

# A COMPARATIVE STUDY BETWEEN FIELD-INDEPENDENT AND FIELD-DEPENDENT STUDENTS IN READING COMPREHENSION ACHIEVEMENT

Dwi Artha Rini, Ujang Suparman, Sudirman  
Email: [dwiartharini@rocketmail.com](mailto:dwiartharini@rocketmail.com)

## Abstract

Tujuan dari penelitian ini adalah untuk membandingkan nilai-nilai antara siswa FID dan FD dalam memahami sebuah teks bacaan. Desain penelitian ini adalah Ex Post Facto yang terfokus dalam menemukan perbedaan antara variabel independen dan dependen yang melibatkan satu kelas penelitian beranggotakan 34 siswa. Hasil perhitungan menunjukkan bahwa Sig. (2-tailed) adalah 0.000, karena nilai rata-rata siswa independen adalah 72,38 dan nilai rata-rata siswa dependent adalah 56,56. Ini berarti bahwa adanya perbedaan yang signifikan antara siswa independent dan siswa dependent sejak Sig. (2-tailed)  $< \alpha$  ( $p < 0,05$ ,  $p = 0,000$ ). *Field-independent students* lebih baik dibandingkan dengan *field-dependent students* dalam memahami sebuah teks bacaan.

The objective of the research is to compare between FID and FD students in reading comprehension achievement. The design of this research is Ex Post Facto which concerns in finding the difference between independent and dependent variables involving one class numbering of 34 students. The result show that the Sig. (2-tailed) was 0.000, since the mean score in field-independent students is 72.38 and the mean score of field-dependent student is 56.56. It means that the difference of students score in field-independent group is significantly difference since Sig. (2-tailed)  $< \alpha$  ( $p < 0.05$ ;  $p = 0.000$ ). Field-independent students are better than field-dependent students in reading comprehension achievement.

**Keywords** : field-dependent, field-independent, reading comprehension achievement.

## INTRODUCTION

English teaching is intended to increase the students' ability in using English as a means of communication. Students should be able to master both oral and written form. In the class, students do not have the same achievement in getting the required goal although they receive the same treatment from the teacher. Based on pre observation, it is found that each student had different achievement level in four English skills. The differences happen because perhaps there were many factors that may have influenced the result of a study beside the treatment given by the teacher.

It was also found that students of SMAN 1 Ambarawa had difficulties in their reading comprehension. Students in XI Science 3 class consisting of 34 students had the difficulties in reading especially in determining inferences, reference, and finding main idea of the text. This fact is reflected in their score of reading gain 75, below the stand of KKM is 78.

Other facts also showed that there were certain characteristics of students at that school. For examples some students like to have a discussion with friends when they are reading something and students tend to be individual when they want to read something. There are students who like to socialize with their environment and there are some others, who prefer to be alone within their surroundings. In addition, within the learning activities, there are students who prefer working on tasks in groups or field dependent and others prefer to working individually or field independent.

In relation to personality, at least two types of personalities associated with the environment. In spite of it all, this is related to the personality of each individual, whether they are independent or dependent students. The differences of their personalities can happen because many factors that influence the students. The way of thinking, attitude and also students personality are psychological factors which may influence their achievement in teaching-learning process. Teacher professionalism in explaining and presenting the material may influence students' achievement. Besides personality, teachers should also be able to place the students who have field dependence and field independence, because such personalities may greatly affect their achievement.

Among the factors which may have much influence on language learning are cognitive and affective factors. One of the styles of learning is cognitive style that can be defined as a term used in cognitive psychology to describe the way individuals think, perceive and remember information (Mulyani, 2011). Field dependent and field independent are included in style of learning. In this research, the writer will focus her research on field independent and field dependent as one of cognitive style in style of learning.

Cognitive style can be interpreted as building dimension related to the way a person thinks or process information. It is supported by Suparman (2010:103) who states that cognitive style are usually defined as an individual's preferred and habitual modes of perceiving, processing and representing information. Moreover, Slameto (1991:162) says that cognitive style is attitude, choice or strategy that firmly determines the typical ways of someone in accepting, remembering, thinking, and problem solving. Attitude of the student can be influenced by students' opinion about a teacher, their classroom, and their school.

Cognitive style is important in teaching learning process because it describes how the individual acquires knowledge (cognition) and process information (conceptualization). Cognitive styles are related to mental behaviors which individuals apply habitually when they are solving problem. In general, they affect the way in which information is obtained, sorted and utilized. Cognitive style is usually described as a stable and persistent personality dimension which influences attitude, values and social interactions. It is clear that every individual in the world has his own way in constructing the things which are seen, remembered and thoughts by him/her (Mulyani, 2011:13).

Cognitive styles mediate between emotion and cognition (Brown, 2001). He provides an illustration as follows : a reflective cognitive style invariably grows out of a reflective personality or reflective mood. By contrast, an impulsive cognitive style appears out of the way he internalizes his total environment.

Students use cognitive processes in education to acquire knowledge, recall information, and process analyzation. The importance of cognitive styles in learning has gained increasing attention because, too often, discrepancies exist between school task and the diverse capabilities and styles of learners. As we all know, many learners are more intuitive, spontaneous, emotional, creative and people oriented. They are not linear learners.

Cognitive style is included in learning style. In learning style, there are five cognitive styles that are relevant to second language learning The examples of cognitive style are focused on this research are field independence and field dependence. Field independent style is the ability to perceive a particular, relevant item or factor in a "field" of distracting items.

In psychological terms, the "field" may comprise different things. It may be perceptual; it may be more abstract which may refer to a set of thoughts, ideas, or feeling. The psychology sides of the students can affect the learning process. Reardon and Moore (1988:354) have summarized that the reason field dependent and field independent stand out from the other cognitive styles are because it "involves perceptual and problem-solving ability, structuring a stimulus field, breaking up or disembodying such a field, suppressing irrelevant information and dealing with high information load, all of which are relevant to the instructional process". On the other hand, field-dependent style is the tendency to be "dependent" on the total field (Suparman, 2010:56).

Related to the statement above, the differences cognitive style that is field independence and field dependence which cause differences of students' reading achievement because they are different of thinking, remembering, problem solving and other factors.

According to Suparman (2010:56), field independent style is the ability to perceive a particular, relevant item or factor in a "field" of distracting items. In psychological terms, the "field" may comprise different things: it may be perceptual; it may be more abstract which may refer to a set of thoughts, ideas or feelings from which students' task is to perceive specific relevant sub items.

Field independence has advantages for the students in teaching and learning process. It is important because it affects on students' reading comprehension achievement. Students who have field independent style are able to differentiate parts from a whole texts, to concentrate on something without influenced by the surrounding and to analyze separate variables without the contamination of neighbouring variables.

Affectively, students who are more field independent tend to be generally more independent, competitive and self-confident (Suparman, 2010:57). They can control their action and faster in choosing their major field. This style helps the students to solve the problems they face in teaching learning activities. Therefore, their achievement, especially in reading comprehension achievement, will be better.

The examples of students who have field independent style is they tend to do their task individually because they think that they have self-respect and self-confidence. Moreover, they speak quickly without considering comprehensive ability of others.

Field dependence is a style in which one is affected by the surrounding. Field dependent style is the tendency to be "dependent" on the total field. That the parts embedded within the field are not easily perceived, although the total field is perceived more apparently as a unified whole (Suparman, 2010:56). Field dependent is important in teaching learning process since it helps students to cooperate with the others. They are more responsive as they interact with the people and their environment. Furthermore, they have a stronger interpersonal orientation and greater alertness to social cues. By giving a suitable treatment for field dependent students, they can get better achievement, especially reading comprehension achievement.

Reading comprehension depends on the accuracy and speed of graphemic perception, that is perception of written symbols, control of language relationship and structure, knowledge of vocabulary items and lexical combination, awareness of redundancy, the ability to use contextual clues and recognition allusion. According to Afflerbach (2007:12-13), reading is a dynamic and complex process that involves skills, strategies and prior knowledge. Reading is a "social event" and that reading is socially situated. Someone read, using skills and strategies in

relation to intellectual and social goals. Definition of reading includes the ideas that we read to construct meaning and that we must use particular skills and strategies to do so. For many language learners, reading is ranked first among the academic skills that they wish to gain mastery over (Grabe & Stoller, 2001; Richards and Renandya, 2002).

Reading comprehension is the crucial link to effective reading - a strong factor in our educational and professional lives. For many, reading comprehension also unlocks the door to a lifetime of reading recreation and enjoyment. It is supported by Caldwell (2008:4) who states that reading comprehension is the process of extracting and constructing meaning through interaction and involvement with written language. Furthermore, Kamil et al. (2011:91) state that in reading comprehension, the students tend to understand more when it is in the language they know better and when the text they are reading deals with culturally recognition context.

Dealing with the ideas above, Field dependence tend to come in a group of discussion than self study. In cognitive domain, they have low analytical ability in solving problem. Therefore, they need much time to solve a problem. Brown in Mulyani (2011) who point out that the field dependent person is thought to be more emphatic, open, and effectively, and cognitively perceptive of total pattern. Field-dependent is more responsive as they interact with the people and their environment. Field-dependent tends to have stronger interpersonal orientation and greater alertness to social cues.

The example of this style is the students who speak slowly in order to be understood by the others. In addition, students who waiting a clue, waiting the teacher's guide for the answer and student who choose their answer based on the dominant answer in the class are included in this group.

Among the factors which may have much influence on language learning are cognitive and affective factors. One of the styles of learning is cognitive style that can be defined as a term used in cognitive psychology to describe the way individuals think, perceive and remember information (Mulyani, 2011). Field dependent and field independent are included in style of learning. In this research, the writer will focus her research on field independent and field dependent as one of cognitive style in style of learning.

Reading achievement means students ability to read, identifying supporting text sentence, identifying topic sentence, identifying main idea, making reference, making inference/visual clues, analysing visual & context clues of the text and usually represent scoring ranging from 10 up to 100 (Suparman 2012).

The internal factor of reading comprehension. There are two things in internal factor; Motivation and interest. As Kahayanto's (2005:13) states that the internal factor means the factor which comes from the reader himself or usually known as personal factor, because the factor has existed inside the reader. Brown (2001:75) divide the motivation theory into two kinds; they are intrinsic and extrinsic

motivation. The most basic distinction is between intrinsic motivation, which refers to doing something because it is inherently interesting and enjoyable and extrinsic motivation, which refers to doing something because it leads to a separable outcome.

Interest is being one of the important factors in order to increase the students' comprehension achievement in reading. If one has interest to read, it means that he or she will get a good achievement. It is impossible to understand the text if he or she has no interest and motivation to read. Therefore, the higher students' interest, the higher their reading comprehension achievement.

The external factor of reading achievement. Reading Material and Teacher of reading are included in the external factor. In line with Reading Material, the material given to the students should be support their teaching learning process. The use of facilitation and media can help the student to understand the material. In line with teacher of reading, the teacher of reading should be interesting and careful in choosing the text and giving the tasks because they are related to the students' reading comprehension achievements.

The writer use narrative text to make a questions. Priyana, et al. (2008:91) says that narrative text entertains and instructs the reader. It entertains because it deals with the unusual and unexpected development of events. It instructs because it teaches readers that problems should be confronted, and attempts made to resolve them. A narrative or story is a construct created in a constructive format (written, spoken, poetry, prose, images, song, theater or dance) that describes a sequence of fictional or non- fictional events. Derewianka (1990: 32) states that the steps for contracting a narrative are :

1. Orientation: (introduction) in which the characters, setting and time of the story are established. Usually answer who? when? Where? e.g., Mr. Wolf went out hunting in the forest one dark glommy night.
2. Complication or problem: the complication usually involves the main character(s) (often mirroring the complication in real life).
3. Resolution: there needs to be a resolution of the complication. The complication may be resolved for better or worse/ happily or unhappily. Sometimes there are a number of complications that have to be resolved. These add and sustain interest and suspense for reader.
4. Re- Orientation indicates optional point. This means that stories do not always use this, and usually, it states the conclusions of the events on the writer's point of view.

Narrative can include stories such as:

1. Fairy tale
2. Fabel
3. Short story
4. Fantasy
5. Legend
6. Mystery fiction
7. Science fiction
8. Biography
9. Autobiograph

Narrative text is based on life experience and is person-oriented using dialogue and familiar dialogue. There are many types of narrative. They can be imaginary, factual or combination of both. They may include; (1) folktales, i.e., very old traditional story from a particular place that was originally passed on to people in a spoken form, e.g., Abu Nawas. (2) Wonder Tales, i.e., a story tells about something amazing, human's imagination, e.g., Harry Potter. (3) Fables, i.e., traditional short stories that teach moral lesson, especially one with animals as characters; these stories are considered as one group of animal stories, e.g., Winnie The Pooh. (4) legend, i.e., a story from ancient times, especially one that was to explain about natural events or to describe the early history of a place or people, e.g., Tangkuban Perahu. (5) Mystery, i.e., a story about something that difficult to understand or to explain which crimes and strange events are only explained at the end, e.g., Sherlock Holmes. (6) science fiction, i.e., a story that science oriented, e.g., Time Machine. (7) Fantasy, e.g., a story about pleasant situation that people imagine but it is unlikely to happen, e.g., Alice in Wonderland. (8) Historical Fiction, i.e., a story about people and events that is in or connected to the past, e.g., Bumi Manusia.

Concerning to the explanation of narrative above, the researcher will choose narrative text as the focuses of the research since on the curriculum, the students of the second year of senior high school have to be able to comprehend short text in form of narrative.

## **METHOD**

The research design of the research is Ex Post Facto which concern in finding a direct relationship between the independent and dependent variables. Ex post fact in this research is called a criterion group design that two groups of students will be compared on one measure.

The design is formulated as follow :

G1    T1  
G2    T1

Where :

G1    : Field independet as an independent variable  
G2    : Field dependent as an independent variable  
T1    : Reading achievement as dependent variable

The population of this research was all the second grade students at SMAN 1 Ambarawa in the academic year of 2012/2013 consisting of 34 to 35 students in each class. There were seven classes available at the second grade, and the researcher took one class as the try out class; it was XI IPA 3 and one class as the experimental class; it was XI IPA 1. Both of classes were chosen randomly through lottery drawing. The experimental class was classified into two groups namely, field-independent and field-dependent.

This quantitative research focused on cognitive styles in language learning. This cognitive learning is divided into two types, they are : field independence and field dependence. The material used for this research is reading narrative text. The data of students cognitive style was gained from questionnaire and the reading comprehension achievement data was gained from reading narrative text.

The researcher used the following procedure in order to collect the data:

1. Determining the research problem.  
The first step of this research was determined the problem. The writer was determined what kind of problems appear in the classes.
2. Determining the population and selecting the samples  
The population of this research will be the second grade students of SMA N 1 Ambarawa in the academic year 2012/2013 that consist of 7 class. The sample of this research is one class choosing randomly.
3. Administering the try out of reading comprehension and questionnaires  
This is to find out the quality of the test before it was used, whether the items were good or not validity, reliability, level of difficulty and the discrimination power. The researcher will first try out the instrument on another class in the same grade before the reading test is administered. The total items of the reading comprehension try out test will be 40 and it will be allocated within 60 minutes. The total items of questionnaire try out will be 30 item.
4. Administering the questionnaires  
The content of this questionnaire cover field-independent and field-independent. There will be 30 items of questionnaires.
5. Administering the reading test  
In this test, the students will be asked to do multiple choice test consist of 30 items of narrative reading comprehension questions.
6. Analysing the data  
In order to find out whether there is significant difference in students reading comprehension achievement of both groups, the data will be statistically computed through the Statistical Package for Social Science (SPSS).

## **RESULT AND DISCUSSION**

Try out test was conducted in XI Science 3 class on April 24<sup>th</sup>, 2013. In this case, the writer gave the questionnaire in order to get reliability of the questionnaires. The result shown that questionnaire number 2 and 30 has bad reliability. On April 25<sup>th</sup>, 2013 the students were supposed to do the reading comprehension test in order to get the validity and reliability of the test as well as to get level difficulty and discrimination power of the items test thus those can be used to select the items used to collect the data.

After the data had been analyzed using Pearson Product Moment, it was found that the reliability of half test ( $r_{xy}$ ) was 0.968. Then the data was computed by using Spearman Brown, it was found that the reliability of the whole test ( $r_k$ ) is 0.983. Based on the criteria of reliability cited on previous chapter, the reliability of the test is high, because 0.983 is included to high level of reliability. It can be said that the data collecting instrument in this research is reliable.

It has been cited in previous chapter that the test is considered valid if the test measures the object to be measured and suitable with the criteria (Hatch and Farhady, 1982:250). The test should be valid and in line with the reading comprehension theory. In order to measure whether the test has good validity or not, this research used content validity and constructs validity.

The rater concluded that the test had good content validity because it reflected the materials were taught by the teacher that is students are able to understand the meaning of short functional text and simple essay of narrative in daily activity context and to access knowledge and the objectives of teaching those are the students are able to identifying supporting text sentence, identifying topic sentence, identifying main idea, making reference, making inference/visual clues, analysing visual & context clues of the text.

From the calculation of difficulty level, showed that there was six items out of 40 items presented which was found to be easy item and there were eight items belong to difficult item. Then, the rest items belong to average level. From the calculation of discrimination power of try out test, it was found that there were two items belong to poor items and there were seven items belong to bad items. Then, there were six items belong to good items and the rest items had satisfactory discrimination power. It shows that there are 9 item is dropped, 7 items are revised and 31 items are used. In this research, all poor items were dropped. The difficult or easy items that fall in satisfactory level of discrimination power were revised and the average items which had discrimination power higher than or equal to 0.20 were used. At last, the researcher took 30 items as reading comprehension test.

There are 13 students belong to field-independent group and the mean score is 72.38. This finding relates to Suparman's (2010:57) that affectively, students who are more field independent tend to be generally more independent, competitive, and self-confident. In relation to the previous statement, it has been proved that students in field-independent group have high score in reading comprehension achievement. There are 16 students belongs to field-dependent group and the mean score is 56.56. It indicates that there is a significant difference of reading comprehension and students ability in learning language. The different characteristics of field independent and field dependent students supported them to have different way in learning language skill. The field dependent students liked to discuss with other people when they were doing something. In other words, they like to communicate more with their surrounding by asking questions to other persons.

Based on the findings, the writer concludes that each type of personality has their own potential in learning language. In this case, the result of this research proved that the field independent students have better achievement in reading comprehension than the field dependent ones.

## **CONCLUSION AND SUGGESTION**

In line with the result of the data analysis and discussion, the researcher draws the following conclusions :

1. There is significant difference between field-independent and field-dependent students in reading comprehension achievement at second grade of SMAN 1 Ambarawa. The statement is approved by the evidence on the reading score and the computation of t-test. The mean score of field-independent students, 72.38, is higher than that of field-dependent students, 56.56. The result of computation shows that the Sig. (2-tailed) is 0.000. It means tha students score of field-independent group is significantly different since Sig. (2-tailed)  $< \alpha$  ( $p < 0.05$ ;  $p = 0.000$ ).
2. Field-independent students are better than field-dependent students in reading comprehension achievement. Field-independent students tend to be more independent, competitive and self-confident. The field-independent characteristics contribute positive effects on their reading comprehension achievement.

Referring to the conclusions above, the writer gives some suggestions as follow :

For the Teacher

1. The researcher suggests that the English teachers should pay more attention to their students in terms of their personality types. English teachers should not judge their students' ability because they have different types of personality which makes different way on learning and it influences their learning achievement in reading comprehension.
2. The researcher suggests that the English teacher should give more attention to the field-dependent students in teaching reading especially in identifying main idea, identifying topic sentence, identifying supporting details, identifying reference and making inference also analysing visual & context clues. The teacher should train them to have more concentration, so their reading comprehension achievement will be better.

For Further Researcher

1. This research has focused on the six aspects of field-independent and field-dependent, namely independence, competitiveness, self-confidence, socialization, emphatic value and perception. It is better for further researchers to try to find other aspects than modify or use other type of questionnaire.
2. The future researchers are suggested to modify or use other type of reading aspects.

## REFERENCES

- Afflerbach, P. 2007. *Understanding and Using Reading Assessment K-12*. University of Maryland: College Park.
- Brown, H. D. 2001. *Teaching by Principles*. San Francisco: Addison Wesley Longman, Inc.
- Caldwell, J. S. 2008. *Comprehension Achievement: A Classroom Guide*. United States of America: Guilford Press.
- Derewianka, B. 1992. *Exploring How to Text Work*. New South Wales: Primary Teaching English Association.
- Grabe, W. and Stoller, F. L. 2001. *Reading for Academic Purposes: Guidelines for the ESL/EFL Teachers*. In M. Celce-Murcia (Ed). *Teaching English as a second or foreign language* (3rd ed.). Boston: Heinle and Heinle.
- Hatch, E. and Farhady. 1982. *Research Design and Statistics for Applied Linguistics*. London: New Bury House Production.
- Kahayanto. E. 2005. *A Comparative Study on Students' Achievement in Reading of the Education Study Program of Palangkaraya University who Entered through PSB and SPMB in Academic Year 2003/2004*. Unpublished Thesis. Palangka Raya: The Faculty of Teacher Training and Education University of Palangka Raya. <http://digilib.sunan-ampel.ac.id/files/disk1/188/jiptiain--syaefuddin-9384-9-bibliogr-i.pdf>. Accessed in 28 January 2013.
- Kamil, M. C., Pearson, P. D., Moie, E. B., Afflerbach, P. 2011. *Handbook of Reading Research Volume IV*. New York: Taylor and Francis e-Library.
- Mulyani. 2011. *A Comparative Study of Reading Comprehension Achievement between Field-Independent and Field-Dependent Participants at SMP NEGERI 16 Bandar Lampung*. Unpublished Script. Lampung: The Faculty of teacher Training and Education University of Lampung.
- Priyana, J., Saridewi, T. R. P., Rahayu, Y. 2008. *Interlanguage: English for Senior High School Students XII*. Jakarta: Pusat Perbukuan Depdikna.
- Reardon, L. B., & Moore, D. M. (1988). The effects of organization strategi and cognitives styles on learning from complex instructional visual. *International Journal of Intructional Media*. <http://scholar.google.co.id/>. Accessed in 23 January 2013.

Slameto. 1991. *Belajar dan Faktor-Faktor yang Mempengaruhinya*. Salatiga :  
Aneka Cipta.

Suparman, U. 2010. *Psycholinguistics: The Theory of Language Acquisition*.  
Bandung: Arfino Raya Publisher.

Suparman, U. 2012. *Developing Reading Comprehension Skills and Strategies*.  
Bandung: Arfino Raya Publisher.