Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.8, No.2, 2017

The Effects of Vocabulary Instructions on Students' Reading Comprehension across Cognitive Styles in ESP

Eny Kusumawati (1) Utami Widiati (2)
Malang State University (UM), Malang, Indonesia
Electronics Engineering Polytechnics Institute of Surabaya (EEPIS), Surabaya, Indonesia

Abstract
Many scholars in language learning and teaching agree that vocabulary plays a vital role in a language learning. However, the way the vocabulary is presented to language learners, whether explicitly or implicitly, becomes central discussion in language literature. This study investigated the effect of explicit and implicit vocabulary instructions on students' ESP reading comprehension across cognitive styles. Quasi experimental with pretest-posttest design involving 54 Mechatronics students at the Electronic Engineering Polytechnic Institute of Surabaya was employed in the study. The students were divided into two groups, field dependence and field independence, and received different vocabulary instruction from the teacher (the present researcher). Independent samples *t*-test and one way ANOVA used in analyzing the data revealed that the group receiving explicit vocabulary instruction outperformed the group receiving implicit vocabulary instruction in comprehending ESP reading. This suggests that explicit vocabulary instruction is more effective in promoting ESP reading comprehension than implicit one. The language practitioners can take it into account in teaching reading, especially in ESP context, to help improve students' comprehension in the reading.
Keywords: Explicit Vocabulary Instruction, Implicit Vocabulary Instruction, Field Independent, Field Dependent, ESP Reading Comprehension.

1. Review and Related Literature

In the university level, the teaching of the English for non-English Department students is different from that in the English Department students. In Non-English Department, English works as English for Specific Purpose, or called ESP, that is aimed at helping learners to understand the content of literacy for gaining myriad-new knowledge from the materials required in subject matters. The characteristics of ESP as Dudley and Evans (1997) said that (1) ESP is defined to meet specific needs of the learners, (2) ESP makes use of underlying methodology and activities of the discipline it serves, (3) ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

Mostly in content area of English for Specific Purposes (ESP), reading is taking the most view to see and pay attention. Reading is such a long and complex process and high in the L2 content. It demands the reader to have dual activations, understand the subject matters and the language at the same time. Heilman, Blair, Rupley (1981: 1) explained that reading is interacting with language that has been coded into print, reading is language process, and the end result of reading instruction is comprehension. Having the same idea, the theory of psycholinguistics, Goodman (1970) regards that comprehension is a bridge between the known and the unknown. It is something that humans do from birth. In comprehension information, one must relate the incoming new information to the pre-established concept he or she stored in his or her cognitive structure. The theorists gave conclusion that reading is not just kind of simple matter of translating or receiving a new information, but the reader should appropriate the ability to read well to understand and comprehend deeply of what is read by making inferences, evaluating, or judging the idea of the text.

Relate into the goal of reading comprehension of the reader purpose, the reader must be equipped with appropriate vocabularies. It is believed that vocabulary plays the most important part in reading comprehension in all languages as Nation (2000) said that:

> Educated native speakers of English known around 20,000 word families. A word family consists of a headword and its closely related inflected and derived forms. those estimates are rather low because the counting unit is word families, which have several derived family members and proper nouns are not included in the count. Native speakers add on average 1,000 word families a year to their vocabulary. These goals are manageable for non-native speakers, especially for those whose learning English as a second language, even they are away beyond what most learners of English as another language can realistically hope to achieve.

It could be concluded that the sufficient vocabulary means that the reader could get the meaning in the reading passage. Those theorists clearly said that vocabulary is placed as the main center in understanding reading passages. Especially in ESP reading, teachers need to be better understands the students' need, the way the teacher presents to the class, that without sufficient and appropriate English vocabulary, they will find it difficulties to deliver the idea or express the idea when they are teaching reading.

There are two ways of instructions to conduct his study. The first is to use explicit vocabulary instruction, well known as direct instruction. There are some steps to support, by setting a purpose of learning, telling the students what to do, the showing them how to do it, and finally guiding their hands-on application of the new learning. Luke (2014) describes that explicit instruction refers to teacher-centered instruction that is focused on clear behavioral and cognitive goal and out-comes. This, in turn is made 'explicit or transparent to learners'. Bernstein in Luke (2014) defines that explicit vocabulary instruction as if featuring strong classification and strong framing, clearly defined boundary knowledge and skill, and teacher-directed interaction.

Smith (2009) added that techniques such as webbing that involve students' own perspective in creating interaction that gradually clarify targeted vocabulary may be a way to combine direct teaching and incidental learning in one exercise. In the class when the teacher is presenting he or she can use students' personal experiences to develop vocabulary in the classroom, through informal activities such as semantic association students brainstorm a list of words associated with a familiar word, pooling their knowledge of pertinent vocabulary as they discuss the less familiar words on the list. Semantic mapping goes a step further, grouping the words on the list into categories and arranging them on the visual 'map' so that relationship among the words become clearer. Moreover, in semantic developing materials, words are grouped according to certain features, usually with the aid of chats that graphically depicts similarities and difference among features of different words. Then analogies are a useful way to enhance thoughtful decision about relationships among meanings of words. Some studies support that the explicit vocabulary instruction is more effective than other (Dakun, 2000; Hansen, 2009; Mazban, Kamalian, 2013; Zarei, Sepahian, 2015), and direct vocabulary instruction is useful for students at all ability levels (Cynthia, Johnson: 2009).

The second way is implicit instruction. It is a sequence of supports that involve a process, which takes place naturally simply and without conscious operations. It is different from explicit instruction, as Nagy (1997) believes that teaching vocabulary directly is wasting time. This major argument is that there are large numbers of words in English and therefore a large amount of time is needed to deliberately and explicitly present vocabulary. In his study, he simplifies that learners need long term and time to memorize and understand the vocabulary deeply. That is the reason that the instruction is needed as what in the implicit instructions suggested because the main purpose of vocabulary instruction is to help students to improve their comprehension. The extent vocabulary instruction is motivated by the relationship between vocabulary and reading comprehension. Between two ways of vocabulary instructions mention above, particularly in the content area of vocabulary instruction, rarely study is conducted to investigate implicit vocabulary instruction.

In the process of second language reading, it is believed that every individual is different. It can be assumed that are inherent in the learners and it can be predicted whether the learning will succeed or failure (Lightbown & Spada, 2006: 53). It has been observed that in the foreign language classes, some students improve rapidly while others struggle more and have very slow progress. This variance is due to the individual's different learning styles that refer to an individual's natural, habitual, and preferred way of absorbing, processing, and retaining new information and skill.

Cognitive styles are information processing habits representing the learner's typically model of perceiving, thinking, problem solving and remembering (Keefe, 1987:7; Saville-Troike, 2006; 87). Keefe specifically states that cognitive styles are related to, but different from intellectual abilities. To conduct this study, there are two different cognitive styles is used, there are Field Dependence (FD) and Field Independence (FI). As Witkin, Oltman, Raskin & Karp, (1971) that this division is based on the learners tend to see things more holistically (FD) or separate details from the general background (FI). Witkin et al (1971) further said that FI learners perceive things as distinct from their background field, while FD learners tend to be highly analytic and systematic and the FD learners more holistic. Thus, the term of FI and FD do not divide people into two distinct groups: there is simply a tendency in any person toward one mode or the other (Aljets, 1988 : 46).

There are some characteristics of FD and FI concluded by Witkin et al (1971) FD learners are more likely to be attentive to social frame, have a sensitive radar system to social components in the environment so that they are perceived as warm tactful, considerate, socially outgoing, and affectionate by others, pay more attention to verbal messages with social content, allow outside referents affects them considerably when defining their feelings and attitudes, tend to select the academic fields chosen by their peer group, commonly they prefer the social subjects rather than math-science. Meanwhile, FI learners tend to be more impersonal, cold, distant, and individualistic, more likely to be interested in the abstract and theoretical, are more likely to be aware of the needs and feelings they experience as their own rather than those of other people, favor areas of studies that call for analytic skills (mathematical and sciences). Some studies conducted that participants with FI cognitive style performed better in the test of reading comprehension than the participants with FD cognitive styles (Behnam, Fathi., 2009: Tinajero, Lemos ., Araujo., Ferraces., Paramo., 2012; Nezad, Shokrpour. 2012). Sealetsa, Moalosi, (2012) describe their research that the GEFT scores revealed that the students of Engineering and Technology faculty attracts students with analytical skills.

Conducting this study, PANORAMA (Edward, 1973) reading strategies is used to support the teacher in

the explicit vocabulary instruction class. PANORAMA is defined as a reading strategy consisting of a number of stages which are Purpose, Adaptability, Need to pose questions, Overview, Read and relate, Annotate, Memorize, and Assess (Edwards, 1973: 133). This reading strategy delineates three main stages in study situation: pre-reading stage, whilst-reading includes Overview, Read and relate, Annotate; and post reading stage includes Memorize and Assess.

The first facet of PANORAMA, which is "purpose of reading" has fundamental part in the success of reading. It is in line with Hudson (2007: 9) stated that "reading is motivated by the reader's particular purpose". Thus, teachers need to tell the students exactly what their reading purpose is, give them clear instruction about how to achieve it and explain how long they have to do this (Hamer, 2007: 286).

When L2 students read specific texts in classroom contexts, particularly in academic settings, they will engage with various types of reading that reflect different tasks as well as text which require different ways of reading. Teachers, furthermore, need to be aware of reading purposes with which teachers can design suitable reading tasks (Sulistyo, 2011: 79). The understanding of reading purposes will help the teachers to decide the kinds of assessment to evaluate the students' comprehension. Moreover, Sulistyo (2011: 79) shows that there is relationship among reading situation, reading purposes and reading demands as shown in the table 1.1.

Table 1.1 The Relationship among Reading Situation, Reading Purposes, and Reading Demand.

Possible Reading Situation	Reading Purpose	Reading Demand		
		Comprehension Level	Recall Level	Reading Speed
Using index, dictionary, or time table	Finding specific information	Selective	Low	Rapid
Correspondence	Overview main points and details	Selective	Moderate	Moderate
Reading newspaper, or magazines	Enjoyment, entertainment, or relaxation	Low	Moderate	Moderate to rapid
Buying a book	Overview of organization and content	Selective	Low	Rapid
Researching an article or report	Finding relevant information	Selective	Moderate	Rapid
	Getting main ideas/details	Moderate-high	Moderate	Moderate
Exam study summarizing	Findings main points	High	High	Slow
Criticism reading a contract	Analyzing content	Complete	High	Slow

(Source : Sulistyo, 2011: 79)

Based on the table 1.1, it is clearly shown that different reading purposes have fferent degrees of reading demands so that teachers need to inform the students that the degree of intensity in reading a text is flexible.

The second facet of PANORAMA is adaptability. Students need to be aware of the need for flexibility in their reading rates to accommodate different types of reading materials as well as adaptability. This concept is in accordance with the table 1.1 which shows that different text with different purposes will have different speed. The demand of reading speed will also correlate with the reading strategies employed whether the students use surveying, scanning, skimming, or doing intensive reading. In addition, particularly for L2 students, it is essential to get themselves accustomed to the new vocabulary, which might be encountered within the text. In this stage, it is possible for teachers to give brainstorming activity in order to link new vocabulary with their background knowledge. Vocabulary adaptation has its pivotal roles in L2 reading as is likely able to predict and reflect reading achievement level (Pikulski & Templeton, 2004 : 1) stating that "question and questioning when with a clear purpose can serve as effective and efficient teaching strategies that can assist students to enhance their reading comprehension". The questioning step is also in accordance with the scientific approach in K13 which includes observing, questioning, associating, experimenting, and networking.

The next step is overview in which students are asked to find out the topic of the text by looking at glance on the text features which include tittle, heading and subheadings, pictorial aids or graphs, etc. within the passage. It will help students to have general picture of the materials and main ideas without explaining the details. In addition this activity aims at activating the students' prior knowledge by linking their previous experience with the one they find in the text, and establishing the students' understanding about the theme or the

topic of the text (Sulistyo, 2011: 94).

As the continuation of he PANORAMA stages, the students come to the next step, which is read and relate. Students read intensively and carefully, locate the thesis statement, main ideas and supportive facts, and relate their experiential background to the materials to gain meaning and understanding. Students select information to find the answer of the questions posed previously. In addition, the combination between read and relate in PANORAMA reading strategy can stimuli students' critical thinking since they have to associate and connect the written information in the text with their prior knowledge or other discipline field.

After that, students need to pose questions, convert tittles, subheadings, statements, etc. into question before reading to find the answers. Students are asked to make questions as inquiry activities. This step helps the students to know what to look for, to engage with a text, to check their comprehension, and to construct memory representation (Rice, 2009: 4). Further Rice (2009) concludes that "questions-generation has proven to be an especially beneficially strategy for students". Besides, teachers are also possible to question the students in order to direct them to the topic discussed. This statement refers to Sulistyo (2011: 109)

The next step is memorizing. Students organize main concepts and facts into systems, which will facilitate them to recall the information needed, i.e. write on small cards, construct outlines and summaries that are meaningful and quickly being memorized, develop new methods of arranging notes, use acronyms to memorize key points and use mnemonics and association methods to retrieve vital information (Edwards, 1973: 134). This step is interrelated with the previous one, which is annotating. As stated previously, this step can be carried out in the form of summarizing in which students go to the main points of the information from the text in any means, for instance writing main points or mind mapping, and presenting the reading materials they have read in front of the class without looking at the note.

Since the steps of annotate and memorize are interrelated, non-linear note-taking strategy might become the manifestation. Makany, Kemp, & Dror (2009) state that non-linear note-taking is a strategy carried out on three columns; one containing the keyword concepts, and the rest is the space for students to make written summary of the keyword they noted. Based on this illustration, it is clearly seen that the first and the second column refers to the summary step. Moreover, it can also be done by using graphic organizers, e.g. concept mapping , KWL-chart, Herringbone charts, and so forth. It is also obviously seen that the steps of annotating and memorizing are also one of the applications of reading-and-writing integration.

The last stage of PANORAMA reading strategy is assessment that is aimed at checking the students' understanding on the content of reading materials. Firstly, students can test themselves by thinking and/or reviewing the materials they just got. Later, the teachers can administer a reading comprehension test, which is well designed to assess students' ability including lower order thinking as well as higher order thinking.

Regarding to the issues on the role of explicit and implicit teaching instructions and learning styles on the students reading comprehension, this study is aimed to investigate whether the main effect of those variables, the interaction among them and the percentage of effects contribution toward students' reading L2 content area ESP reading comprehension. In light of the background study, the research questions are formulated as follows:

1. Is there any difference in the reading comprehension between students taught using the explicit vocabulary instructions and the implicit vocabulary instructions?
2. Is there any difference in reading comprehension of students with field independence cognitive style under the explicit vocabulary instructions and those with field independence cognitive style under the implicit vocabulary instructions?
3. Is there any difference in reading comprehension of students with field dependence cognitive style under the explicit vocabulary instructions and those with field dependence cognitive style under the implicit vocabulary instructions?
4. Is there any interaction between the vocabulary instruction and students cognitive styles in reading comprehension?

2. Participants

The setting of this current study was at the Engineering Electronics Polytechnic Institute of Surabaya (Indonesia), it is unlikely to do random sampling. The two classes with 54 students could be accessed for the experimentation. Then, they have the same chance for being the sample of this current research as the college has the policy to randomly redistribute the students every academic year, which is aimed at avoiding superior classes. Those two classes were taught by two different teachers. The college suggested to deal with one English teacher for two different classes likely had a crash schedule. Regarding this condition, non-probability sampling was used in this study. Based on the coordination with the college management that and the English teachers, it was decided that the sample of this current quasi-factorial design are Group A and Group B. To avoid the bias, the researcher teaching activities was controlled and guided by the lesson plans.

3. Methodology and Design

The method used in this current research is quasi-experimental 2X2 factorial design study, to examine the effects of explicit vocabulary instruction on students' comprehension skill of L2 content area ESP in engineering reading by analyzing the mean differences between students who were taught using explicit vocabulary instruction and those who were taught using implicit vocabulary instruction.

Since this current research was conducted in the college setting which was not possible to randomly assign subjects to the treatment condition, the existing classes was used. The dependent variable in this research was the form of students' ESP reading comprehension while the independent variables were divided into active (or treatment) and attribute, active (or treatment) variables were those factors that the experimenter manipulates and to which he or she assigns subjects. Attribute variables are those characteristics that cannot be altered by the experimenter, the former is vocabulary instructions (explicit vocabulary instruction and implicit vocabulary instruction), and the later are the student cognitive styles (Field Independence, or FI, and Field Dependence, or FD). This research is not only to investigate the affects of two independent variables separately but also how they combined to influence the dependent variable, that is ESP reading comprehension.

There would be two groups under the observation treatments, by using explicit vocabulary instruction (EVI) and implicit vocabulary instruction (IVI). Both groups would be given Group Embedded Figures Test (GEFT), which are FI or FD. Then, ESP reading comprehension was used as the dependent variable, which is used to measure the effect of both treatments to those experiment groups. There are two strategies used in this study, the first group (EVI) were completed by PANORAMA reading strategies, and the other group (IVI) was completed by conventional reading strategies. The score of those two groups would be compared to determine the appropriate effects of the treatment instruction according to their cognitive learning styles.

3.1 The Difference of ESP students' reading comprehension between EVI group and IVI group.

Based on the result of posttest in EVI group and IVI group, it was shown that the mean scores of the groups were 77.4074 and 67.6852 respectively.

Roughly, it could be concluded that the main score of the EVI group was higher than the IVI group. In addition, provides detailed recapitulation of each group's post-test scores while table 3.1 gives the general summary of the descriptive statistics of the data between the two groups

Table 3.1 Descriptive Statistics of Posttest Data in both the Experimental Groups

			N	Range	Minimum	Maximum	Mean	Std. Deviation
Experimental Instruction	Explicit	Vocabulary	27	25.00	65.00	90.00	77.4074	7.51542
Experimental Instruction	Implicit	Vocabulary	27	37.50	45.00	82.50	67.6852	9.40351

Based on the Table 3.1 the students' scores in the EVI group ranged from 65.00 to 90.00 So that the range and standard deviation were 25.00 and 7.51542 respectively. Meanwhile, the students' scores in the IVI group showed that the interval ranged from 45.00 to 82.50, the range was 37.50, and the standard deviation was 9.40351. The difference of mean scores between the EVI group and IVI group is illustrated in Figure 3.1.

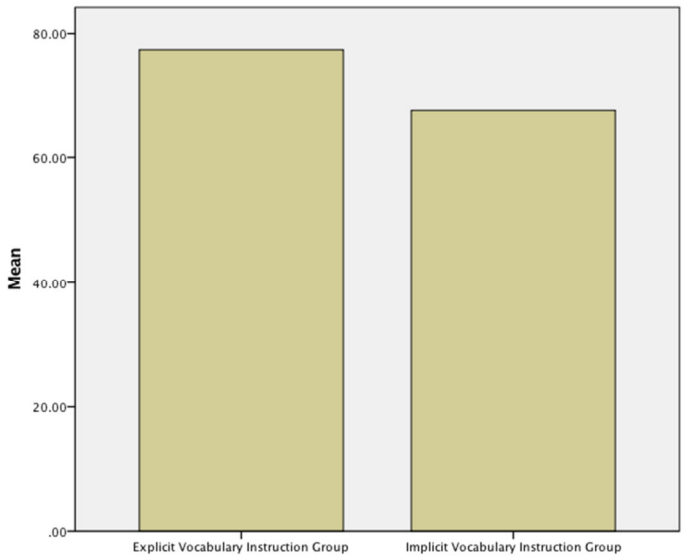


Figure 3.1 The difference of mean scores between the EVI group and IVI groups

3.2. The Difference in ESP reading comprehension with FI under the EVI and FI under the IVI

Based on the result of posttest of FI groups under the EVI group and FI under the IVI group, it was shown that the mean scores for FI under EVI group is 81.2500 and FI under IVI group is 71.7857 respectively. It could be concluded that the main score of FI under EVI group was significantly higher than the FI under IVI group. In addition, provides detailed recapitulation of each group's post-test scores while table 3.2 gives the general summary of the descriptive statistics of the data between the two groups.

Table. 3.2. The Descriptive Statistics of the Posttest Score of FI students under EVI Experimental group and FI students under IVI Experimental group.

Group	N	Range	Minimum	Maximum	Mean	Std. Deviation
FI under EVI group	18	17.50	72.50	90.00	81.2500	5.44018
FI under IVI group	21	22.50	60.00	82.50	71.7857	5.37022

Based on the Table 3.2 the FI students' scores in the EVI group ranged from 72.50 to 90.00 So that the range and standard deviation were 17.50 and 5.44018 respectively. Meanwhile, the FI students' scores in the IVI group showed that the interval ranged from 60.00 to 82.50, the range was 22.50, and the standard deviation was 5.37022. The difference of mean scores between FI students under EVI group and FI students under IVI groups is illustrated in Figure 3.2.

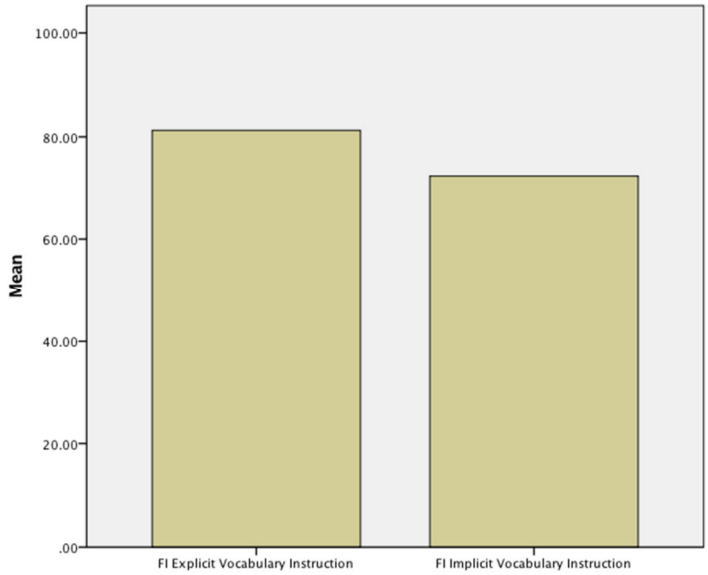


Figure 3.2. The difference of mean scores between FI students under EVI experimental group and FI students under IVI experimental groups

3.3. The Difference in ESP reading comprehension with FD under EVI and FD under IVI

Based on the posttest analysis of the FD students under EVI experimental group and FD students under IVI experimental group shown in the table 3.3

Table 3.3. The Difference in reading comprehension with FD under EVI and FD under IVI.

Groups	N	Range	Minimum	Maximum	Mean	Std. Deviation
FD under EVI group	9	15.00	65.00	80.00	69.7222	4.58333
FD under IVI group	6	15.00	45.00	60.00	53.3333	5.16398

From the data shown above, it was revealed that the mean score for FD students under EVI group was higher with 69.7222 than FD students under IVI group with 53.3333. Further more, the difference of mean score of FD students under EVI group and FD students under IVI group was pictured in Figure 3.3.

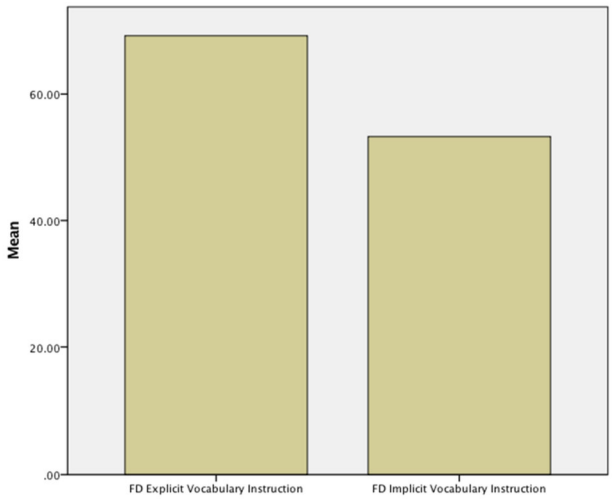


Figure 3.3 The difference of mean score of FD students under EVI group and FD students under IVI group.

3.4 The Interaction between the Vocabulary Instruction and Students Cognitive Styles in ESP reading comprehension.

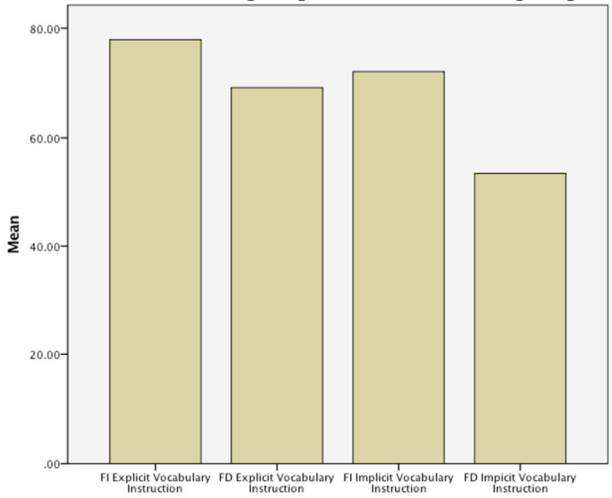
In this current factorial study, the cognitive styles were included as one of the factors in investigate, they were FI students group and FD students group, whether or not that EVI is effective toward ESP reading comprehension. Table 3.4, then shows the description of the data in the EVI group and IVI group.

Table 3.4. Descriptive Statistics of Data of FD and FI Students in the EVI Group and IVI Group.

Groups	Cognitive Styles	N	Range	Minimum	Maximum	Mean	Std. Deviation
EVI Group	FI	18	17.50	72.50	90.00	81.2500	5.44018
	FD	9	15.00	65.00	80.00	69.7222	4.58333
IVI Group	FI	21	22.50	60.00	82.50	71.7857	5.37022
	FD	6	15.00	45.00	60.00	53.3333	5.16398

Based in the recapitulation on the table 3.4, it is shown that in EVI group that there were 18 FI students. The data also shown that the mean scores for the FI students who were taught using EVI is 81.2500. Then, there were 9 FD students. The data showed that the mean score for the FD students who were taught using EVI is 69.7222. In addition, in IVI group there were 21 FI students. The data also showed that the mean score for the FI students who were taught using IVI is 71.7857. Then there were 6 FD students whose mean score was 53.3333. Based on the descriptive of the data above, it can be concluded that the mean score for FI students generally is the highest. It means that there are interactions among those variables. To complete the data, it is showed in the figure 3.4.

Figure 3.4. Mean difference of FI students group and FD students group in the EVI and IVI



IV. Conclusion

Based on the data analysis result, there are a number of conclusions that could be inferred. The first conclusion is that there is significant different between the EVI and IVI groups in their ESP reading comprehension taught using the explicit vocabulary instruction and the implicit vocabulary instruction. It is shown in the mean scores of two groups, that the mean scores of the explicit vocabulary instruction group higher than the mean score of the implicit vocabulary instruction group. The significant difference between the groups was caused by the different vocabulary instruction given by the teacher.

Second, there is significant difference in ESP reading comprehension of students with field independence cognitive style under the EVI group and those with field independence cognitive styles under the IVI. Based on the mean scores of field independence cognitive styles taught using the EVI is higher than those with field independence cognitive styles under the IVI. The significant difference between two groups was caused by the different way of the teachers gave the instructions in each classes. The EVI class used the PANORAMA (Edward, 1973) as the strategy is accommodating the need of the students with clear procedures. Otherwise in the IVI group, the traditional reading syntax is used to accommodate the group instruction as the caused of the lower mean scores of this field. The those students with field independence cognitive styles in the implicit vocabulary instruction class should be independently to activate their skill character of their cognitive styles to achieve their need in ESP reading comprehension. Because the syntax of the teacher used in the class did not accommodate their need.

Third, there is significant difference in ESP reading comprehension of students with field dependence cognitive style under the explicit vocabulary instruction and those with field dependence cognitive style under the implicit vocabulary instructions. It is shown in the mean scores of the two groups, that the field dependence cognitive style under the explicit vocabulary instruction is better that the field dependence cognitive styles under the implicit vocabulary instruction. The different instruction, which is used to teach is the cause of the different achievement of the two groups instructions.

Fourth, there is interaction between the vocabulary instructions and the students' cognitive styles in ESP reading comprehension. Based on the recapitulation data, it is shown that the explicit vocabulary instruction group with field independence cognitive style students is higher in the mean score than the field independence learning style with students under the implicit vocabulary instruction. And the data is shown that the students with field dependence cognitive style under the explicit vocabulary instruction is higher in the mean score than the students of the dependence cognitive style under the implicit vocabulary instruction. Based on the description of the data above, it can be concluded that the mean score for field independence students generally is higher than the field dependence students in both of the experimental groups in their ESP reading comprehension. This condition revealed because the field independence cognitive learning style could higher their achievement when they find the appropriate vocabulary instruction to increase their vocabulary numbers of knowledge in ESP reading comprehension.

It also happened in the field dependence cognitive style. Based on the character of this cognitive style, the students with field dependence cognitive style is higher in the mean score in the explicit vocabulary instruction group than the students under the field dependence cognitive style under the implicit vocabulary instruction group. Based on the students field dependence cognitive style character, that they would get better achievement in ESP reading comprehension when they were under the explicit vocabulary instruction treatment.

The findings of this present study may have implications for learners, teachers, and the syllabus designers. Learning vocabulary through the appropriate technique applied by the teacher would be more enjoyable for learners, because it moves away from boring and tedious. Furthermore, it is an effective technique for improving student's knowledge of vocabulary. Teachers can also use these findings to do maximum activation to enhance their students' ability to understand the ESP reading comprehension based on their students' cognitive styles.

REFERENCES

Best, John W,. Kahn, James V. 2003. *Research In Education. Ninth Edition*. A Pearson Education Company. Boston, M.A.

Behnam, Biook,. Fathi, Mousa. 2009. The Relationship between Reading Performance and Field Dependence/ Independence Cognitive Styles. Journal of Teaching English as a oreign Language and Literature, Islamic Azad University, North Tehran Branch, 1 (1), 49-62, Winter 2009.

Clark, Sheri., Seat, Elaine .,and Weber, Fred. 2000. *The Performance of Engineering Students on The Embedded Figures Test.* http://fie.engmg.pitt.edu/fie2000/papers/1038.pdf

Cynthia, Johnson Drew. 2009. *Why Teach Vocabulary?,* (Online), (http://www.yumpu.com/en/…/why-teach-vocabulary-by-cynthia-and-drew-johnson. Accessed July,1,2015.

Creswell, John W. 2012. *Educational Research. Planning, Conducting, and Evaluating Quantitative and Qualitative Research.* Fourth Edition. Pearson

Dakun, Wang. 2000. *Vocabulary Acquisition : Implicit Learning and Explicit Teaching*. National Institute of Education. REACT.

Dowlatabadi, Hamidreza. Mehraganfar, Mahvash. 2014. *The Causal Correlation Between Field Dependence/Independence Cognitive Style and Vocabulary Learning Strategies Among Iranian EFL Learners*. International Journal of Latest Research in Science and Technology Vol.3, Issue 4 ; Page no 97-103 July-August 2014. HTTP://.mnkjournals.com/ijlrst.htw

Dudley-Evans, Tony.1998. *Development in English for Specific Purposes. A Multi-Disciplinary Approach.* Cambridge University Press.

Ebrahimi, Ahmad. Zeynali, Shabnam, Dodman, Khaled. 2013. The Effect Of Field Dependence/Independence Cognitive Style on Deductive/Inductive Grammar Teaching. International Journal of Academic Research in Progressive Education and Development. www.hrmars.com/journals

Edwards, P. 1973. PANORAMA : A Study Technique. Journal of Reading 17 (2) 132-135 (online). (http://www.jstor.org/discover/40016545?sid=21105509648813&uid=2&uid=4.

Gardner, H. 1993. *Multiple Intelligences*. The Theory in Practice. New York: Basic Books.

Goodman, K, (1970). Reading as a Psycholinguistic Guessing Game. In H.Singer and R.b. Ruddell. (Eds). Theoretical Models and Processes of Reading. Newark, NJ: International Reading Association.

Heilman, Blair, Rupley. 1981. *Principles and Practices of Teaching Reading. 5th Edition*. Colombus Toronto Sidney: Charless E Merryl Publishing Company A Bell & Howell Company.

Hill, McGraw. 2002. *Personality Psychology. Cognitive Topics in Personality*. http://highered.mcgraw-hill.com/sites/0070366055/student_view0/chapter12/chapter_outline

Hansen, Kristina M. 2009. *Vocabulary Instruction, Reading Comprehension, And Student Retention: A Review of Literature*. Thesis. Submitted In Partial Fulfillment Of The Requirements For The Degree Of Master of Arts in Education. Northern Michigan University.

Harmer, J. 2007. *The Practice of English Language Teaching*. Malaysia. Pearson Education.

Hudson, T. 2007. *Teaching Second Language Reading.* New York. NY. Oxford University.

Keefe, James W. 1987. *Learning Style Theory and Practice*. National Association of Secondary School Principals 1904 Association Drive, Reston, Virginia 22091.

Kang, Shumin. 1999. Forum Vol 37 No 4, October – December 1999. *Learning Styles. Implications for ESL/EFL Instruction*. http://exchanges.state.gov/forum/vols/vol1137/no4/p6.htm

Marzban, Amir, and Kamalian, Kimia. 2013. *Effects of Implicit Versus Explicit Vocabulary Instruction on Intermediate EFL Learners' Vocabulary Knowledge*. ELT Voices-India. Desember 2013. Vol.3

Makany, Tamas., Kemp, Jonathan., Dror, Itiel E. 2008. *Optimizing the Use of Note-taking as an External Cognitive Aid for Increasing Learning*. British Journal of Education Technology/

Nagy, William E. 1988. *Vocabulary Instruction and Reading Comprehension*. Center for the Study of Reading. University of Illinois at Urbana – Champaign.

Nagy, William E. 1988. *Teaching Vocabulary to Improve Reading Comprehension*. ERIC Clearinghouse on Reading and Communication Skills. NCTE National Council of Teachers of English 1111 Kenyon Road, Urbana, Illinois 61801. IRA International Reading Association, 800 Barksdale Road, Newark, Delaware 19714.

Nezhad, Gholam Reza Haji Pour. Shokrpour, Nasrin. 2012. *The Impact of Task Type and Cognitve Style on Vocabulary Learning*. English Language Teaching; Vol 5, no.9, 2012. ISSN 1916-4742 E ISSN 1916-4750. Canadian Center Science and Education.

Pirozzolo, Francis J. and Merlin C. Wittrock. 1981. Neurospycological and Cognitive Processes in Reading. New Yorl: Academic Press.

Pikulsi, J John, and Templeton, Shane. 2004. *Teaching and Developing Vocabulary Key to Long-Term Reading Success*. Houghton Mifflin Reading.

Rajabi, Peyman. Rezaei, Nadia. Afshari, Hossein. 2013. *The Impact of Explicit vs Implicit Compensation Strategy Training on Iranian EFL Students' Reading Comprehension Performance.* International Research Journal of Applied and Basic Sciences.

Rice, M. (2009). Research-Based Reading Instruction: Reading Comprehension Skills and Strategies. Florida Center for Reading Research: Making Connections. Educators Publishing Service. Retrieved from http://www.fcrr.org/FCRRREPORTS

Sealesa, Oanthata J & Moalosi, Ritchie. 2012. *Cognitive and learning styles of the Faculty of Engineering and Technology students: University of Botswana.* University of Botswana. Gaborone, Botswana. World Transactions on Engineering and Technology Education. Vol. 10 No. 2, 2012.

Shakouri, Amir. Mahdavi, Mohsen. Mousavi, and Poterghali, Ali Asgar. 2014. *The Effect of Explicit and Implicit Vocabulary Instruction on the Reading Comprehension of University Students via Online Classroom*. International Journal of Multi disciplinary and Current Research.

Sulistyo, Gunadi Harry. 2015. *EFL Learning. Assessment At Schools. An Introduction To Its Basic Concepts*

*And Principle*s. Malang: CV Bintang Sejahtera.

Tinajero, Carolina. Lemos, Sonia Maria. Araujo, Margarete. Ferraces, M Jose. Paramo, M. Fernanda. 2012. Cognitive Style and Learning Strategies as Factors which Affect Academic Achievement of Brazilian University Students. www. Scielo.br/scielo.php?script=sci_arttext&pid=50102-79722012000100013

Witkin, H.A 1976. *Cognitive Style Academic Performance and in Teacher Students Relations. In Individual Learning*. Edited by Samuel Messick and Associates. San-Fransisco: Jossey-Bass.

Wyss, Robert. 2002. The Weekly Column. Article 102, June 2002. *Field Independent/Dependent Learning Styles and L2 Acquisition.* http://www.eltnewsletter.com/back/june 2002/art1022002.htm

Witkin H.A and Goodenough, D.R. 1981. *Cognitive Styles : Essence and Origins, Field Dependence and Field Dependence*. New York: International University Press.

Witkin, Herman A, Philip K, Oltman, Evelyn Raskin, Stephen A, Karp. 1992. *A Manual for The Embedded Figure Test. California*: Consulting Psychologists Press.

Curriculum Vitae

First writer: Kusumawati, Eny. She was born in Surabaya (Indonesia) in July, 19, 1973. She is an English lecturer at Electronics Engineering Polytechnic of Surabaya since 2005. After taking her Bachelor and Master degree of English department, in this moment she is continuing her study in Doctoral Program of English Department, focusing in ESP field.

Second writer : Widiati, Utami. She was born in August 13, 1965. She is a professor of ELT in Malang State University, Indonesia.