

**THE COMPARATIVE STUDY BETWEEN REFLECTIVITY AND
IMPULSIVITY COGNITIVE STYLE IN USING LEARNING
STRATEGY IN READING AND READING COMPREHENSION ON
SECOND GRADERS OF MAN 2 BANDAR LAMPUNG**

(A Script)

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2018**

ABSTRACT

THE COMPARATIVE STUDY BETWEEN REFLECTIVITY AND IMPULSIVITY COGNITIVE STYLE IN USING LEARNING STRATEGY IN READING AND READING COMPREHENSION ON SECOND GRADERS OF MAN 2 BANDAR LAMPUNG

By

Nabila Ayu Nisa

The aims of this study are to find out whether (i) reflective or impulsive students did better reading comprehension and (ii) there is significant difference between impulsive and reflective students in using different learning strategy in reading.

The subjects were 35 students of XI IPA 1 at MAN 2 Bandar Lampung in 2017/2018 academic year. The students were classified into reflectivity/impulsivity by using Matching Familiar Figure Test (MFFT) by Kagan (1966) and there were only 12 reflective students and 10 impulsive students. Then, in order to find students' preferences in learning strategy, Language Learning Strategy Questionnaire by Setiyadi (2011) is used. In seeking for the reliability of reading test, there were two raters to assess students' reading comprehension test used as the instrument. The data was analyzed by using One Way ANOVA in which the mean score of each group was compared. Then, to find the significant difference of each group in using learning strategy, Independent Sample T-Test was used and determined by $\alpha < 0.05$. Hypothesis testing was computed using Statistical Package for Social Science (SPSS).

Based on the calculation of One Way ANOVA descriptions, the result showed that the reflectivestudents' mean score reading comprehension was higher impulsive students ($7.69 > 7.47$) which means that reflective students did better in reading comprehension than the impulsive ones. The results of the independent sample test indicated that the significant (2-tailed) value was 0.533 ($0.533 > 0.05$). It showed that the hypothesis was rejected that there is no significant difference between reflective and impulsive students in using different learning. The result shows that reflective students used metacognitive strategy at first, then cognitive style and social strategy. While impulsive students used social strategy first, metacognitive then cognitive strategy.

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**By
Nabila Ayu Nisa**

**A Script Submitted in a Partial Fulfillment of
The Requirement for S-1 Degree**

In

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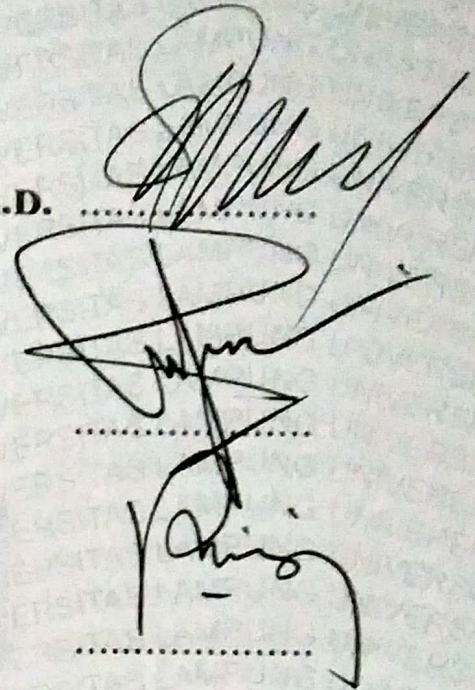
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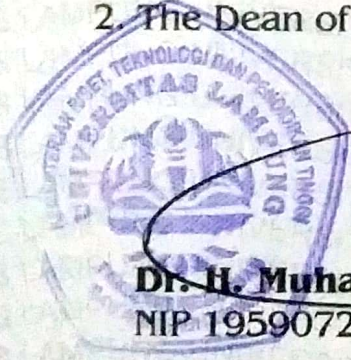
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CURRICULUM VITAE

Nabila Ayu Nisa was born in Bandar Lampung on January 3rd, 1997 as the only daughter in a lovely family of Ibnu Hasyim and Sorayah. Farhan Baresi and Muhammad Alfarez are her brothers.

RA Perwanida was her place for seeking pleasure in her early-stage-learning. She continued to SDN 4 Sukaraja in 2002. She completed the study 6 years later in 2008. In the later stage, she enrolled in SMPN 1 Bandar Lampung. During her study, she started her organization experience by joining ROHIS. She finished her junior high school in 2011. She continued her study to MAN 2 Bandar Lampung. In her year of senior high school, she joined special class of fashion. She graduated in 2014. In the same year, she successfully passed out SBMPTN program and was accepted as a student of English Education Study Program of the University of Lampung.

DEDICATION

This writing is definitely dedicated for My Beloved Parents who always keep on praying for my life, and the whole Barazi family and Sariah family who always support me to finish my study.

MOTTO

“Life is much more successfully looked up at from a single window”

-The Great Gatsby-

F. Scott Fitzgerald

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Praise is only for Allah SWT., The Almighty God, for blessing the writer with health and determination to finish this script. This script, entitled “The Comparative Study between Reflectivity and Impulsivity Cognitive Style in Using Learning Strategy in Reading and Reading Comprehension on Second Graders of Man 2 Bandar Lampung”, is presented to the Language and Arts Education Department of Teacher Training and Education Faculty of Lampung University as a partial fulfillment of the requirements for obtaining S-1 degree.

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Finally, the writer believes that her writing is still far from perfection. There might be weaknesses in this research. Thus, comments, criticism, and suggestions are always open for better research. Somehow, the writer hopes this research would give a positive contribution to the educational development, the readers and to those who want to conduct further research.

Bandar Lampung, 3 Mei 2018

The writer,

Nabila Ayu Nisa

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I. INTRODUCTION

This chapter explains about the background of the research, the research question, objective of the research, uses of the research, scope of the research, and definition of terms.

1.1. Background of Problem

Beside the technical factors in language learning process, there are thousands of students' psychological factors that influence the success of learning. One of them is the diversity among students. Diversity, in this context, is a set of characteristics that is varied from one another and differ based on students' inner traits. Educationally, individual differences is widely accepted for development and implementation of teaching learning process. Because there are considerable individual differences in language learning such as gender, age, social status, motivation, attitude, aptitude, and culture, what works for one learner might not work for another. Therefore, none of the method and technique proved that they can work all the time, in all classes, with all students.

In addition, educators are examining the role of different creativity and abilities of students in the teaching and learning process. One particular group of individual differences appears to be influential in classroom learning. These differences are referred to as the cognitive psychology of learners which aims at accounting for the mental processes employed by humans to internalize information (Kellogg: 1995 in Szelest and Pawlak: 2014). Although those mental processes are universal for all

human beings, they are represented in a different manner, depending on individual differences. It is the cognitive style that in fact balances on the border of cognition and personality (Gass and Selinker: 2008).

Cognitive style refers to individual differences when perceiving, attending, remembering, deciding, and solving problems (Quiroga et al.: 2011). Its trait is learners' variable distinguished from how they process information and problem solving. This widely used term relates to the cognitive processes and modes of problem solving incorporated by a learner. One aspect of cognitive style which is specifically related to behavior in problem solving situations which has been identified by Kagan (1966) is conceptual tempo or the reflectivity/impulsivity dimension.

Reflectivity/impulsivity has been defined by Kagan (1966) primarily as a conceptual tempo, or decision time variable, representing the time the subject takes to consider alternative solutions before committing to one of them in a situation with high response uncertainty. Messer (1976) in Bazargani and Larsari (2013) believes that reflectivity/impulsivity is the extent to which a person reflects on a solution to a problem for which several alternatives are possible. For empirical purposes, classification of subjects has utilized a dual criterion (response time and errors). As Kagan (1966) explains that the impulsive students reach decision and report them very quickly with little concern for accuracy; others of equal intelligence are more concerned with accuracy and consequently take more time to reach a decision. In other words, impulsive people tend to jump at the first response whereas reflective people think about their answers.

Reflective people make fewer mistakes and are probably more analytical. The reflective learner spends extra time analyzing the structure of the problem and the details presented. This usually leads to a lower error rate. Reflective learners

perform better when learning calls for inductive reasoning (Kagan, Pearson, & Welch, 1966 cited in Bull: 1999). Brodzinsky (1985) in Bull (1999) suggests that reflective students are more likely to benefit more in learning, because they can utilize the knowledge base and rule system related to academic problems better than impulsive learners can.

Fontana (1995) in Bazargani and Larsari (2013) states that reflective children tend to make fewer errors than impulsive ones particularly on challenging and difficult tasks, since they show a strong desire to be right first time, and seem able to tolerate the ambiguity of a long silence in front of the class. Nevertheless, impulsive people are usually very good at the guessing game of reading in a way that their impulsive style of reading may not impede comprehension necessarily. In the case of simple tasks, impulsive children benefit more, while in cases of tasks demanding analytical purposeful problem-solving the reflective learners perform better than impulsive learners.

Individually, learners as both reflective and impulsive have different characteristics as mention before. Even in completing tasks, among reflective learners have different way on approaching problems encountered during the process of language learning and so do impulsive learners. This approach is usually known as learning strategy. Learning strategies sometimes do not get much teachers' attention since it is privately possessed by students. Since the amount of information to be learnt by language learners is high in the language classroom, learners use different strategies in performing tasks and processing new input.

Wenden and Rubin (1987) in Sholatunisa (2016) state that language learning strategy refers to language learning behaviors that learners actually engage in to learn and regulate the learning of second or foreign language. It means that the strategies are able to change the learners' behavior especially positive behavior. But

in the real condition we can see many language students were passive and accustomed to learn only from the teacher. According to that, it is very important for learners and teachers to know the learning strategies used by students to make it easier for teachers to prepare teaching material and to succeed the learning process for learners. Specifically, language learning strategies play important roles in one of receptive skills i.e reading skill. Some strategies are found to impede the readers' process to determine meaning (Sutarsyah, 2013:34). It is assumed that the students who used good strategies will be able to answer the reading test items and to comprehend the received message well. In other words, using an appropriate learning strategies might result in the success of study particularly in reading.

Reading comprehension cannot be separated with its aspects which are the benchmarks of successful comprehension of reading skill. Nuttal (1982: 109) in Sari (2015) states there are five short reading aspects that should be mastered by reader to comprehend a text deeply; determining main idea, finding the specific information or part of text, finding reference, finding inference, and guessing meaning of vocabulary (difficult word).

Yet, students' achievement in reading specifically in senior high school is not satisfying. The unawareness of learning strategies and cognitive style concept of students is likely to be the factor influencing which may lead students into failures in comprehending reading text. This problem can be solved if students use exact strategies by being conscious of their class in solving the problems they face in reading comprehension to gain their achievement.

Many previous studies on these concepts conducted. In a research conducted by Kesuma (2015) was interested in the effect of cognitive style – field-dependent and field-independent – on reading comprehension in eight graders of junior high school show there was no significant effect of cognitive style on students' reading

coprehension. While Sari (2015) focused on the effect of students' learning strategies used by second graders in Senior High School. However, there is no research on finding the effects of learning strategies used by impulsive and reflective learners in reading comprehension.

Based on the rationalizations above, writer would like to solve the problem by having observation to know which group of students – reflectivity and impulsivity – do better in reading comprehension. Moreover, writer will attempt to distinguish whether students learning strategies affect their reading comprehension achievement based on their class of cognitive style. Hopefully, after realizing their classification and learning strategies, it will help them increase students' reading comprehension achievement. Therefore, the research will hold on The Comparative Study between Reflectivity and Impulsivity Cognitive Style in Using Learning Strategy in Reading and Reading Comprehension.

1.2. Research Question

Based on the explanation above, writer addressed the following research questions:

1. Which group of students do better in reading comprehension?
2. Is there any significant difference between reflective and impulsive students in using learning strategies?

1.3. Objectives

Based on the formulation of the research problem above, objectives of the research are as follow:

1. To find out which group of students do better in reading comprehension.
2. To find out whether there is significant difference between reflective and impulsive students in using learning strategies

1.4. Uses

The findings of this research will be beneficial for:

1. Theoretically, writer expects the result of this research can confirm and clarify the theory of learning strategies and cognitive styles in learning process especially in reading comprehension.
2. Practically, writer expects the result of this research can be used as reference and consideration for English teachers concerning with learning strategies and cognitive styles which was more influential on increasing students' reading comprehension.

1.5. Scope

This paper focused not only on comparing reflective and impulsive students in achieving reading test but also both differences in using different strategies in learning especially in reading activity. The writer only focused on the result of the test generally and did not analyze the aspects of reading skill deeply. In addition, students of second grade of senior high school were the population on this research

by considering the age and the ability in English was well enough. Samples were divided into two groups according to students' cognitive style – impulsivity and reflectivity – using Matching Familiar Figure Test (MFFT) by Kagan and were determined according to their learning strategies by using Setiyadi's (2011) Language Learning Strategy Questionnaire (LLSQ). Then, the groups were compared based on the achievement of reading test. Also, students' learning strategies were analyzed to reveal the differences of both group in the reading achievement.

1.6. Definition of Term

In order to avoid ambiguity, some terms used in this research comprehensively defined, they are:

1. Cognitive Styles

Cognitive style is a field closely related to cognitive processing to describe the way individuals think, perceive and remember information. Moreover, a preference for a particular style of learning and the speed and efficiency of learning are functions as well as a good indication of the individual's most and least preferred styles.

2. Impulsivity/Reflectivity

I/R is defined as a dimension of cognitive style that is responsible for information processing determined by the degree to which an individual tends to reflect on the potential accuracy of one of the alternatives provided by means of hypothesizing and evaluating this hypothesis (Kagan 1966).

3. *Learning Strategies*

Learning strategies are ways taken by students to enhance their learning to improve proficiency and self-confidence. Also, it is a tool for active, self-directed involvement, which is essential for developing communicative competence.

4. *Reading Comprehension*

Reading comprehension is the ability to read text, process it and understand the meaning. An individual's ability to comprehend text is influenced by their traits and skills, one of which is the ability to make inferences. If word recognition is difficult, students use too much of their processing capacity to read individual words, which interferes with their ability to comprehend the text.

This chapter already reviewed introduction of the research. Including the explanations about the background of research, research questions, objectives of the research, uses, scope, and definition of terms were discussed in order to provide an insight to this research. The next chapter would deal with literature review of this research.

II. LITERATURE REVIEW

This chapter discusses about concept of cognitive style, impulsivity and reflectivity, concept of reading comprehension, aspects of reading, concept of learning strategies, learning strategies classification, theoretical assumption, and hypothesis.

2.1. Cognitive Style

Cognitive style can be illustrated as a construction dimension related to the way individual thinks or processes information. As stated by Suparman (2010:103) who says that cognitive style is usually defined as an individual's preferred and habitual modes of perceiving, processing and representing information. Every individual is considered to have relatively dependable or constant mode of cognitive functioning. Ellis (1990) in Bazargani and Larsari (2013) says that cognitive style is a term used to the manner in which people perceive, conceptualize, organize, and recall information. He also states that "the idea of learning style comes from general psychology. It refers to characteristic ways in which individuals orientate to problem – solving." It is clear that every individual in the world has his own way in constructing the things to be seen, remembered and thought by him/her (Mulyani, 2011:13).

Messick (1976) in Kozhevnikov (2007) defines cognitive styles as stable attitudes, preferences, or habitual strategies that determine individuals' modes of perceiving, remembering, thinking, and problem solving. As cognitive style differ among people, individual differences is also referred to cognitive style due to the diversity in the way individual identify, organize, and process the information. Besides, cognitive style is also known as universal uniqueness.

Cognitive style is essential in teaching learning process since it shows how every individual acquires knowledge (cognition) and process information (conceptualization). Students use cognitive processes in education to acquire knowledge, recall information, and analyzing process. Moreover, Liu (2008: 130-131), Cognitive style is individual's habitual way of organizing and processing information while learning style is a broader concept. By having the awareness of their own cognitive style, students are able to extend their learning process to get better achievement. Individuals apply mental behavior habitually when they are solving problem which directly links to cognitive style.

Cognitive style is included in learning style. In learning style, there are five cognitive style that are relevant to second language learning. One of which is Impulsivity and Reflectivity as the focus of this research. People who are slower than the median, but score more accurately than the median, are considered to be "reflective". As has been found by Kagan (1966), learners who are conceptually reflective tend to make fewer errors in reading than impulsive learners. Reflective students are more analytical in

their problem-solving approach and do not have the same level of difficulty with delayed gratification while impulsive students are on the opposite.

2.2. Reflectivity and Impulsivity

Impulsivity and reflectivity cognitive styles are considered to be an individual's different style of forming concepts, solving problems, and thinking. They are ways in which individuals select hypotheses and process information. Impulsivity and reflectivity (I/R) describe the disposition to reflect on the solution to a problem where several alternatives are possible and there is high uncertainty over which is correct (Kagan, Rossman, Day, Albert, and Phillips: 1964 as cited in Ghapanchi and Dashti: 2011). According to Quiroga et al.(2011), reflectivity implies a delay in response latency until being sure about the correct alternative. Reflective individuals show accuracy but high response latencies. They also state that Impulsivity entails a quicker choice of a response alternative. Impulsive individuals show lower response latencies but greater inaccuracy. Impulsive individuals accept the first hypothesis that arises in their minds without testing for its accuracy.

As a cognitive style, impulsivity is a dimension of fast, spontaneous and unplanned performance in cognitive tasks (Kagan 1965). According to him, impulsive people in psychological literature are described as those easily carried away by new and exciting ideas, and by the prospects of immediate gratification. They tend to act quickly without thinking through the consequences of planning ahead.

Reflective people, on the other hand, like to stand back to ponder experiences and observe them from many different perspectives. They tend to postpone reaching definite conclusions for as long as possible. They are thoughtful people who like to consider all possible angles and implications before making a move. Moreover, they tend to adopt a low profile and have a slightly distant, tolerant unruffled air about them (Pirouznia: 1994 in Bazargani and Larsari: 2013).

According to Fontana (1995) in Bazargani and Larsari (2013), reflective children tend to make fewer errors than impulsive ones particularly on challenging and difficult tasks, since they show a strong desire to be right first time, and seem able to tolerate the ambiguity, such as, a long silence in front of the class while they think out the right answer before responding. Impulsive children on the other hand, adopt a “shotgun” approach, firing off answers in the hope that one will be right and that in any case errors will provide appropriate feedback from the teacher to help them to get nearer to the solution next time.

Zelnicker and Jeffry (1976) in Rozencajg and Corroyer (2005) state that reflective children by attending to the detailed information of a stimulus tend to process information analytically. On the other hand, impulsive children tend to process information globally by attending to a stimulus as a whole. This result was revealed in a series of experiments by Zelnicker and Jeffry. At first, reflective children recalled significantly more detailed information from five sentences than the impulsive ones. Second, a variant of the Matching Familiar Figures Test was given which included stimuli that could be processed either analytically or globally. Again reflective students

were better at analytic processing while impulsive students were better at global processing. In their final experiment, impulsive children used a large number of dimensions (global processing) as a first hypothesis in a concept attainment task. However, reflective children were more likely to focus on a single dimension (analytic processing).

Another study conducted at the University of Michigan (Doron: 1973 as cited in Bazargani and Larsari: 2013) sought to examine the relationship between I/R and reading proficiency in students of English as a second language. Kagan's Matching Familiar Figures test was used to measure I/R in a sample of ESL student; Doron then administered reading tests of comprehension and speed to the same subjects to determine the correlation between I/R and reading. She discovered that reflective students were slower and more accurate than impulsive students, and suggested that this fact be taken into account in the teaching of reading in ESL. Pirouznia's study (1994) cited in Bazargani and Larsari (2013) provides continuing evidence for the positive relationship between reflectivity and EFL reading comprehension. In her study, reflective students were perfect at error detection, and the mean differences between reflective and impulsive students across grade levels were significant.

2.3. Reading Comprehension

Reading comprehension is important because it is a matter of identifying letters in order to recognize words to get the meaning from what is read, involving making connection among words and ideas presented in the text and the readers' own background

knowledge about the text they read will have difficulties in comprehending the text (Smith: 1982 in Sholatunisa: 2016). Comprehension means relating to what we do not know or new information, to what we already know (Eskey: 1988 in Sari: 2015). Therefore, in comprehending a text, the reader relates new information from the text to his previous knowledge that he has stored in his mind.

Reading comprehension is a complex intellectual process involving a number of abilities. Two major abilities involve word meaning and verbal reasoning. Without words meaning and verbal reasoning, there could be no reading comprehension; without reading comprehension, there would be no reading (Brown, 1994 in Ghapanchi and Dashti: 2011). Then, reading with comprehension will recognize the important point of the text besides understanding the surface meaning of the text. It is complex, dynamic process that requires active engagement with the text and a conscious afford on the part of the reader to gain meaning from what is read. Schumm (2006: 223) says that comprehension process involves an understanding of words and how these words are used to create meaning. Readers use a variety of reading strategies to assist with decoding to translate symbol into sounds or visual representations of speech and comprehension. Readers integrate the words they have read into they exist framework of knowledge or schema on their brain. Comprehension entails three elements, they are:

1. The reader who is doing the comprehending

To comprehend, a reader must have a wide range of capacities and abilities. These include cognitive capacities, motivation and various types of knowledge.

2. The text that is to be comprehended

The features of the text have a large effect on comprehension. Comprehension does not occur by simply extracting meaning from text. Texts can be difficult or easy, depending on the factors inherent in the text. When many of these factors are not matched to a readers' knowledge and experience, the text may be too difficult for optimal comprehension to occur.

3. The activity in which comprehension is a part

A reading activity involves one or more purposes, some operations to process the text at hand, and the consequences of performing the activity. The consequences of reading are part of the activity. Some reading activities lead to an increase in the knowledge a reader has. Another consequence of reading activities is finding out how to do something.

Reading the words of a composition is one thing, but comprehension is the vital point for the reader. Reading the words has no benefit if the reader does not comprehend what is being read. If the reader can read the words but they do not understand what they read, they are not really reading. Thus, comprehension is fundamentally relating the new to the already known.

2.4. Aspects of Reading

There are five aspects of reading according to Nuttal (1982), they are identifying main idea, finding specific information, determining reference, making inference, and understanding vocabulary.

1. Identifying Main Idea

This aspect of reading skill is one of the most important specific comprehension skills. Determining main idea is a skill to grasp and find the main point of a passage by summarizing it and looking for repetition of ideas/words. Therefore, identifying main idea is the process of which important point of the author is going to be found throughout the text.

2. Finding Specific Information

The topic sentences by giving definition, examples, facts, an incident, comparison, analogy, cause and effect statistics and quotation are developed as information. That is specific information which should be concerned by the students or readers due to its usefulness of knowing what the exact information the readers are looking for. Reading the relevant part such as question about time, person, place and thing which is being questioned or using scanning reading technique can be the strategy to get the specific information correctly.

3. Determining Reference

In determining reference, readers are asked to identify the source of information in order to ascertain the answer. Furthermore, it is also a matter of citing a specified matter which have a relation to the information in the text.

4. Making Inference

Theoretically, Inference is an assumption or conclusion that is rationally and logically made based on the given facts or circumstances. It is a guess that we make or an opinion that we form based on the information that we have. The reader will be able to do this by making use of the context in which the word occurred, in order to give a rough idea of its meaning.

5. Understanding Vocabulary

A text cannot be comprehended if readers do not have enough vocabulary of a certain language. Since comprehension is the ultimate goal of reading, readers should not overestimate the development of vocabulary of themselves. Therefore, this is the basic foundation to understand the vocabulary which is often asked in parts of synonymy or antonymy.

2.5. Learning Strategies

The meaning of strategy is originally used in military as the art of planning operation war, it is a way or tactic of the movements of armies or navies into favorable positions for fighting. In language learning, this term is also used as any effort or attempt used to achieve to determined goals. Oxford (1990) in Sari (2015) on her definition states that learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations.

Macaro, (2006:324) states learning strategies are “any set of operations, plans or routines used by learners to facilitate the obtaining, retrieval, storage and use of information”. Furthermore, Stern (1992) in Sari (2015) states that the concept of learning strategy is dependent on the assumption that learners consciously engage in activities to achieve certain goals and learning strategies can be regarded as broadly conceived intentional directions and learning techniques.

Several researchers have studied what learning strategies are and why they are effective in the learning process. Setiyadi (2011:45) says that teachers should introduce learning strategies to their students and provide opportunity for their students to implement the strategies which have been proved to be more effective than other strategies. Learning is the conscious process used by the learners to achieve the objectives, while learning strategy is the steps taken by language learners to enhance any aspect of their language. In line with that, researcher assumes that students’ learning strategies can be one of the

best approach in getting new information and knowledge in order to achieve the learning objectives. Moreover, by having the knowledge about learning strategies, students can facilitate their learning, response to their learning needs, and acquire the language better. In other word language learning strategies lead the learner to become self-directed or independent.

2.6. Learning Strategies Classifications

Since there are many classifications of language learning strategies proposed, scholars, such as, Wenden and Rubin (1987), O'Malley et al. (1985), Oxford (1990), Stern (1992), Ellis (1994), and Setiyadi (2014), may have different taxonomies of language learning strategies. However, they actually reflect more or less the same categorization without any far-reaching changes. According to O'Malley et al. (1985: 582-584) cite in Hismanoglu (2000) typical strategies are divided into three categories, i.e. metacognitive, cognitive, and social strategy.

Wenden and Rubin (1987) in Naimie et al. (2010), who pioneered much of the work in the field of strategies, make the distinction between strategies contributing directly to learning and those contributing indirectly to learning. According to them, there are three types of strategies used by learners that contribute directly or indirectly to language learning. These are: (1) learning strategies (cognitive learning strategies and metacognitive learning strategies), (2) communication strategies, and (3) social strategies.

This is in line with Oxford's (1990) in Sari (2015) who sees the aim of language learning strategies as an orientation towards the development of communicative competence. Oxford divides language learning strategies into two main classes, direct and indirect, which are further subdivided into 6 groups. Oxford's (1990:17) taxonomy of language learning strategies are: (1) direct strategies and (2) indirect strategies. Direct strategies, it consists of memory, cognitive and compensation strategies. Memory strategies include creating mental linkages, applying images and sounds, reviewing well and employing action, while cognitive strategies included practicing, receiving and sending messages strategies, analyzing and reasoning and creating structure for input and output. Last, compensation strategies included guessing intelligently and overcoming limitations in speaking and writing. On the other hand, indirect strategies consist of metacognitive strategies, affective strategies and social strategies. Metacognitive strategies include centering learning, arranging and planning learning, and evaluating learning. Then, affective strategies are lowering anxiety, self encouraging, and taking emotional temperature, while social strategies include asking questions, cooperating with others and empathizing with others.

Besides, Setiyadi (2014) classifies learning strategies as skill-based categories, they are listening category, speaking category, reading category and writing category. The learning strategy measurement consists of cognitive, metacognitive and social strategies. As stated by the explanation above, writer tends to apply Setiyadi's classification of language learning strategies. Writer focuses on reading category which

is assessed on cognitive, metacognitive and social strategies. This theory will be elaborated further afterwards.

2.7. Skill-based Learning Strategies Classification

Setiyadi (2014) classifies learning strategies according to how students develop their skill in acquiring a language. These language skills are included, reading skill, writing skill, listening skill, and speaking skill. The focus of this research was on the reading skill, therefore the following classification of strategies are related to reading skill.

2.7.1. Cognitive Strategy

A cognitive strategy is all activities that take place in the brain in order to acquire a foreign language. Cognitive strategy refers to all the mental process, except processes that involve self-monitoring and self-evaluating, in order to learn another language (Setiyadi, 2011:16). Cognitive strategies are more limited to specific learning tasks and they involve more direct manipulation of the learning material itself, for instance repetition, resourcing, translation, grouping, and note taking.

O'Malley et al. (1985: 582-584) as cited in Hismanoglu (2000) state that cognitive strategies are strategies which refer to the steps or operations used in learning or problem-solving that requires direct analysis, transformation, or synthesis of learning materials. Furthermore, this category may include intelligent guessing, looking for patterns from sentences, inference, association, summarizing, grouping in the mind, deducting, imagery, and other mental processes (Setiyadi, 2011).

Consistent with Setiyadi, Oxford's model, guessing intelligently by using linguistic clues is similar to infer by using available information. Memory strategy in Oxford's model, which includes creating mental linkages, applying images and reviewing, will be included under the cognitive strategies in Setiyadi's study since the processes mentioned in the category of memory in Oxford's model involve mental processing. In other words, cognitive strategies are strategies which refer to the steps or operations used in learning or problem-solving that requires direct analysis, transformation, or synthesis of learning materials.

2.7.2. Metacognitive Strategy

O'Malley and Chamot's study (1985) as cited in Setiyadi (2011) say that metacognitive strategy relates to the awareness of learning. It requires planning for learning, thinking about the learning place, monitoring of one's production of comprehension, and evaluating learning after an activity is completed. Metacognitive strategies allow learners to control their own learning through organizing, planning and evaluating and are employed for managing the learning process overall.

Metacognitive strategies is a term to express executive function, strategies which require planning for learning, thinking about the learning process as it is taking place, monitoring of one's production or comprehension, and evaluating learning after an activity is completed (O'Malley et al.: 1985 as cited in Hismanoglu: 2000). More specifically, Metacognitive is an appreciation of what one already knows, together with a correct apprehension of the learning task and what knowledge and skills it requires,

combined with the ability to make correct inferences about how to apply one's strategic knowledge to a particular situation, and to do so efficiently and reliably (Peirce, 2003: 2).

Students who are able to identify suitable learning strategies in the proper situation are using metacognition, for instance, a student understands that she/he has difficulty in finding the connection between important concepts within a story. If he/she has been taught to use a graphic organizer, such as a concept map, to identify the main concepts and link them together using lines, similar to a spider web, then that student has used metacognitive to complete the task (Nelson and Conner, 2008).

Moreover, Sheinker and Sheinker (1989) in Setiyadi (2011) emphasize that students studying metacognitively may use strategies for self-direction, self-monitoring, self-evaluation, and self-correction. They are used to oversee, regulate or self-directed language learning. In addition, Wenden and Rubin (1987:25) in Sholatunisa (2016) state that metacognitive refers to an individual's self-knowledge about their cognition and the ability to influence one's own cognition. The goal of this strategy teaches students how to become purposeful, effective, and independent learners. Students with metacognitive learning strategies can make plan for their studies. Students without metacognitive learning strategies are essentially learners without directions and abilities to review their accomplishment, progress, and future learning direction

Among the main metacognitive strategies, it is possible to include advance organizers, directed attention, selective attention, self-management, functional planning, self-monitoring, delayed production, self-evaluation. In short, metacognitive learning strategy is important in which people monitor and control the process of learning to be successful.

2.7.3. Social Strategy

In social strategy, students have to work with other language learners to obtain feedback and information (cooperation). Besides, they are questioning for clarification and self-talk. Stratton and Hays (1988) as stated in Sari (2015) state that social strategy is the nature of social interaction, how people come to influence one another's behavior.

Social strategy is the way students use towards their learning process that take place in groups. Social strategies include asking questions, cooperating with others, and empathizing with others. Social strategies will help learners work and interact with other people. Example for social strategies are: asking questions (for example, asking for clarification or verification of a confusing point), talking with a native-speaking conversation partner, and help the learner work and cooperating with others (for example, asking for help in doing a language task) and empathizing with others (for example, developing cultural understanding and exploring cultural and social norms).

As stated by O'Malley et al. (1985: 582-584) as cited in Hismanoglu (2000), he states that social strategies are related to social-mediating activity and transacting with others. Cooperation and question for clarification are the main social strategies. Besides, Stratton and Hays (1988) defines social psychology as the branch of psychology which is particularly concerned with the nature and form of social interaction and how people come to influence one another's behavior. Social category was investigated and explicitly stated in studies conducted by Fillmore (1979) in Sari (2013). He divided social strategies into 3 categories, namely joining a group, give the impressions – with a few well-chosen words – that students speak on certain language, and count on friends.

2.8. Theoretical Assumption

Based on the literature review above, the researcher assumed that individual differences affect students learning process. The differences could be influenced by human cognitive style. There were many types of cognitive style and the researcher focused on reflectivity and impulsivity dimension. Reflective students are more analytical in their problem-solving approach and do not have the same level of difficulty with delayed gratification. Meanwhile, impulsive students do not consider as many alternative answers when presented with open-ended questions as compared to reflective students. Personality of individuals could make them different in answering the reading comprehension questions. Referring to this, reflective students were considered to do better in reading comprehension since their analytical thinking in solving problem which could help comprehend the reading text.

Whereas, in relation of learning strategy to students' cognitive style, learners have different strategies in learning language. Teachers should determine students' learning strategy because it is important to shape creative English teachers in choosing effective learning activities. Learning strategies are usually used in the learning process, even if the learners are not aware about what learning strategies he/she uses in their learning process. Therefore, the uses of learning strategies affected learners' cognitive style in processing the information had different influences towards the achievement of reading comprehension. According to this, it was assumed that students with different cognitive style would use different learning strategies in completing reading comprehension test.

2.9. Hypothesis

Based on the theoretical assumption above the researcher made hypothesis as follows:

1. Reflective students do better in reading comprehension.
2. There are differences between reflective/impulsive cognitive style in using learning strategies.

In brief, this chapter was the elaboration of the previous chapter. This chapter had discussed about concept of cognitive style, impulsivity and reflectivity, concept of learning strategies, learning strategies classification, concept of reading comprehension, theoretical assumption, and hypothesis. Furthermore, this chapter portrayed the result possibility of this research as written in hypotheses.

III. METHODS

This chapter discussed the research method. Everything related to the model of research, such as: design, data, instruments, data collecting technique, data analysis, and hypothesis testing will be described below.

3.1. Design

This research was intended to find out (1) Which group of learners do better in reading comprehension; and (2) whether there is significant difference between impulsive and reflective students in employing different learning strategies. To answer these questions, writer applied quantitative design. The data were taken from questionnaires and reading comprehension test.

Ex-post facto design called a criterion group design was used in this research. This design, two groups of learners were compared on one measure. Based on the research question of the study, impulsivity and reflectivity was the independent variable which is a characteristic that a subject possesses before a study begins. According to the distribution of the questionnaire, the researcher classified the learners into two groups. Ex post facto of dependent variables was that the result of reading comprehension test of learners which was made by the researcher based on the syllabus of the chosen school. In collecting the data, the researcher did not apply any treatment or any experiment to subject. The research designed of ex post facto criterion group design was formulated as follows:

G1 T

G2 T

G1 : Impulsive Learners

G2 : Reflective Learners

T : Reading Comprehension Test

(Setiyadi:2006)

Likewise the first design, the second one was also purposed to compare the two groups of learners based on their their preferences in learning strategies for reading skill. The design used ex-post facto design: causal comparative (Setiyadi: 2006).

The research's second design was formulated as follows:

G1 T

G2 T

G1 : Impulsive Learners

G2 : Reflective Learners

T : Language Learning Strategies

(Setiyadi: 2006)

To sum up, the writer used same design to answer two different research questions which used ex-post facto causal comparative design to find out which group was better in reading comprehension and their preferences of language learning strategies.

3.2. Population and Sample

The population of this research was the second year learners of MAN 2 Bandar Lampung in the second semester of academic year 2017/2018. Researcher chose the second graders since the subjects needed in this research were they who were mature enough to have stable strategies in learning and consistent modes in perceiving and processing information. According to Arikunto (2010) the sample is partly or deputy population of the research to determine if the size of the sample subject less than 100 better taken all the population to the research. Based on the population above, the researcher had determined the sample by using simple random sampling where every individual in population had probability to be chosen as the sample. After getting the amount of sample from the population, learners was be classified into two groups, reflective and impulsive learners.

3.3. Instrument

In gaining the data, researcher employed two kinds of instruments, they were questionnaires and the test of reading comprehension. Each kind of instruments was explained as follows.

3.3.1. Language Learning Strategy Questionnaire

According to Setiyadi (2006: 54), he states that questionnaire is an instrument which is very effective to measure aspects and variables in associated with personality, psychology aspect or sociology. The questionnaire that was given to the learners was adapted from Setiyadi's (2011) "Language Learning Strategy Questionnaire" which was modeled to discover of learning strategies employed by the learners. Further, the researcher used Language Learning Strategy Questionnaire for reading skill only since the research only focuses on reading field. The researcher used Setiyadi's questionnaire (2011) because it had been arranged

into three classifications of learning strategies; cognitive strategies, metacognitive strategies, and social strategies. The questionnaire was developed by using Likert-Scale in which provided students with the following optional answers:

- 1 = Never or almost never true of me
- 2 = Usually not true of me
- 3 = Somewhat true of me
- 4 = Usually true of me
- 5 = Always or almost always true of me

The learners' preferences or choices on the item selected indicated their group, whether they belong to cognitive, metacognitive, or social groups. For example: items 1 – 11 refer to cognitive, and then the total scores on the group were divided into 11. Items 12 – 17 refer to metacognitive, and then the total scores on the group will be divided into 6. Items 18 – 20 refer to social, then the total scores on the group will be divided into 3. The data accumulated from the questionnaire were used to analyze the most frequent strategies employed by the learners.

a. Validity

The validity was measured to find out whether the components were proportionally adequate and relevant to the related theories of learners' learning strategies in English reading. According to Hatch and Farhady (1982), there are at least two types of validity that should be fulfilled; they are content and construct validity. Language Learning Strategies Questionnaire (LLSQ) in reading ability proposed by Setiyadi that was used in this study had been standardized for its construct validity of the questionnaire. It consisted of 20 items that included three different measurements of skill-based learning strategies in reading categories, namely, cognitive, metacognitive, and social strategy.

Aspects of Questionnaire	Number of items
Cognitive strategies	1-11
Metacognitive strategies	12-17
Social strategies	18-20

Table 3.1. Specification Table of Language Learning Strategies Questionnaire

b. Reliability

The researcher collected the data by using the quantitative one. First of all, the result of questionnaire was scored based on Likert Scale. The score ranges from 15. To make sure that the data gathered from the questionnaire is reliable, the researcher used reliability analysis based on Cronbach Alpha Coefficient of SPSS for window. Cronbach Alpha Coefficient is the most common used to measure the consistency among indicators in the questionnaire which was counted based on the correlation between each items. The Alpha ranges from 0. to 1. The higher alpha, the more reliable the items of the questionnaire (Setiyadi, 2006). Here are the coefficient in evaluating the Alpha Cronbach:

> 0.9 = very high reliability

> 0.8 = high reliability

> 0.7 = medium reliability

> 0.6 = low reliability

> 0.5 = very low reliability

3.3.2. Matching Familiar Figure Test

The dimension of reflection-impulsivity (R-I) was purported to be a reliable and useful dimension along which to conceptualize individual differences in cognitive style. A child's relative position on this dimension was typically determined by his

performance on the Matching Familiar Figures Test (MFFT) (Kagan & Kogan, 1970 in Quiroga et al.(2011); Kagan, Rosman, Day, Albert, & Phillips, 1964).

Matching Familiar Figure Test was an individually administered visual discrimination matching-to-sample task which was aimed to divide learners to Impulsivity and Reflectivity dimension. There was a picture of a common and familiar object and there were eight variants with only one of which matched the familiar figure of the top page. There were two practice items and followed by twelve test items. The tendency toward fast or slow decision times and number of errors were used to identify the degree of conceptual Impulsivity/Reflectivity.

This instrument of measuring conceptual tempo was constructed by some researchers basically by Kagan (1965), and was accepted as a valid test to measure I/R by some researchers. Ghapanchi and Dashti (2011) attempt to find the relationship between cognitive style of impulsivity using Matching Familiar Figure Test and performance of the intermediate EFL university students on display, referential and inferential reading comprehension questions. While Rozencajg and Corroyer (2005) determined the relationships between the RI style and the cognitive factors, which would be likely to explain different MFFT solving modes—field dependence or independence as a cognitive style, the g factor, the spatial factor, and a metacognitive control index, which the authors developed for this study.

3.3.3. Reading Comprehension Test

Individual assessment task provided limited representation of reading comprehension; however, many reading researchers continued to use only task to measure comprehension. In this research, the researcher used multiple-choice items

in assessing the learners' reading comprehension which was consisted of 30 items of multiple choice for 60 minutes.

No.	Reading Aspect	Number	Percentage of Item
1.	Determining Main Idea	1, 3, 8, 10, 20, 23	20%
2.	Finding Specific Information	4, 6, 14, 16, 21, 26	20%
3.	Finding Reference	5, 13, 18, 22, 24, 29	20%
4.	Finding Inference	9, 12, 15, 17, 27, 30	20%
5.	Understanding Vocabulary	2, 7, 11, 19, 25, 28	20%
Total		30 items	100%

Table 3.2. Table of Specification of Reading Test

a. Validity

Validity is a matter of relevance; it means that the test measures what is claimed to measure. To measure whether the test has a good validity, it can be analyzed from its content validity and construct validity.

- Content validity

This kind of validity is concerned whether the test is sufficiently representative for the rest of test or not. While construct validity focuses on the relationship between indicators within the test.

- Construct validity

It concerns with whether the test is actually in line with theory of what it means to know the language (Shohamy: 1985 in Sari: 2015). Regarding the construct validity, it measures whether the construction had already in line with the objective of the learning (Hatch and Farhady, 1982 in Ferdian: 2016). To know

whether the test was good reflection of the knowledge which the teacher wanted the learners to know, the researcher compared the test with table of specification.

b. Reliability

Reliability refers to the extent to which the test is consistent in its score and gives us an indication of how accurate the test score are (Hatch and Farhady, 1982:244 in Ferdian: 2016). The test will be determined using Pearson Product Moment which measures the correlation coefficient of the reliability between odd and even number.

$$r_{xy} = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$

where:

r_{xy} : the correlation coefficient of reliability between odd and even

X : the total numbers of odd number items

Y : the total numbers of even number items

$\sum x^2$: the total score of odd number items

$\sum y^2$: the total score of even number items

(Hatch and Farhady, 1982:199)

c. Level of difficulty

Level of difficulty is calculated by using the following formula:

$$LD = \frac{R}{N}$$

Notes:

LD : the level of difficulty

R : the number of the learners who answer correctly

N : the total of the learners in the higher and lower group

(Heaton, 1975:182 in Sari: 2015)

The criteria of the difficulty level are:

< 0.30 = difficult

$0.30 - 0.70$ = average

> 0.70 = easy

d. Discrimination Power of the Test

Discrimination power refers to the extent to which the item differentiates between high and low level learners on that test. Discrimination power is calculated by using the following formula:

$$D = \frac{U - L}{1/2 N}$$

Notes:

D : discrimination power

U : the number of learners from the upper who answer correctly

L : the number of learners from the lower who answer correctly

N : the number of the learners

(Shohamy, 1985:82 in Sari: 2015)

The criteria of discrimination power are:

$0.00 - 0.20$: Poor

$0.21 - 0.40$: Satisfactory

$0.41 - 0.70$: Good

$0.70 - 1.00$: Excellent

- (negative) : Bad items (should be omitted)

3.4. Data Collecting Technique

The procedures in administering the research were as follow:

1. Determining the Population and Sample

The population of this research was the second year learners of senior high school. The researcher gave the learners some questionnaires to separate them into two groups; they were impulsive learners and reflective learners.

2. Determining the Research Instrument

The instrument of this research was objective reading text of multiple choices test. To measure reading comprehension, it requests learners to write short-sentence answers to written questions is less valid a procedure than multiple-choice selection. Objective test was used for measuring the learners reading comprehension from two groups based on learners' learning strategies. The test consisted of items of multiple choices of some reading texts.

3. Administering the Questionnaires

Writer used 2 questionnaires in this study. First, MFFT was administered for knowing the validity and reliability of the questionnaire. The questionnaire covered the impulsivity and reflectivity characteristics. Secondly, the Questionnaire -in this case LLSQ items- was administered to measure the learning strategies used by the learners in reading. The items of the questionnaire were in the form of limited statements which have range 1 until 5, explaining from never to always.

4. Administering the Reading Test

The reading test was administered to the learners of both groups, impulsive and reflective learners.

5. Analyzing the Data

The result of the questionnaire was analyzed by using SPSS and Microsoft Excel. The result of the reading comprehension was compared between impulsive learners and reflective learners in order to find out whether there was a significant difference in learners' reading comprehension both of the two groups. The data were statistically computed through the Statistical Package for Social Science (SPSS).

6. Making a Report and Discussion of Findings

After having gained all the data, the researcher reported and discussed the findings.

3.5. Data Analysis

This research had two variables, dependent and independent variable. The researcher used tests for those two variables to collect the data. They were reading ability test and questionnaires of impulsivity/reflectivity and learning strategies. Learning strategies and cognitive style were the independent variable since it was assumed that they had an influence to reading achievement.

In analyzing the data, the researcher used causal comparative study. It was used to measure which group of students did better in reading comprehension. The result of the learners' achievement in reading comprehension was analyzed by using Microsoft Excel 2013 to find the average time in order to determine the impulsivity

and reflectivity of the students. To compare both groups in reading comprehension test, the data were analyzed using One Way ANOVA of SPSS 16.0 by comparing the mean scores of both group. Then, to analyze the significant differences among the use of learning strategies of reflective and impulsive students, the data were tested using Independent Sample Test of SPSS 16.0 by considering the differences between both independent variables.

3.6. Hypothesis Testing

In order to prove the hypothesis, the data were analyzed by using Statistic Package for Social Science (SPSS) 16.0. The researcher used the level of significance 0.05 in which the hypothesis is approved if $\text{Sig.} < \alpha$.

This chapter had elaborated the method which was used in the research. It also revealed how the data were analyzed. The data result would have been discussed in the next chapter.

V. CONCLUSIONS AND SUGGESTIONS

This chapter deals with the conclusions and suggestions based on the finding and discussion of the data analysis in this research.

5.1. Conclusions

This research was concerned with the comparison between reflective learners and impulsive learners in reading comprehension and the correlation between learning strategy and cognitive style of students at the second grade of MAN 2 Bandar Lampung. With regards to the research findings and discussion, the researcher would mention some conclusions as follows:

1. In comparing the two groups of students, reflective and impulsive learners, the study came to the result that reflective learners were better in reading comprehension than the impulsive learners. This was taken by comparing the mean scores of both groups in reading comprehension. The reflective learners owned 7.69 as their mean score while the impulsive learners' mean score was 7.47 (see table 4.13, pp. 50). As stated, the mean score of reflective learners were higher than the impulsive ones so that it can be concluded that the reflective learners were better in reading comprehension. The aspects of reading comprehension were also considered to be concluded that the highest aspect of reading gained by reflective students was determining main idea

followed by specific information, inference, reference, and vocabulary (see table 4.9, pp. 47). This happens since their characteristics of cognitive style Reflectivity/Impulsivity plays a great role in comprehending the reading text. Reflective learners thought analytically before making a decision although they need more time to come to a decision. In contrast, the reading aspect of impulsive learners held the vocabulary as their highest aspect followed by reference, specific information, inference, and main idea (see table 4.12, pp. 49) impulsive learners tended to think impulsively, quicker than the reflective and average learners so that they could make more errors than the other groups.

2. While seeking for the significance of each variable, researcher found that between reflectivity/impulsivity cognitive style there was no significant differences in using different learning style. Unless the significant value was < 0.05 , the H_0 was rejected and this happened in this research. The significant value was 0.689 and was more than 0.05. Therefore, the research found that there was no significant differences in using different learning style between reflectivity/impulsivity cognitive style.

Even though there was no significant difference, it did have differences yet not significant. It was found that there is a trend that reflective learners use more metacognitive strategy than the other strategies, cognitive and social. In general, reflective participants performed better than on the multiple – choice test and other analytical tasks. On the other hand, impulsive learners were better in tasks that need high speed processing task such as guessing games, role play and other spontaneous activity.

5.2. Suggestions

By considering the results of finding and the discussion, the researcher recommended several suggestions as the following;

5.2.1. Suggestions for English Teacher

- a. In conducting a learning process, there will be a lot of factors influencing the success of learning. Privately, students are blessed with such a gift of individual differences which should be inserted as the main consideration of creating a successful learning process and teacher should understand this.
- b. If several students are identified as poor students especially in high needed analitically task, teacher should consider the probability of them having impulsive characteristics. Quickly in making decisions in every type of test and do more errors than the other groups of students are the most important yet harmful for them. Although it is considered as a negative characteristics, they also can lead them to a great or even good result in guessing game and practical task such as conversation task owing to their low enxiety of making mistakes. Accordingly, teacher can give test which allow them to think more analitical which can train them to be more reflective.
- c. Language learning strategy is as important as any other factors affecting the success of learning. Being aware of language learning strategy can help teacher produce a learning situation in which students can properly apply their preffered strategy to support the language learning process. Strategy that privately chosen by students is going to be the key of how

they learn language. Therefore, teacher is highly recommended to be aware of students' language learning strategy.

5.2.2. Suggestions for Further Research

- a. This study is only concerned in the comparison in reading comprehension where the probability of reflective learners being better in this skill is bigger. Research in some other skills should be conducted to reveal the how impulsive learners' characteristics can help them be successful in other skill.
- b. In addition, this research does not emphasize on how to make impulsive learners more reflective to help them gain the achievement in reading comprehension. Therefore, a further research concerning to this is needed.
- c. Further research on analyzing the aspects of reading related to the Impulsivity/Refelctivity features is also suggested to be done since the result on this research presented quite satisfied to deeply be continued for the next research.
- d. Having a lot of participants or samples will help the researcher to find the significant different for both group. Since the participants in this research were only 22 students, the researcher found the difference yet it was not significant. Therefore, the writer suggests further research to make sure many people participate the process of the research.

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