

# THE EFFECT OF STUDENTS' COGNITIVE STYLE ON THEIR READING COMPREHENSION

**Suri Widhya Kesuma, Hery Yufrizal, Huzairin**  
Suriwidkes@gmail.com

## Abstract

Tujuan penelitian ini adalah untuk menemukan apakah gaya kognitif siswa berpengaruh terhadap prestasi pemahaman membaca mereka, dan seberapa signifikan pengaruhnya. Desain penelitian ini kuantitatif menggunakan non-correlational of ex post facto design. Populasi dari penelitian ini adalah siswa kelas delapan di SMP. Sampel penelitian sebanyak 60 siswa. Instrumen yang digunakan adalah kuisioner gaya kognitif dan tes pemahaman membaca. Data yang terkumpul dianalisis menggunakan *Pearson Product Moment*, *One-Way ANOVA* di SPSS 16.0. Hasil penelitian menunjukkan bahwa nilai f-table dari gaya kognitif terhadap prestasi pemahaman membaca siswa 2.363 dengan nilai signifikansi .130 lebih besar dari f-value (.05). Dapat disimpulkan bahwa tidak ada hubungan yang signifikan antara gaya kognitif pada prestasi pemahaman membaca siswa. Namun, nilai rata-rata siswa independen lebih tinggi dari nilai siswa dependen. Dapat disimpulkan bahwa, bidang independen adalah gaya kognitif yang lebih baik pada pemahaman membaca siswa dibandingkan dengan bidang dependen.

The objective of this study is to find out whether any significant effect of cognitive style on students' reading comprehension. This is quantitative research applied non co-relational of ex post facto design. The population was the eight grade students of SMP. There were 60 students as the sample. The instruments are in the form of questionnaire about cognitive style and reading comprehension test. The data were analyzed by using Pearson Product Moment- One Way ANOVA in SPSS 16.0. The result showed that F-table score of cognitive style on students' reading comprehension is 2.363 and the significant value is .130. It concluded that there is no significant effect of students' cognitive style on students' reading comprehension. Moreover, the mean of students' field independent score was higher than the students' field dependent. It can be concluded that, independent field was the better cognitive style in reading comprehension than dependent filed.

**Keyword:** cognitive style, effect, reading comprehension

## INTRODUCTION

Nowadays, English teachers and students need to improve their English by mastering the four language skills; listening, speaking, reading and writing. Furthermore, the four skills had their own functions to support the improvement of English. Listening and speaking will be naturally learned by people, while reading and writing were more difficult to be studied. Reading is one of the important skills which must be learned by students in order to master English well and it is one of the language skills that cannot be separated from other language skills because the students' ability in one aspect will support their ability in mastering the others.

By reading, the students can access much information which might have otherwise been unavailable, especially in English textbook. English textbook is one of the mediators which can be used in teaching learning process for junior high school students. In the book, there are some examples of the texts that are learnt and comprehend by the students differently in every grade. The main goal of reading a text as it has been mentioned by Chastain (1975) is comprehension. Talking about reading comprehension, it must also be popular with reading aspect. Nuttal (1982: 109) states there are five short reading skills 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).

### 1. Determining main idea

Determining idea is a skill to grasp and find the main point of the passage by summarizing and looking for repetition of ideas/words.

### 2. Finding the specific information or part of text

Finding the specific information or part of text means looking for the information that relevant to the goal in mind and ignores the irrelevant.

### 3. Finding reference

Reference is the intentional use of one thing to indicate something else in which one provides the information necessary to interpret the other. Finding reference means interpreting and determining one linguistic expression to another.

### 4. Finding inference

Inference is good guess or conclusion drawn based on the logic of passage. Finding inference means the reader imply the sentences or passages understand and conclude it logically.

### 5. Understanding vocabulary

Understanding vocabulary means comprehend what the words mean. When vocabulary mastery improves, comprehending will be deeper. Since comprehension is ultimate goal of reading, the reader cannot overestimate the importance of vocabulary development.

By learning the elements of reading, it can influence students reading comprehension. Although they are thought by the same teacher, but the result of their reading comprehension will not always be the same. It is affected by some factors. From the

internal factors of students, their reading comprehension can be influenced by their learning style, their motivation, and their cognitive style. In the other hand, students' reading comprehension can be affected by the teachers' role as the external factor.

Teachers also have function as an educator, as a facilitator and motivator for their students in the class. Similarly, teachers can identify strong style patterns in their classes and make effective use of such information by devising lesson plans which accommodate individual learning style preferences. Students can enhance their learning power by being aware of style areas in which they feel less comfortable--and by working on the development of these--thus, providing avenues to foster their intellectual growth (Kang: 1999). But unfortunately, sometimes the teachers give the materials or knowledge to their students without considering some aspects from their side. It looks like natural's law in education. That is one of the factors that make students have low achievement. In fact, none of the students has the same achievement in getting the required goal, although they have received the same treatment from the teacher.

The other factor is psychological factor which can influence the students' achievement in teaching-learning process. There are many characteristics of the students when they learn at school. Such as, some students are like to have discussing with the friends when they have read something; some students tend to be individual when they want to read something, have quick response to the teaching process, slow in understanding the materials, interested in specific or general things when they are

reading or learning. The way when students learn something in general or particular, then the solution they make for solving the existed problems, it relates to the link between their personality and cognition. This link called cognitive style. Several cognitive style constructs have been identified through research.

Durodoye and Hildreth (1995) points that cognitive style is now defined within the dimensions of the psychological processes an individual utilizes to perceive and react to his/her environment. Luk (1998: 151) adds that cognitive style reflects an individual's preferred way of actively processing and transforming information, categorizing new knowledge, and integrating it within the memory structure. Tennant (1988) indicates that cognitive style is a consistent approach that an individual uses to organize and process information. Riding (1997: 21) further describes cognitive style as one's "habitual preference" for processing information for the completion of specific mental tasks.

Cagley (1983) states that at least there are a dozen different cognitive style dimensions have been systematically studied. However, field dependent and field independence have received the most attention of all the cognitive style dimensions. Even though later researchers have coined new terms, such as "analytics" and "wholists" (Riding, 1998), "reflectives" and "impulsives" (Kagan and Kogan, 1970), "divergent" and "convergent" (Bahar and Hansell, 2000), the characteristics ascribed to these processing styles are reflective of those associated with field dependent or independent.

The concepts of Field Dependence (FD) and Field Independence (FI) were first introduced by Witkin (1954) to describe individual differences in tendencies to rely primarily either on external visual cues or internal gravitational or body sensations for the perception of the upright. Later, they tried to link people's performance to their ability to visually separate an item from a complex context or field.

In this research, the researcher focused on field independent-dependent as one of cognitive styles in style of learning. This was important for the teachers to know the cognitive style especially field independent and field dependent of their students, so they can easily find the approaches that suitable for the students. Because of the teacher knowledge about the characteristics of their students, it would help the teaching learning process more enjoyable.

In reference to this situation, the researcher was interested in carrying out a research on the differences in reading comprehension through the students' field independent and students' field dependent. Field-independent persons are the persons who have more analytical thought, self-respect and also have high self-confidence. On the other hand, field-dependent persons are the persons who are more sociable, communicative and tend to be more depend on the other people.

## **METHOD**

In this research, the researcher aimed to find the effect of cognitive style on students' reading comprehension. To conduct the research, the researcher used non co-

relational of *ex post facto design* (Setiyadi, 2006). Here, the researcher only administered the questionnaire to know students' cognitive style and reading comprehension test. So, there was no treatment or experiment of any kind to subjects. The researcher gave the questionnaire first, then the process followed by reading comprehension test. After that, the data gained from the questionnaire and test was analyzed to see whether cognitive style has a significant effect on students' reading comprehension or not. The researcher used quantitative method to analyze the result of research. This method was used to find the effect of cognitive style on students' reading comprehension.

In this research there were two variables i.e. dependent and independent variables. The dependent variable was students' reading comprehension and independent variables were students' cognitive style. The score showed a data about students' achievement in questionnaire of cognitive style and their reading comprehension which can be used to identify the effect of those two variables. The population of this research was the students of the eight grade of SMPN 21 Bandar Lampung. There were 10 classes that consist around of 29-30 students for each class. According to Suharsimi (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. If the population is larger than one hundred (100), the sample can be taken between 20-25 % from the population. Moreover, the researcher took 20% from the populations. Based on the population above, the researcher has determined the sample by using simple random sampling where every individual in

population has probability to be chosen as the sample. It meant that the sample was 60 students from the total population in this research.

The instruments were testing about cognitive style and reading comprehension. The researcher gave the reading test to the students for both of groups, here were field-independent and field-dependent. The test consisted of 50 items and it allocated within 80 minutes.

## **RESULTS AND DISCUSSIONS**

### **The Effect of Students' Cognitive Style on Their Reading Comprehension**

The first researcher's objective in conducting this research was to describe the effect of cognitive style on students' reading comprehension. In order to provide a meaningful explanation of this scientific question, the researcher calculated the data by using Pearson Product Moment, One-Way ANOVA in SPSS 16.

Based on the calculation, the researcher found that the F-table score of cognitive style on students' reading comprehension is 2.363 and the significant value is .130. In other words, the effect of cognitive style on students reading comprehension achievement will be said significant at the level of .05, if the coefficient significant score was lower than .05. But, it can be seen from the table above that the coefficient significant score is .130, which means that the score was higher than the coefficient significant at the .05 level ( $.130 > .05$ ).



Based on the result above, it can be concluded that there is no significant effect of cognitive style on students' reading comprehension. It meant that each of field independent and field dependent as students' cognitive style do not have a big influence on students' reading comprehension.

## **DISCUSSION**

In this research, it is found that there is no significant effect of cognitive style on students' reading comprehension. It means that there is no significant difference among field independent and field dependent in achieving students' reading comprehension. But relatively, this research found that field independent tends to be the best cognitive style among others in affecting students' reading comprehension achievement. In line with it, students' field independent had high concentration in doing the reading test, they were not influenced by their around situation when they did the test. The students in field independent group had high self confidence. It made the students more focused in answering the test and the students in field-independent cannot be influenced by the other students. Field- independent people are free of the influence of the whole field.

## **CONCLUSION**

It can be concluded that there is no significant effect of cognitive style on students' reading comprehension. It meant that both of cognitive style has no significant difference on students' reading comprehension achievement. But, relatively, it is

found that field independent tends to be the best among other cognitive styles in affecting students' reading comprehension.

## REFERENCESS

- Bahar, M. & Hansell, M. 2000. *The relationship between some psychological factors and their effects on the performance of grid questions and word association test*. Educational Psychology, 20, 349-361.
- Cagley, C. 1983. *Field dependence/independence as a predictor of inferencing and problem solving abilities in community college students*. Boca Raton: Florida Atlantic University Dissertation.
- Chastain, K. 1975. *Developing second language*, London. UK: Oxford University Press.
- Durodoye, B. & Hildreth, B. 1995. *Learning styles and the African American student*. Education. 116(2).
- Kagan, J. & Kogan, N. 1970. Individual variation in cognitive processes. In P. H. Mussen (Ed.), *Carmichael's Manual of Child Psychology* (3<sup>rd</sup> ed.), 1, 1273-1365. New York: John Wiley & Sons, Inc.
- Kang, S. 1999. *Learning Styles: Implications for ESL/EFL Instruction*. FORUM, Vol 37, No 4.
- Luk, S. C. 1998. *The influence of a distance-learning environment on students' field dependence/ field independence*. The Journal of Experimental Education, 66, 149-160.
- Nuttal, C. 1982. *Teaching Reading Skills in a Foreign Language*. London: Heinemann Educational Books.
- Riding, R. 1998. *Cognitive style and problem behavior in boys referred to residential special schools*. Educational Studies, 26, 205-222.
- Riding, R. 1997. *Cognitive style and individual differences in eeg alpha during information processing*. Educational Psychology, 17(1 and 2), 219-235.
- Setiadi, Ag. B. 2006. *Metode Penelitian untuk Pengajaran bahasa Asing*. Yogyakarta: Graha Ilmu.

- Suharsimi, A. 2010. *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Tennant, M. 1988. *Psychology and adult learning*. London: Routledge.
- Witkin, H. A. 1976. *Cognitive style in academic performance and in teacher student relations*. San Francisco, CA: Jossey-Bass.