

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter contains the references from the experts which are useful to give relevant knowledge in the field of the study in the next chapter. The researcher is going to describe some theories and review some relevant research findings related to the research. This chapter will describe in depth of the variables exist in this study, the cognitive styles and reading comprehension.

2.1. Cognitive Style

Cognitive style is one of psychological aspects of the individual learning process. Every individual has different cognitive style on their learning process. It refers to the learners' preference on their learning styles that may affected to the academic achievement. For the more details of cognitive style will be explained in the next point.

2.1.1. Definition of Cognitive Style

Based on Blanton (2004) cognitive style is a psychological developmental process of individual to identify and respond to their environment. Every individual have their own characteristic in the process of receiving, organizing and interpreting information from their environment and cognitive style effecting to their behavior in this process. In receiving information, every individual have their own look and opinion. After that, they organize the information and interpret the information. Their

interpretation will guide them to react (Hayes & Allinson in Guisande, Paramo, Tinajero & Almeida, 2007). In this term, cognitive style show how individual characterized in the learning process. Different people have different perspective and response to their learning condition. These preferences of individual are going in line with their improvement and achievement in the learning process.

Cognitive style refers to the preference of individuals of how the way they used their intelligence in specific ways to learn (Yousefi, 2011). Individual have different approach in the way how they learn. The word style in cognitive style represents the consistency of individual liking in the learning situation which differentiates every individual to another. According to Salmani-Nodousan (2007), the term cognitive style refers to the relationship between personality and perception of how individual learn things in general and the certain approach they adopt when they solving problems. In line with that, Messick in Guisande, Paramo, Tinajero & Almeida (2007) also stated that “cognitive styles also can be seen as the characteristic of how the way individuals identify environmental stimuli, and organize and cue information”.

2.1.2. The Origin of Cognitive Style

Before the 1970s, individual differences were supposed to be same with differences in ability in the area of learning theory. However, many psychologists in the 1950 and 1960 turned out to be interesting about the restriction of abilities measured by standard intelligence test. Guilford introduced a model of the structure of the intellect which differentiated between a number of cognitive operations,

including convergent and divergent thinking. Then, many researches in this field are increasing rapidly to identify more about the psychological aspect in the human learning process.

Herman A. Witkin is first researcher who introduced the term of “cognitive style” to describe individual consistency of the style preferences in the organizing stimuli they got from their environment then construct the meaning by themselves beyond the experiences. Cognitive style include of the variable in a single separation like, global-holistic vs. focused-detailed, field-dependent vs. field-independent. Indeed, the most globally discussed in the many researches is field dependence (FD) and field independence (FI). FD/FI refers to the general theory of perception, intellect, and personality.

Witkin et al. conducted a study in the late 1940's to determine how individuals locate and orient themselves to the upright position (Goodenough in Daniels, 1996). This study found that there is a consistent pattern of the strategy used by individuals to perform an upright task (Witkin & Goodenough in Daniels 1996). Some subjects of the study disposed to use the signals of the visual field while the others act to depend on internal gravitational referents.

Witkin and his colleagues developed many tests to measure field dependence and field independence cognitive style. They are Rod-and-Frame test, Body-Adjustment test, Embedded Figure Test (EFT), Group Embedded Figures Test (GEFT), Articulation of Body Concept (ABC) test.

In the body adjustment task (BAT) participants were seated in small room that was stilted to right or left either clockwise or counter clockwise independently one

another. After the participants were seated, the chair and the room were rotated to a prepared tilted setting. The participant was then asked to adjust the chair to a position where he/she experienced it as upright. While, in the rod-and-frame test (RFT) the participants were guided into a dark room where they viewed a movable luminescent rod contained within a movable luminescent frame. The task was to position the rod to where it was vertical. See figure 2.1 for an example of the rod-and frame diagram. From both experiments, they indicate same finding, some participants are used the frame to define the upright while others used their bodies to define it.

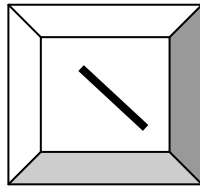


Figure 2.1. Example of the rod-and frame diagram (Source: Witkin, Moore, Goodenough & Cox (1977))

From the early findings, Witkin and his colleagues theorized that the upright tasks of the earlier measures could also be considered as a perceptual task that required one to separate an item (e.g., a rod) from a background (e.g., a frame). From this theory, Embedded Figures Test (EFT) was developed. This test required to an individual to extract a simple geometric shape embedded in more complex shape. The results of the EFT were significantly correlated with the BAT and the RFT. Field dependents found the task to be difficult while field independents found it relatively easy to overcome the influence of the organized complex figure and locate the simple figure within it.

In 1971 Witkin and his associates developed group embedded figures test (GEFT) which can be administered to several people at once. From the EFT and GEFT findings, it suggested that the field dependency dimension had a more general application than just spatial orientation. This assumption led to research that focused on the relationship between disembedding or restructuring ability in perception and the same ability in cognition (Daniels, 1996).

2.1.3. Characteristic of Cognitive Style

Witkin, Moore, Goodenough and Cox (1977) define some essential characteristics of cognitive styles in general. The first, cognitive styles are concerned with the form rather than the content of cognitive activity. The word form means the style or individual characteristic. In this case, cognitive styles refer to individual preferences in how to perceive, think, solve problems, learn, relate to other, etc. These preferences in style are include to term of the process. These preferences affected to individuals strategies in doing task in the learning process.

The second characteristic of cognitive styles, it was pervasive dimensions. Realizing from their pervasiveness, cognitive styles carry a message about personality of human essence in the learning process. This personality is not alone of cognition in the narrow sense, it can be form of the characteristic of individual who likes to be among people, attentive to what others say and do, takes some information from others and defining his own belief and ideas. The pervasiveness also means that individual can be assessed by nonverbal or perceptual methods.

The third characteristic of cognitive styles is that they are stable over time. This stable characteristic does not mean that it cannot change, of course for some individuals it may easily be transformed. In the educational process, individuals have the same style in one day, then in the next day, month and may be even years later. This stability can be used by educators to make long-range guidance and counseling for the learner.

The fourth characteristic of cognitive styles based on Witkin et al. (1977), cognitive styles are bipolar. This characteristic is important to differentiate cognitive styles from intelligence and other ability dimensions. Together with the cognitive styles, on the other hand, each pole has adaptive values under specific circumstances and may also have a relationship to the circumstances as like in the articulated-global dimensions. The cluster of competence in cognitive articulation plus an impersonal orientation, at one pole, and the cluster of a social orientation and social skills and over the less competence in articulation, at the other pole, it may be seen as the requirements of particular tasks.

2.1.4. Dimension of Cognitive Style

There are many dimensions of cognitive style, but the only cognitive style which has received the greatest attention in second/foreign language researches is Field Dependence/ Independence (FD/FI). FD/FI is typically referred to as a variable of cognitive style, a pervasive, stable, and bipolar characteristic affecting the process of perception, thinking, and problem solving (Witkin, Moore, Goodenough and Cox, 1977).

2.1.4.1. Field Dependence

Field dependence is the dimension of cognitive style in which individual is characterized as having a greater aptitude for interpersonal skills but has difficulty breaking information into isolated parts, seeing an item as discrete from its background, or providing structure to context when there is none (Witkin et al., 1977). Brown (2000) stated that Field Dependence is “the tendency to be ‘dependent’ on the total field so that the parts embedded within the field are not easily perceived, although that total field is perceived more clearly as a unified whole”.

Field-dependent individuals have a greater aptitude for interpersonal skills. They also have the tendency to relate well to others and are often characterized as warm, affective, and accommodating (Korchin in Blanton, 2004). Individual who included to field-dependent person prefer to work in small group and have stated goals and structured activities. Kiewra and Frank in Blanton (2004) also noted that field dependent students tend to have a passive and spectator approach to learning.

2.1.4.2. Field Independence

Field independence is the dimension of cognitive style in which the individual is described as analytical person. Different from field-dependent person, this typical person can see isolated parts of a problem, perceive an item as separate from its background, and provide structure to context when there is none (Witkin et al., 1977).

It means that field independence learner can see how to solve problem in the complex tasks and can notice an item that should be consider from contextual information, and provide structure to context. For example, when a field independent learner asked to do some tasks, they understand well which problem that should be undertaken. They are easy to read the direction and understand well the question and they able to answer the questions.

Yousefi (2011) stated that Field Independence addresses to the degree which an individual focuses on some aspect of experience and separates it from its background (the word 'field' is used for this kind of background). An FI person identifies problem analytically. They analyze the information and isolate details which are important, detect pattern which appear in the information, and critically evaluate data. This statement are proved by Witkin et al. (1977) who said that field independents tend to use an analytical approach solve a problem, sample more cues inherent in the field, and are able to extract the relevant cues necessary for completing of a task.

Witkin and Goodenough in Daniels (1996) stated, Field Independents tend to have a more articulated self-concept with clear boundaries between internal attribute, feelings, and need and the external social environment.

According to Brown (2000) field independence defines as the ability to perceive a particular relevant item in a field of distracting items. "Field independence addresses the degree to which an individual focuses on some aspect of experience and separates it from its background (The word "field" or "ground" is used for this kind

of background; the term “figure” is sometimes used to indicate what receives focus and is thus pulled into foreground)” (Alimorad, 2013).

2.1.4.3. Characteristics of Field Dependence/ Independence

Field dependence and field independence have different characteristic contrary one for another. Blanton (2004) summarize the differences of cognitive style as shown in the Table 2.1 below.

Field Independence (Analytical)	Field Dependence (Global)
Solves complex problem and isolated facts	Has difficulty breaking information into isolated facts to use to solve problems
Separates the relevant from the irrelevant	Has difficulty separating the relevant from irrelevant
Recalls information for summarizing	Often does not summarize accurately
Imposes structure to content	Has difficulty providing structure to content when it is missing
Encodes information quickly and accurately	Has a slow encoding process and often encodes inaccurately because of difficulty separating facts
Does well in standardized tests	Often does not do well on standardized tests
Does well in science and mathematics	Does well in humanities and social sciences
Has a high working memory capacity	Has low working memory capacity
Reflective	Impulsive
Concerned with mastery of concepts	Concerned with relationship

Task-oriented	People-oriented
Independent learner; prefers working alone instead of groups	Needs direct instruction; prefers to work within small groups
Flexible in learning situations	Inflexible; has difficulty changing strategies
Self-reliant	Dependent on others for direction and often seeks help from others
Relies on intrinsic reinforcement and motivation	Relies on others for reinforcement and motivation
Devises own strategies and learning aids for learning	Needs structural aids (i.e., outlines or note taking instruction) and direction from others for learning content
Excels in tasks controlled by brain's left hemisphere	Excels in tasks controlled by brain's right hemisphere
Have strong lateralization between brain hemispheres	May have weak lateralization between brain hemispheres
Most processing of information occurs in posterior region of brain	Least processing of information occurs in posterior region of brain
Has sense of time orientation	Lacks a sense of time
Performs well under pressure	Anxiety provoking situation negatively impact performance
Often seen as impersonal	Personable, friendly, outgoing
Has no difficulty setting goals for self	Relies on others for goal identification
Objective	Affective
Stays focused on task	Distractable; needs encouragement to stay-on-task
Uses intuition	Has difficulty using intuition

Table 2.1. Characteristics of Field Independence vs. Field Dependent Cognitive Style

2.2. Cognitive Styles and Their Educational Implication

Cognitive styles have important role in the educational teaching learning process. It can be affected to the student behavior and preferences in learning strategy used to process and interpret information from their environment. As stated by Witkin, Moore, Goodenough and Cox (1977) cognitive style of the learner showed that every individual has used both the cognitive and social characteristics in their learning. These characteristics define as global-articulated dimension of cognitive style which indicates relations between learning behavior and cognitive style. From the learner behavior and style in the learning process, we can select the appropriate strategy to improve students understanding and achievement in the classroom. As cited in Blanton (2004) cognitive styles show a positive correlation to the academic achievement in language learning process.

The other implication of cognitive style in educational area is that from cognitive style theories, it can be an alternative instrument to develop training design process which has potential to improve the efficiency and effectiveness of individual learning, and may also help to identify leaning difficulties of the learner (Riding & Sadler-Smith, 1997). This concept can be help to educators to design learning materials which are appropriate to the students' characteristic, because every individual have their own style in the learning process.

2.3. Reading

In learning English as foreign language, reading is one of important skills that should be mastered by EFL learners. Moreover, in this study reading is one of

variable which will be researched. In this point, researcher describes the definition of reading, the purpose of reading and reading strategies.

2.3.1. Definition of Reading

Reading is the ability of constructing meaning from the printed page and interpret its information appropriately (Grabe and Stoller, 2002: 9). The readers can get information from the process of interpreting the meaning from the written text. Braunger and Lewis (2006: 8) also stated that reading is an arranging process of meaning from text. The process include to an active, cognitive, and affective process.

Alderson (2000: 13) stated that reading involves identifying written form of language or text from visual like read a book or kinesthetically like braille. Meanwhile, reading can be the same sort of activity as listening, the different is only in the type of language we need to concern. In the reading we learn from printed text, while listening in form of speech.

Reading is a consistent process of guessing meaning and message stated or implied in the text Grellet, 1990: 7). This is means when the students read a text, in the same time they try to understand the meaning or idea implied in the text. They also tend to understand the elements in the text they read, whether it is the idea of the passage or it just a simple word they do not know and guessing the meaning.

According to Grellet (1990: 4) there are some ways of reading as follows:

- Skimming: quickly reading by seeing a text to get the idea.

- Scanning: quickly reading going through a text to find a particular piece of information
- Extensive reading: reading longer texts, usually for one's own pleasure such as novel. This is a fluency activity, mainly involving global understanding.
- Intensive reading: reading shorter texts, to extract specific information. This is more an accuracy activity involving reading for detail.

2.3.2. The Purpose of Reading

Based on Grabe and Stoller (2002: 11) there are several purposes of reading as follows:

1. Reading to search for simple information and reading to skim

Reading to search information is a common reading activity that we do in daily life, however some researchers see it as relatively independent cognitive process. Usually, in reading to search, we scan the text to find specific information about something or find a specific word. For an example, when we search in a telephone directory to find information about an address or phone number. It is similar with skimming which in essence we are guessing where important information might be in the text, and then using basic reading comprehension skills on those segments of the text until a general idea is formed.

2. Reading to learn from texts

Reading to learn basically occurs in the academic and professional context like school or institute. In reading to learn, people need to learn some specific information and remember main ideas of the text also the number of details that elaborate the main and supporting ideas in the text, recognize and build rhetorical frames that organize the information in the text, also link the text to the readers' knowledge base. Reading to learn is placed under reading comprehension.

3. Reading to integrate information, write and critique texts

Reading to integrate information involves additional decisions about the relative importance of complementary, mutual supporting or conflicting information and the likely restructuring of a rhetorical frame to accommodate information from multiple sources. While reading to write and reading to critique texts both purposed to find information. The information will be used to write or critique text, it depends on the reader like to use reading for which purpose.

4. Reading for general comprehension

Reading for general comprehension is the most basic purpose for reading, underlying and supporting most other purposes for reading. General reading comprehension is actually more complex than commonly assumed. It requires very quick and automatic processing the word, strong skill in performing a general meaning representation of main ideas, and efficient coordination of many processes under limited time limits.

2.3.3. Reading Strategies

In the reading process every individuals have their own strategies to construct meaning from text. As stated by Braunger and Lewis (2006: 90) “strategies may include the use of cues to construct meaning of the text via words, structures, meaning, and purposes in the text; knowing what to do before, during, and after reading a particular piece; knowledge of the similarities and differences among different text structures; and the use of self-monitoring strategies (Does it make sense? What do I do if it does not? What do I know that can help me to understand this text?)”. Moreover, Braunger and Lewis (2006) have been defined reading strategies which have been identified as critical to learning from text as described follow:

- Inferencing, means the process of reaching conclusions based on information which appear in the text. This strategy uses predictions making using prior knowledge combined with information available from text.
- Predicting, means understanding the text by guessing of what is to come in the next as a result of knowledge or information gotten from the text. The readers will check and confirm or revise their prediction as they read new information available in the text.
- Reading selectively, refers to making decisions about what to read carefully and what to skim, what not to read, what to reread based on the reader needs.
- Identifying important information, explains as the process of finding critical facts and details in narrative like stories or expository like informational text.

Readers know how to use which strategies based on the different text they read to get the information.

- Monitoring, defines as a metacognitive or self-awareness process which means that the reader know how to adjust their speed or process needed when they read, also know the strategies to fix it when they have a problem.
- Summarizing, describes as the process that involves determining the main point of the long passage and create a synthesis which accurately represents the original.
- Question generating, outlines as the process that involves the reading to ask to their self to get the information from the text. The good readers characteristic will continually asking and revise the meaning.

2.4. Reading Comprehension

Reading comprehension is one of skills that should be mastered by EFL learners. In this point, researcher defines the definition of reading comprehension, the definition of reading comprehension ability and microskills for reading comprehension.

2.4.1. Definition of Reading Comprehension

Alderson (2000: 339) explain that comprehension is categorized as a complex set of activities which is interacted to one another when the reader tries to make sense of the text. Reading comprehension is an extraordinary accomplishment of balancing and coordinating many abilities in a very complex and rapid set of routines (Grabe

and Stoller, 2002: 29). It makes reading comprehension is an effortless and enjoyable activity for fluent readers.

Reading comprehension means read to get gist and more detailed understanding. Understanding a written text means digging up the information available in the text as efficiently as possible (Grellet, 1990: 3). The word efficiently means that when read a text we can use different strategies to get information. It will be different when we read a board of advertisement and read an article or a scientific journal. The strategies are differing based on the purpose of the readers.

In the Pandis et al (2003: 65) stated that reading comprehension is often understood as the ability of the student to retell a text they have in their own words. It is mean that after reading the text, student able to understand what the ideas which stated in the text so they can retell the text by their own word.

One of vital aspect of reading comprehension has so far been left out is the ability to asses and evaluate the text (Grellet, 1990: 24). In the reading comprehension, the readers also should be aware of the writer's aim when writing the text, his point of view and possible bias in his writing. It will help us to understand the idea that the writer try to explore.

2.4.2. Reading Comprehension Ability

Reading comprehension abilities are includes a quite complex process than we imagine. There are numerous types of reading comprehension which is separated based on task, motivation, goals and language abilities (Grabe and Stoller, 2002: 19). There are several processes that are activated as we read. Grabe and Stoller (2002)

have divided the reading processes that activated when we read into two categories, lower-level processes and higher-level processes. Lower-level processes include lexical access, syntactic parsing, semantic proportion formation and working memory activation. While, higher-level processes include text model of comprehension, situation model of reader interpretation, background knowledge use and inferencing, executive, and the last is control processes.

Based on Grellet (1990: 8) reading comprehension should not be separated from other skills, because reading comprehension is an important skill which correlated with another skills such as reading and writing (e.g. summarizing), reading and listening (e.g. comparing article and news bulletin), reading and speaking (e.g. discussion and debates). Furthermore, Grabe and Stoller (2002: 29) stated reading comprehension processes work in line with some skills which will activate automatically as we start to read.

2.4.3. Microskills for Reading Comprehension

A good EFL students should be master the microskills of the reading comprehension. To become a good reader and an efficient reader in reading comprehension, Brown (2001: 307) has been defined the distinction of microskill in reading comprehension as follow:

1. Discriminates among the distinctive graphemes and orthographic pattern of English
2. Retain chunks of language of different lengths in short-term memories.
3. Process writing in an efficient rate of speed to suit the purpose.

4. Recognize a core of words, and interpret word order patterns and their significance.
5. Recognize grammatical word classes (nouns, verbs, etc.), system (e.g., tense, agreement, pluralization), patterns, rules, and elliptical forms.
6. Recognize that a particular meaning may be expressed in different grammatical forms.
7. Recognize cohesive devices in written discourse and their role of signaling the relationship between and among clauses.
8. Recognize the rhetorical forms of written discourse and their significance for interpretation.
9. Recognize the communicative functions of written text, according to form and purpose.
10. Infer context that is not explicit by using background knowledge.
11. Infer links and connections between events, ideas, etc., deduces causes and effects, and detect such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
12. Distinguish literal and implied meanings.
13. Detect culturally specific references and interpret them in a context of the appropriate cultural schemata.
14. Develop and use battery of reading strategies such as scanning and skimming, detect discourse markers, guessing the meaning of word from context and activating schemata for the interpretation of the text.

2.3. Previous Research

There are some researches which are conducted a research about cognitive styles before this study carry out, researcher relates this study from the previous research which has similarity that can be used to material review. The first, a study which is done by Blanton (2004) examined the influence of students' cognitive style on a standardized reading test administered in three different formats. This subject of the study is the students of the reading class at Daytona Beach Community College in Daytona Beach, Florida. The participants were given a multiple-choice test, constructed response test, and un-timed multiples-choice test. The finding of this study indicated that cognitive style had more impact on students' performance on standardized test of reading comprehension than did ethnicity or gender. The un-timed multiple-choice format also had an equalizing effect on the means of the scores for the participants.

Yu Cao (2006) explored the effects of field dependent-independent cognitive styles and cueing strategies on students' recall and comprehension of two hundred thirty-eight undergraduate students of Virginia Tech. The results showed that field independent outperformed field dependent in all tests. There were no significant differences for the three treatments which are given to the participants. A significant interaction was found between filed dependency and cueing strategy.

Salmani-Noudusan (2007) conducted a study by the title "Is Field Dependence or Independence a Predictor of EFL Reading Performance?" One thousand, seven hundred, forty-three freshman, sophomore, junior, and senior students, all majoring in English at various Iranian universities and colleges took part

as the participants of the study. Group embedded figures test and 1990 version of IELTS administered to the participants and revealed that individuals' cognitive styles resulted a significant difference in their overall test performance.

Another study try to investigate the relationship among cognitive learning styles, motivation and strategy use in reading English as foreign language, this study conducted by Yea-Ru Tsai (2012). The purpose of this study is to investigate the correlation among three major dimensions of individual learning styles, motivation and strategy use in reading English as foreign language. 422 undergraduate Taiwanese students enrolled as the participants in this study. The correlation analysis revealed that there was a strong correlation between motivation, reading strategy use and reading performance.

In this study researcher will conduct a research which tries to investigate the relationship between cognitive style and reading comprehension ability. The current study will be conducted to the 13 undergraduate students of English education department of University of Muhammadiyah Gresik in 4th semester. The reason researcher conducting the correlation, because from the previous study measuring the cognitive style influence to kind of different format test of reading (Blanton, 2004) not to the ability of the reading itself, it indicating the focus is not only cognitive style and reading comprehension only, but the one of the skill, in this case is format of the test and test performance (Salmani-Noudushan). While another researcher, Yea-Ru Tsai (2012) investigating three focuses, the learning style, motivation and strategy use in reading. What the researcher aim in this research is to examine the correlation between cognitive style and reading comprehension ability of the EFL learners. The

researcher wants to know whether the cognitive style has impact or influence to the EFL learners' reading ability or not.