it quietly first.

b) 'Let's try it out and see how it works' is an Active learner's phrase; 'Let's think it through first' is the Reflective learner's response.

c) Active learners tend to like group work more than Reflective learners, who prefer working alone.

d) Sitting through lectures without getting to do anything physical but take notes is hard for both learning types, but particularly hard for Active learners.

3) Visual and Verbal learners

Visual learners remember best what they see—pictures, diagrams, flow charts, time lines, films, and demonstrations. Verbal learners get more out of words—written and spoken explanations. Everyone learns more when information is presented both visually and verbally.

4) Sequential and Global learners

a) Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly 'getting it'.

b) Sequential learners tend to follow logical stepwise paths in finding solutions; Global learners may be able to solve complex problems quickly or put things together in novel ways once they have grasped the big picture, but they may have difficulty explaining how they did it.

c) Sequential learners may not fully understand the material but they can nevertheless do something with it (like solve the homework problems or pass the test) since the pieces they have absorbed are logically connected. Strongly Global learners who lack good sequential thinking abilities, on the other hand, may have serious difficulties until they have the big picture. Even after they have it, they may be fuzzy about the details of the subject, while Sequential learners may know a lot about specific aspects of a subject but may have trouble relating them to different aspects of the same subject or to different subjects.

The application of ILS, however, should be aware of two important points (Felder and Soloman, 1993) as cited in Willems (2011):

1) The ILS results provide an indication of an individual's learning preferences and an even better indication of the preference profile of a group of students (e.g. a class), but they should not be over-interpreted. If someone does not agree with the ILS assessment of his or her preferences, trust that individual's judgment over the instrument results.

A student's learning style profile provides an indication of possible strengths and possible tendencies or habits that might lead to difficulty in academic settings.

The profile does not reflect a student's suitability or unsuitability for a particular subject, discipline, or profession. Labeling students in this way is at best misleading, and can be destructive if the student uses the label as justification for a major shift in curriculum or career goals.

1.6. Developing Cooperative Learning Activities Grouped based on Learning styles in Teaching Writing

As what has been clarified in the background, it is assumed that the instructor who teaches writing in cooperative learning activities aiming at gaining a good result in writing ability and interaction should focus on the demand of a good and well-prepared process of grouping that can be used long run and maximized in the heterogeneity. So, the first step before conducting the cooperative learning activities is to know the distribution of the students' learning styles by administering the questionnaire of index of learning styles which measures the students' preferences in some dimensions.

Regarding the above assumption, the researcher formulated a teaching instruction by incorporating some techniques of cooperative learning as the combination of the needs of goal of teaching writing with the activities as follows:

1. Pre-activity

a. The teacher greets the class.

b. The teacher holds brainstorming session about a descriptive writing.

c. The teacher explains aspects of writing need to be paid attention in students' writing, namely content, organization, vocabulary, language, and mechanics.

2. While Activity

a. Pre-writing

1. The teacher groups the students based on their index of learning styles (the experimental class: heterogeneous and the control class: homogenous/less heterogeneous) into Home Group (5 students).
2. The teacher tells the students to create a descriptive text by making outline first through circle the sage technique as follows:
    - Teacher polls the class to see who has special knowledge/experiences about how to describe a table or graph given by the teacher that would benefit the class to develop their descriptive text.
    - After finding some the students (around 4/5 students) who are brave enough to be the sages, the teacher asks those students to have the short briefing with the teacher to discuss what will be the materials they are going to master and to explain back to the whole of the students. This step is to make sure the sages have the same understanding or comprehension of the samples of the materials of the descriptive text and the graph or table that will be the source of their writing.
    - Those students are the "sages". They stand and spread out in the room.

- The remaining students are still placed in their home group.
- Each member of a group goes to a different sage (students will surround or “circle” the sages).
- No two members of the same group go to the same sage.
- The sage then shares his/her knowledge/experiences (the characteristics of descriptive text and the information from a table or graph which is going to be described) with the students that surround him/her.
- The students ask questions, listen, and take notes.
- After a designated period of time, students return to their groups (around seven minutes).
- Each student shares what he/she learned from the sage with the group.
- The group members compare notes.
- Each home group concludes the information for composing their outline.

b. Drafting

1. Each home group composes a draft of descriptive text based on the outline they have made.
2. The group composes their first draft by considering the structure of descriptive writing which has been determined by the teacher (Introductory, developmental paragraph (the information from a table or graph), and conclusion.

c. Revising (Jigsaw Technique)

1. After composing their first drafts, the teacher assigns each member of home group to be the expert of one of the paragraphs of the whole draft.
2. Groups members then join with members of other groups assigned the same paragraphs (e.g. member with paragraph one collaborates with the other paragraph 1 members). They discuss, share and give feedback concerning what should their paragraph be in terms of aspect of writing.

d. Editing

1. Eventually, the members return to their home group to share the feedback and revision they got.
2. The home group edits their draft reflecting on the feedback.
3. The home group composes their second draft.

e. Publishing

1. After finishing their second draft, each home group shall submit their draft in form of hard copy and present their work to the class orally.

3. Post Activity

1. The teacher concluded the lesson.
2. The teacher did the reflection by asking one of the students to be a representative to convey what they got from the lesson.

1.7. Theoretical Assumption

According to Johnson and Johnson (1994), the fundamental premise of social interdependence theory of cooperative learning is that the way in which goals are structured determines how individuals interact, and those interaction patterns create outcomes. They added that positive goal interdependence tends to result in promotive interaction, negative goal interdependence tends to result in oppositional interaction, and no interdependence tends to result in no interaction. Thus, outcomes are defined as the positive result of cooperative learning which could be the positive interaction and students' ability in writing.

According to Jolliffe (2007), cooperative learning has two main prerequisites. He stated that tasks need to be structured to ensure pupils are interdependent and individually accountable; just putting pupils into groups does not mean they will work together cooperatively. Considering this view, teacher should select the groups to reflect a diversity of abilities, learning styles, viewpoints, gender, race, and even consistency of attendance, which will be particularly relevant for groups working on a project over time. Heterogeneous groups produce the greatest opportunities for peer tutoring and support as well as improving cross-race and cross-sex relations and integration. Kagan and Kagan (2009) stated that the rationale for heterogeneity is simple: If all students on a team had exactly the same skills and knowledge, they would have nothing to learn from each other. He imposed that to a degree, the greater the team heterogeneity, the greater the learning potential letting the students choose their own groups can result in a homogeneity which reduces the acquisition of social skills and increases the

possibility of a lack of focus on the learning task (Cooper, 1990) as cited in Herteis, Wright, and MacInnis (1994). Suggested groups contain fewer than six—most likely four. The group of around five or four is large enough to contain a diversity of perspectives, yet small enough to facilitate useful interaction (Millis, 1993) in Herteis, Wright, and MacInnis (1994).

In line with the above problem, another strong justification could be made dealing with the way the teacher to put the students into groups. There must be basic consideration to divide the students into small groups in order to meet real heterogeneity in the license to cooperative learning. Unfortunately, there is still no study which applies the measurements of the distribution of the students' learning styles especially the learning styles proposed by Felder and Silverman as the basic consideration and information to group the students in teaching writing through cooperative learning. So, the researcher assumes that the distribution of students learning style is needed before grouping the students. It will fulfill the need of making heterogonous group which will maximize the students' strengths as what had found by Melser (1999) as cited in Adodo and Agbayewa (2011) who stated students working in heterogeneous group increase in self-esteem and by Shield (1995) as cited in Adodo and Agbayewa (2011) who stated students' of all ability exhibited greater academic self confidence in heterogeneous group. Thus, it is assumed that by having high self-esteem and greater academic self-confidence, the students will have active interaction in groups of cooperation.

To respond the researcher's point of view above, Felder-Silverman learning style model is used as the basis for learning style measurement, which is assessed using Index of Learning Styles (ILS). This model was selected with at least two considerations: *first*, it does not demand special license and training to be applied for academic and research or non-commercial purposes; and *second*, it has been validated by a number of studies (Zywno, 2003). The information gathered through the students' distribution of learning style is one of consideration in grouping the students in teaching writing using cooperative learning. Grouping the students randomly based on their learning styles which focus on their personality and interaction mode is considered more beneficial in teaching writing through cooperative learning activities. It is assumed that the previously random grouping of cooperative learning still gives actually the chance to have the homogenous groups otherwise the heterogeneity itself has been clearly defined.

Based on the illustration above, it is clear that the heterogeneity should be defined first before grouping the students in cooperative learning activities in order to make the cooperative learning activities run smoothly based on its heterogeneous principle.

1.8. Hypothesis

Based on the theoretical assumption above, the researcher formulates the hypothesis as follows:

2. “The heterogeneous grouping of cooperation procedure in teaching writing optimizes students’ writing ability”.
3. “The heterogeneous grouping of cooperation procedure in teaching writing produces more students’ interaction”.

This chapter elaborated some theories related to this study. This chapter accumulated some theories which came from several theorists from some books, journals and articles.

III. RESEARCH METHODS

This chapter discusses research design, population and sample, data collecting technique, research procedure, instrument, data analysis, and hypothesis testing. All of them are discussed as follows:

3.1. Research Design

This research used the design of *experimental groups pretest posttest design* (Hatch and Farhady, 1982:22). It took two classes which served as experimental class 1 (heterogeneous grouping) and experimental class 2 (homogeneous grouping). This research used both quantitative and qualitative data analysis. Both of them were partially used to answer two research questions. In the license to answer the first research questions, it neededquantitative analysis to see the comparison of the students' writing ability between two classes before and after treatments. Then, descriptive qualitative method of analysis wasto see the students' interaction during the treatments using direct observation and video recording.

The design was presented as follow:

G1 (heterogeneous grouping) = T_1 X_1 T_2

G2 (homogeneous grouping) = T_1 X_2 T_2

Note:

G1 : experimental class 1

G2 : experimental class 2

T_1 : pre test

T_2 : post test

X_1 : treatment of cooperation procedure (heterogeneously grouped)

X_2 : treatment of cooperation procedure (homogeneously grouped)

(Hatch and Farhady, 1982:22)

3.2.Population and Sample

The population of this research was the sophomore students of IBI Darmajaya, Lampung who took the subject of English 2. There werefive English-2 classes which were taught by the researcher. Among those five classes there were two classes chosen as the sample. They were the experimental class 1 and experimental class 2. The experimental class 1 was the most heterogonous class in term of their index of learning styles, whereas the experimental class 2 was the class which tended to be homogenous (less heterogonous) in term of their index of learning styles.

3.3. Data Collecting Technique

A questionnaire survey was employed to explore the distribution of learning styles among the students of experimental group. Two questionnaires, Index of Learning Styles (ILS) suggested by Felder-Silverman (2002), and Grasha-Reichmann Student Learning Style Scales (GRSLSS) by Grasha and Reichmann (1996), were reproduced in Indonesian and delivered to the students. These questionnaires seek to explore the students' information processing modes and social interaction modes respectively, which influence learner-to-learner interaction patterns. The data on student academic abilities and learning styles help the grouping process in the experimental activities.

To find out the students writing ability, the researcher conducteda pretest and a posttest. The pretest was administered to the experimental and control group in 100 minutes. It was to find out the students' entry point of both groups before giving the treatments. The posttest was administered in order to find out the students' ability in writing descriptive text. In line with the pretest, the posttest was administered in 100 minutes.

Direct observation was applied during the treatments to observe the teaching and learning process to capture the students' interaction. It was done to confirm and enhance the reliability of the later analysis of the video recording done after the treatments.

3.4. Research Procedure

1. Collecting data on students' learning styles.

   Before conducting the treatmenta questionnaire survey was employed to explore the distribution of learning styles among the students of five English 2 classes. Felder-Silverman learning style model was first developed in 1987 by Richard M. Felder of North Carolina State University and Linda K. Silverman of the Institute for the Study of Advanced Development. It was based on several other models, particularly on the model in Carl Jung's theory of psychological types, on David Kolb's learning style model, and on the Myers-Briggs Type Indicator (MBTI) (Felder and Silverman, 1988; Felder and Brent, 2005). ILS was available at no cost to individuals who wish to assess their own preferences and to instructors or students who wish to use it for classroom instruction or research, and it might be licensed by non-educational organizations.

   Several studies have tried to validate ILS, including Zywno (2003) and Litzinger *et al.* (2007), and have concluded that ILS may be considered reliable and valid for assessing learning styles, although these studies recommend continuing research on the instrument. Litzinger *et al.* (2007) have also elicited students' feedback to identify whether their measured learning styles match their perception of their styles; the results have provided additional, assuring evidence for the construct validity of ILS. This questionnaire sought to explore

the students' information processing modes and social interaction modes respectively, which influenced learner-to-learner interaction patterns. The data of the distribution of students' index of learning styles was used to group the students in cooperative learning activity to teach writing both in experimental and control group.

2. Experimenting Cooperative Learning activities.

   The researcher used two techniques of cooperative learning named Circle the Sage and Jigsaw to be developed as the learning activities in the class during the treatments. Furthermore, in using these two techniques, the researcher did not use the ordinary technique in grouping the students but the researcher grouped the students based on the distribution of their index of learning styles in which the experimental class 1 was homogeneously grouped while the experimental class 2 washeterogeneously grouped. The researcher considered only two dimensions (Active/reflective and sensing/intuitive) of the students' index of learning styles as the focus of grouping. It was because of those two dimensions correlated much on the personality and the process of interaction. Circle the sage technique was used to let the studentsgather the various information that correlated with the topic of descriptive writing in the stage of prewriting especially outlining, while Jigsaw was used by the students to get the input or feedback in revising stage.

3. Observing the lessons to measure the students' interaction in classroom participation.

3.5.Instrument of the research

1. Writing Test

The writing test consisted of two tables and two graphs that the students were asked to describe one of the enclosed tables or graphs. They were given the provided direction and background to lead them to the characteristics of how to describe a table or graph. They were asked to develop their writing into at least three paragraphs which consisted of introductory, developmental paragraph, and conclusion. They were assigned to finish their writing for 100 minutes.

In evaluating the students' writing score, the researcher and another rater scored the test based on their judgment by considering five aspects of writing to be tested; they are content, organization, vocabulary, language use, and mechanic. These criteria were adopted from Jacobs (1981:90) as cited in Ghanbari et al (2012).

Table 1: Specification for aspects of writing

No	**Aspects**	**Percentage**
1	Content	30%
2	Organization	20%
3	Vocabulary	20%
4	Language use	25%
5	Mechanics	5%
Total		100%

Since writing test was a subjective test, there were two raters to reduce the subjectivity in judging students' writing ability. The two raters were the researcher herself and the lecturer who is also the researcher partner in IBI Darmajaya. Both of the raters worked collaboratively to score the result of the students' writing. In the intention of increasing reliability of the test, the two raters treated the students' work anonymously during scoring by folding back the top side of the paper where the students put their names on. It was done before scoring. Anonymous scoring is highly desirable, for identification of papers (students' writing) often leads quite unconsciously to scorer bias, Harris (1974: 79). Then, before scoringany papers, the two ratersscanned a sample of papers to decide upon standards. They found, for example, a high, high medium, low-medium, and low paper to serve as models. Then, as they scored the papers, they return occasionally to the models to ensure that their standards were not shifting.

After scoring the test, it was important to make sure that both raters used the same scoring criteria. Reliability of the pretest and posttest was examined by using statistical measurement. The following statistical data presents the reliability of interrater scoring. It was measured using SPSS systematic measures.

Table 2: Systematic Measurement of Interrater Reliability Writing Ability of Pretest

		Value	Asymptotic Standardized Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Contingency Coefficient	,965			,037
Measure of Agreement	Kappa	,195	,061	6,651	,000
N of Valid Cases		44			

From systematic measurement of interrater reliability of the pretest table, we can see the coefficient kappa value is 0.965 which is >0.6 and the significance is 0.37 which is <0.05. It means the interrater reliability of pretest scoring was reliable.

Table 3: Systematic Measurement of Interrater Reliability of Writing Ability of Posttest

		Value	Asymptotic Standardized Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Contingency Coefficient	,967			,002
Measure of Agreement	Kappa	,174	,062	6,032	,000
N of Valid Cases		44			

From systematic measurement of interrater reliability of posttest table, we can see the coefficient kappa value is 0.967 which is >0.6 and the significance is 0.02 which is <0.05. It means the interrater pretest scoring was reliable.

The validity of the pre and post writing test of this research was related to face, content, and construct validity. To get face validity, the instruction of writing test was previously examined by advisors and the partner (real teacher of the school) until the test which was in form of instruction looked right and understandable. The Content validity meaning that the test was a good reflection of what has been taught based on the syllabus of the students' level. The test measures the students' ability in writing narrative text. Construct validity concerns with whether the test was actually in line with the theory of what writing was. It meant that the test measured certain aspects

based on the indicator. The researcher examined it by referring to the theories of aspects of writing and the theories of descriptive writing itself.

2. Questionnaires

Index of Learning Styles© (ILS)

The *Index of Learning Styles*© (ILS)was a forty-four-item forced-choice instrument developed in 1991 by Richard M. Felder and Barbara Soloman to assess preferences on the four scales of the Felder-Silverman learning style model, which was put on the internet in 1997. ILS was available at no cost to individuals who wish to assess their own preferences and to instructors or students who wished to use it for classroom instruction or research, and it might be licensed by non-educational organizations. Several studies have tried to validate ILS, including Livesay *et al.* (2002), Zywno (2003), Felder and Spurlin (2005), and Litzinger *et al.* (2005, 2007), and have concluded that ILS may be considered reliable and valid for assessing learning styles, although these studies recommend continuing research on the instrument. Litzinger *et al.* (2007) have also elicited students' feedback to identify whether their measured learning styles match theirperception of their styles; the results have provided additional, assuring evidence for the construct validity of ILS.

In terms of reliability and validity, the following aspects weretaken into account for the ILS used in this research to see to what degree the instrument was valid and reliable:

1. *Internal-consistency reliability*: the homogeneity of items intended to measure the same quantity—that is, the extent to which responses to the items are correlated. The measure of internal consistency in this study is Cronbach's alpha, which is estimated using the following formula based on item variances:

$$\text{Cronbach's}\alpha = \frac{k}{(k-1)}\left[1 - \frac{\sum \text{var}(i)}{\text{var}(sum)}\right]$$

where k is the number of items, $\text{var}(i)$the variance of an item, and $\text{var}(sum)$the variance of the totals for each participant. A slightly different Cronbach's alpha called the standardized Cronbach's alpha can also be applied under the assumption that the items are measuring the sameunderlying dimension on the same scale and therefore should have the samevariance. The calculation is based on the inter-item correlations rather than on item variances:

$$\text{Standardized Cronbach's } \alpha = \frac{k\bar{r}}{1 + \bar{r}(k-1)}$$

where k signifies the number of items and $\bar{r}$the average inter-item correlation.

The question is whether the measured alpha values signify acceptable reliability. Tuckman (1999) distinguishes between instruments that measure a univariate quantity, such as a test of knowledgeof a subject area or mastery of a particular skill, and instruments that measure preferences orattitudes. In tests of the former type, a high level of proficiency in the subject area or skill beingassessed should lead to correct responses to most items and a low level of proficiency should lead to mostly incorrect responses, so that a high level of correlation among the items

on thescale and hence a high Cronbach's alpha would be expected. On the other hand, if the assessedpreferences are dependent and may vary in strength from one individual to another(as learning style preferences do), a lower correlation among the items related to that preferencewould be anticipated; indeed, a very high correlation would suggest that the items are notassessing independent aspects of the preference but are simply reworded variants of the samequestion. In light of these considerations, Tuckman (1999) suggests that an alpha of 0.75 or greater isacceptable for instruments that assess knowledge and skills and 0.50 or greater is acceptable forattitude and preference assessments such as learning styles.

For the ILS applied in this study, a standardized Cronbach's alpha was calculated for each scale of the learning styles. The standardized Cronbach's alpha values for the learning style scales are shown in the table below.

Table 4: Standardized Cronbach's alphas of the four scales of ILS

ILS Scales	Cronbach's Alphas
Active/Reflective	0.685
Sensing/Intuitive	0.760
Visual/Verbal	0.678
Sequential/Global	0.735

The alphas fall more than the standard of reliability (>0.6) for the four dimensions. They represent that the items of questionnaires are reliable.

2. *Construct validity*: the extent to which an instrument actually measures the attribute it purports to measure. In terms of construct validity, the most illuminating in regard to score meaning are studies of differences over time,

across groups, and settings (Messick, 1995). Thus, the process of validating an instrument consists of gathering evidence over many studies; no single study should be considered as a complete proof of validity.

Table 5:Specification for the Index of learning styles

No	Dimension	Number of items	Percentage
1	Active/reflective	1,5,9,13,17,21,25,29,33,37,41	25%
2	Sensing/intuitive	2,6,10,14,18,22,26,30,34,38,42	25%
3	Visual/verbal	3,7,11,1519,23,27,31,35,39,43	25%
4	Sequential/global	4,8,12,16,20,24,28,32,36,40,44	25%
Total		44 items	100%

3. Observation of Documented Video Recording

Observation was applied to observe the treatments to measure the students' interaction in classroom participation through documented video. The observed stages were drafting and editing in which the students cooperated and collaborated in their home groups. In home groups, the interaction of the homogeneous and heterogeneous groups could obviously be seen.

Table 6: Table of Interaction Specification based on the Indicators

No.	Indicators of Interaction	Occurrence Target of Successful Interaction	Percentage Target of Successful Interaction
1	Paraphrasing other's words to ensure and verify comprehension	25	60%
2	Giving and receiving feedback	30	60%
3	Allowing everyone to contribute ideas	30	60%
4	Refraining from taking over the group or allowing another to do so	15	60%

3.6.Data Analysis

To analyze the gained data, the researcher treated the data through the following steps:

1. Analyzing the questionnaire of the students' learning style.

The 44 items in ILS consist of four 11-item parts, with each part assessing one learning style dimension. The items of ILS, to make statistical analysis simpler, were scored for one of the preferences for each scale, in which (a) response was scored 1 and (b) response was scored 0. Therefore, for each scale, a score of 11 represents the strongest preference for the 'left-side' learning styles (the Active, Sensing, Visual, and Sequential preferences) and a score of 0 signifies the strongest preference for the 'right-side' learning styles (the Reflective, Intuitive, Verbal, and Global preferences). The table below will make the explanation clearer.

Table 7:Scores for ILS and their respective categories of learning style preferences

11	10	9	8	7	6	5	4	3	2	1	0
Strong-Active		Moderate-Active		Balanced-Active		Balanced-Reflective		Moderate-Reflective		Strong-Reflective	
Strong-Sensing		Moderate-Sensing		Balanced-Sensing		Balanced-Intuitive		Moderate-Intuitive		Strong-Intuitive	
Strong-Visual		Moderate-Visual		Balanced-Visual		Balanced-Verbal		Moderate-Verbal		Strong-Verbal	
Strong-Sequential		Moderate-Sequential		Balanced-Sequential		Balanced-Global		Moderate-Global		Strong-Global	

2. Scoring the data of writing test

Each rater scored the students' writing of pretest and posttest of both groups. Then, the scores between two raters were taken the average to be the final score that was analyzed statistically using *Independent Group T-test*.

3. Analyzing the Documented Video

The data gathered from documented video was explored and interpreted. The researcher and her colleague observed the documented video and finally drew the conclusion. To get the result of the analysis, they counted the occurrences of the indicators of the phenomena of the student's interaction during they cooperate in their home groups. The indicators were based on four requirements of successful interaction which were formulated by Herteis, Wright, and MacInnis (1994). The indicators are paraphrasing other's words to ensure and verify comprehension (occurrence target: 25), giving and receiving feedback (occurrence target: 30), allowing everyone to contribute ideas (occurrence target: 30), and refraining from taking over the group or allowing another to do so (occurrence target: 15). They determined and categorized the interaction to be successful if the percentage of the occurrences of the indicators is at least 60%.

4. Analyzing, interpreting, describing and drawing conclusion

The result of the questionnaires and observation were analyzed, interpreted, and then described to answer the rest of the research questions stated in terms of students' learning style and the impacts on students' interaction in classroom participation in cooperative learning class. The scores of the pretest and posttest of two groups were

statistically analyzed using *Independent Group T-Test* to draw a conclusion. It was computed through the Statistical Package for Social Science (SPSS).

3.7.Hypothesis Testing

Hypotheses were stated as follows:

1. "The class which is taught using cooperative learning activities grouped heterogeneously by learning styles optimizes students' writing ability more than the class which is homogenously grouped".
2. "The class which is taught using cooperative learning activities grouped heterogeneously by learning styles produces more students' interaction than the class which is homogenously grouped".

Independent group T-Test was used to answer the first hypothesis. The means of the test of two classes were computed using the SPSS. The hypothesis was analyzed at the significant level of 0.05 ($p < 0.05$). Then, to answer the second hypothesis, the researcher used the percentage parameter of the successful interaction indicators in which if the percentage of the appearances of the indicators in experimental class 1 is more than 60% and higher than experimental class 2, the hypothesis is accepted. The indicators were based on four requirements of successful interaction which were formulated by Herteis, Wright, and MacInnis (1994).

This chapter elaborated research methods that were applied to gather the data of this research.

V. **CONCLUSION AND SUGGESTION**

This chapter presents the conclusions of the results in the research and also several suggestions which are elaborated in the following sections.

5.1.Conclusion

From the discussion of the findings, we can draw the following conclusions:

1. It is inferred that incorporating learning style-based grouping in cooperation procedure of teaching writingcan optimize the students' writing ability and produce more interaction.

2. Grouping using learning styles in cooperative learning is one of the best ways to promote the principle of heterogeneity and it can be used to get long run groups that benefit the students to enhance their academic purpose especially writing class.

3. The grouping method of cooperative learning is placed as the prominent part overall to structure and ensure all the elements of cooperative learning

run smoothly and ultimately achieve the goal of teaching especially in promoting students' interaction and writing ability.

4. The grouping method using learning styles might be taking long time but it is worthy. Once it is assessed, the information can be documented and used for long run to make the variety of heterogeneous grouping in cooperative learning.

5.2. Suggestion

Based on the finding, the researcher will state the suggestion as follows:

1. The distribution of students' learning styles should be taken into a count as the prominent part before grouping the students in cooperative learning activities. In addition, formal training should be applied for making students aware of their styles before putting them into groups in cooperative learning activities in order to make them easy to take the benefits by maximizing their learning styles in generating the interaction within the groups (especially the Sensing/Intuitive dimension and Active/Reflective dimension).

2. Considering the benefit of grouping the students based on their learning styles in cooperative learning, periodic measurements of learning styles are also needed to make the students aware of their learning styles and to make them appreciate such individual differences. They must be provided with clear information that none of the learning styles is worse or better

than the others; these styles are just different. This will help them benefit optimally from their strengths and weaknesses, from their learning environment, from their peers, and from learning to embrace the other styles.

3. For the future researchers who would like to deal with the same variables of the research may include the rest two dimensions of the learning styles— Visual/Verbal (the way individual gets input) and Sequential/Global (the way the individuals gets their understanding. Since this research focused only on Sensing/Intuitive dimension (Perception and personality) and Active/Reflective dimension (the process of the interaction mode). It is believed that it will make groups have the more choices to be heterogonous and believed to have more benefits in cooperative learning.

4. Futhermore, researchers who are interested to do the same study dealing with cooperative learning in other English skills besides writing may consider to use the same grouping procedure which concerns more in heterogeneity principle besides learning styles such as gender, linguistic competence, proficiency, or learning strategies.

This chapter presented the conclusions of the results in this research and also several suggestions dealing with the results.

REFERENCES

Adams, F.H. 2013. Using Jigsaw Technique as an Effective Way of Promoting Cooperative Learning Among Primary Six Pupils in Fijai. *International Journal of Education and Practice.* 1 (16): 64 – 74.

Agbayewa, S.O. and Adodo. 2011. Effect of Homogenous and Heterogeneous Ability Grouping Class Teaching on Student's Interest, Attitude and Achivement in Integrated Science. *International Journal of Psychology and Counselling.* 3 (3): 48-54.

Ali, W. T. 2017. Students' Attitudes Towards Cooperative Learning (CL) in EFL Writing Class. *Arabic Language, Literature and Culture.* 2 (3): 60-68.

Alves, Anabele Reis. 2008. *Process Writing*. Birmingham: The University of Birmingham.

Arumugam, Nalini. 2011. Students and Teachers: Trouble Shared, Trouble Halved. *International Journal for Educational Studies.* 3 (2): 219 – 229.

Brown, D.H. 2000. *Principle of Language Learning and Teaching.* Edinburgh: A Pearson Education Company. Charles, C.M. (1999). *Building classroom discipline*. New York: Addison Wesley Longman, Inc.

Department for Education and Skills. 2004. *Pedagogy and Practice: Teaching and Learning in Secondary Schools.* Norwich: The Licensing Division, St Clements House.

Dangwal, Ritu and Mitra, Sugata. 1998. Constructrion and Validation of a Learning Styles Inventory Test for Use in India. *Learning Styles Inventory – in the Asian Context.* 1998. 42 (3): 138 – 145.

Ellis, R. 1994. *The Study of Second Language Acquisition*. Oxford: Oxford University Press.

Emig, Janet. 2014. Writing as a Model of Learning. *JSTOR.* 1: 122-132.

Felder, R.M.. 2002. Learning and Teaching Styles in Engineering Education. *Engineering Education.* 78 (7): 674 – 681.

Felder, R.M. 2010. Are learning styles invalid?. *On-Course Newsletter*. Session: September 27th, 2010.

Felder, R.M. and Brent, R. 2005. Understanding Student's Differences. *Journal of Engineering Education* 94 (1): 57-72.

Felder, R.M. and Henriques, E.R. 1995. Learning and Teaching Styles in Foreign and Second Language Education, *Foreign Language Annals*. 28 (1): 21–31.

Felder, R.M. and Silverman, L.K. 1988. Learning and Teaching Styles in Engineering Education. *Engineering Education* 78(7), 674–681.

Ghanbari, B., Barati, H., and Moinzadeh, A. 2012. Rating Scales Revisited: EFL Writing Assessment Context of Iran under Scrutiny. *Language Testing in Asia.* 2 (1): 83 – 96.

Harmenita, R.Y and Tiarina, Y. 2013. *Teaching Writing a Descriptive Text by Using Environmental Observation Strategy*. Padang: State University of Padang.

Harris, David. 1969. *Testing English as a Second Language.* McGraw-Hill Book Company: New York.

Hatch, E. and Farhady, H. 1982. *Reseach Design and Statistics for Applied Linguistics.* London: Newburry House Publisher.

Heaton, J.B. 1975. *Writing English Language Tests.* New York: Longman Press.

Hedge, T. 2005. *Writing.* Oxford: Oxford University Press.

Herteis, M.E. 1994. Cooperative Learning. *Focus on University and Learning.* 3 (5):1-10.

Ismail, Bt. Syafini and Maasum,Bt. M.T. 2014. *The Effect of Cooperative Learning in Enhancing Writing Performance.* Universiti Kebangsaan malaysia.

Johnson, D.W. and Johnson R.T. 1994. *An Overview of Cooperative Learning.* Baltimore: Bookes Press.

Johnson, D.W., and Johnson, R.T. 2001. Learning Together and Alone: an Overview. Asia Pacific Journal of Education. 22 (1):

Johnson, D.W., and Johnson, R.T. 2016. Cooperative Learning and Teaching Citizenship in Democracies. *International Journal of Educational Reseach.* 76: 162 – 177.

Johnson, D. W., Johnson, R. T., & Smith, K. A. 1998. Cooperative Learning Returns to College: What Evidence is There That It Works?. *Journal on Excellence in University Teaching.* 30 (4): 27-5.

Johnson, D. W., Johnson, R. T., & Smith, K. A. 2013. Cooperative learning: Improving University Instruction by Basing Practice on Validated Theory., 1 (2) 1- 15.

Jolliffe. 2007. *Cooperative Learning in the Classroom Putting it into Practice*. New Delhi: SAGE Publications India Pvt.Ltd.

Jones, N.B. (1998). 'Action Research, Learning Style, and ESL-EFL Writing', *Trends in Second Language Teaching and Learning Conference*. Carleton University. Ottawa, Canada.

Kagan, S.1992, 1994. *Cooperative Learning.* San Clement: Kagan Publishing.

Knapp, P. and Watkins, M. 2005. *Genre, text, grammar: technologies for teaching and assessing writing*. Sidney: University of New South Wales Press Ltd.

Kratzig, G.P. and Arbuthnott, K.D. 2006. Perceptual Learning Style and Learning Proficiency: a Test of the Hypothesis. *Journal of Educational Psychology*. 98 (1): 238-246.

Li, Jingguang. 2011. The Literature Review about the Research on Learning Style Both Abroad and at Home. *Theory and Practice in Language Studies*. 1 (12): 1780-1785.

Li, Weihong. 2012. Critical Analysis of Cooperative Learning in Chinese ELT Context. *Journal of Language Teaching and Research.* 3 (5): 961 – 966.

Litzinger, T.A, Lee, S.H., Wise, J.C., and Felder, R.M. 2007. A Psychometric Study of the Index of Learning Styles. *Journal of Engineering Education* 96 (4): 309-319.

Lyman.T.F. and McTiger, J. 1988. Cueing Thinking in the Clasroom: the Promise of Theory – Embodded Tools. *Educational Leadership.* 18 – 28.

Maghsudi, M. 2007. *The Interaction between Field Dependent/Independent Learning styles and Learners' Linguality in Third Language Acquisition*. Mysore: University of Mysore.

Mahmoud,W.A.M.M. 2014. The Effectiveness of Using the Cooperative Language Learning Approach to Enhance EFL Writing Skills among Saudi University Stdents. *Journal of Language Teaching and Research.* 5 (3): 616 – 625.

Mariani, Luciano. 1996. Investigating Learning Styles. *Perspectives Journal of TESOL-Italy*. 16 (2): 1-18.

Munawaroh. 2015. The Comparative Study Between the Cooperative Learning Model of Numbered Heads Together (Nht) and Student Team Achievement Division (Stad) to the Learning Achievement in Social Subject. *IOSR Journal of Reseach and Method in Education.* 5 (1): 24 – 33.

Pojuah, Azizi Shirin. 2014. On the Role of Learning Styles in language Learning. *International Journal of Language and Applied Linguistics World.* 6(1): 545 – 561.

Raimes,Ann. 1983. *Techniques in Teaching Writing.*Oxford American English: Oxford University Press.

Shih, Ching–Chun. 1998. Learning Strategies and Other Factors Influeting Achivement Via Web Course. *Proceeding of the Annual WI, August 5-7.*

Shih, C.C and Gamon J.A. 2002. Relationships among Learning Strategies, Patterns, Styles, and Achievement in Web-Based Courses. *Journal of Agricultural Education*. 43 (4): 1-11.

Slavin, R.E. 1980. Cooperative Learning. *Review of Educational Research.* 50 (2): 315- 342.

Slavin, R.E. 1981. Synthesis of Reseach on Cooperative Learning. *Research Information Service.* 655 – 662.

Willems, Julie. 2011. Using Learning Styles Data to Inform E-learning Design: a Study Comparing Undergraduates, Postgraduates and E-educators. *Australasian Journal of Educational Technology*. 27 (6): 863-880.

Zywno, M.S. 2003. 'A Contribution of Validation of Score Meaning for Felder-Soloman's Index of Learning Styles', *Proceedings of the 2003 American Society for Engineering Education Annual Conference and Exposition*. Washington, D.C.: American Society for Engineering Education. 8 (31): 1-17.