Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests

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Abstract

To determine the possible effects of gender on learning style - field dependent and field independent - this research study was conducted. This research is an Expo Facto design one. Two hundred subjects were selected voluntarily. They were selected from five different English Language schools in Qom. They were supposed to be from post intermediate level. So the researcher decided to choose male and female learners in post intermediate level in each institute. He selected four classes in each English language school, which are included 10 post-intermediate male and female students. Supervisors of each institute homogenized them. They were divided into two groups, male and female that both of them were experimental groups. There were no control groups. There was no treatment only their academic English book that is taught by their own teacher during the semester. At first, they should fill background questionnaires. After performing PET tests as General English proficiency test, they were supposed to answer the GEFT – Group Embedded Figure Test. This test is authorized to determine the students' dependency and independency to the field. The treatment was students' academic English book. Subjects were expected to study and cover the book completely according to a special procedure, which was suggested by Dr. Maghsoudi in 2013. Finally, they

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Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests
1

were supposed to answer Big Five Inventory tests. According to Dr. Maghsoudi, those students who received marks too close to mean (+1/-1 SD) were discarded from groups because they cannot be regarded as filed dependent or independent. So researcher tried to analyze one standard deviation above and below in bell shaped distribution. It means he discarded those students who were around mean actually in 68% area. After statistical analysis, research's hypothesis was supported by 95% of confidence.

Key terms: General English Proficiency, Neuroticism, Openness, Learning Styles (field-dependent and field independent)

1.1.   Introduction

There is a gap in teaching communities in most of classes. Students are seen as a case that they are out of behavior and style. They have two different needs. The first one is nature need and the next one is nurture need. Educational system only sees them as nurture (outside) needs and it can be said different educational methods are dictated to students from outside. It means there is no method that can be matched with all students in class. For example, Audiolingual method is a kind of nurture method that focuses on learning only through repetition. It is not focused on students' psychology. But CLA tries to focus on inside needs of students and focus on students' psychology. When teachers participate to the class, they face to different students with different cultures, nations, gender and learning style. One of the teachers' jobs is to choose a similar procedure, style and method for all students. It is not like a physician that visits different people with similar drug or tries to treat them in the same way. So teachers should know everything about students' needs and aware of their backgrounds. So according to the information they can conduct educational method and use it. So at first it should be mentioned a definition for language. Any particular system of human communication can be regarded as a language. According to the philosophy expressed in the myths and religion of many people; language is the source of human life and power. In common usage, it can also refer to non – human systems of communication such as the language of bees. We cannot define language because it is a variable; it is described based on methodology. In this discussion, we deal with language aptitude.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   2

Language aptitude is the natural ability to learn a language, not including intelligence, motivation, interest, etc. it is thought to be a combination of various abilities such as the ability

to imitate sounds not heard before. In language learning and teaching at first following WH – question must be discussed: 1.Who? 2. What? 3. How? 4. When? 5. Where? 6. Why?

1. WHO

Who are the learners that you are teaching? What are their native language level of education and socioeconomic characteristics? What are their intellectual capacities abilities, and strengths and weakness? What life's experiences have they had that empowers their learning?

2. WHAT

3. HOW

- By the question "how" these three items are considered:

   A. Process: We talk about a general characteristics shared by all learners. How does learning take place? How can a person ensure success in language learning?

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and
Neuroticism Tests   3

B. Style: General characteristics of intellectual and emotional functioning that differentiate one person from another. /variation in person's speech or writing.

Variations like:

1- *Visually oriented / Auditory oriented*
2- *Impulsive* vs. *Reflective*
3- *Field dependent / Field independent*
4- *Ambiguity tolerance / Intolerance*

1- *Visually oriented / Auditory oriented:* Visual learners tend to prefer reading and studying charts, drawing and other graphic information. Auditory learners prefer listening to lectures and audiotapes.

2- *Impulsive* vs. *Reflective:* It is common for us to show in our personalities certain tendencies toward reflectively sometimes and impulsivity at other times. A learner with an impulsive style tends to make quick decisions in answer to problems; sometimes those decisions involve risk-taking. Impulsive person is usually faster reader but inaccurate.

3- *Field dependent / Field independent:* Field dependent is the tendency to be dependent on the total field so that the parts embedded in the field are not easily perceived. The learner has difficulty in studying a particular item when it occurs within a field of other items. In this research we are dealing with just one aspect of learning style that is described as filed dependent and field independent.

A filed independent learner is able to identify or focus on particular items and is not distracted by other items in the context. A filed independent style enables you to distinguish parts from a whole, to concentrate on something like reading a book in a noisy train station.

Witkin (1973), a pioneer in learning styles, defined learning styles in terms of a process. He argued that learning styles are concerned with the form rather than the content of the learning activity. Learning style refers to individual differences in how we perceive, think, solve problems, and learn. Witkin spent a great part of his academic career developing measures of learning style. His work concentrated on determining to what extent a person's perception of an item was influenced by the surrounding field in which the item appeared. He wanted to determine if "some people saw the tree, while others saw the forest" (sited in Maghsudi 2007).

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   4

Chapelle, (1995) pointed out that according to him whereas field-dependent people see the forest; field-independent learners see the tree within the forest. In theory, there are as many learning styles as there are learners, and the practical implication of learning styles for teaching-learning interactions are numerous. Nevertheless, in recent years, only a few of the possible number of styles have received the attention of L2 researchers; one of the most well researched areas is "field independence" (FI) or "field dependence" (FD). FI / FD refer to how people perceive and memorize information (sited in Maghsudi 2007).

Hall (2000) pointed out that the differences between FI and FD learners are more likely the result of "varying information processing skills such as selective attention, short-term memory encoding, and long-term recall at which field independent individuals are more accurate and efficient" (p. 72) (sited in Maghsudi 2007).

Brown, (1994) pointed out that imagine you have just arrived to a foreign country whose language you neither speak nor read. You are at the airport and your contact person is not there to meet you. To make matters worse, your luggage is missing. It is 2 A.M. and airport staff is scarce, and those that are present do not speak English. What will you do? Your response to this question will depend largely on the "cognitive styles" you happen to bring to bear, your general predisposition towards processing new information or challenges in a particular way (Skehan, 1991). For instance, if you are "ambiguity tolerant," your unfortunate circumstances will not easily fluster you. If you are "reflective," you will exercise patience. If you are "field independent," you will be able to focus on the relevant issue and not be distracted by unnecessary details (sited in Maghsudi 2007).

Students can enhance their learning power by being aware of style areas in which they feel less comfortable, work on the development of these, and thus provide avenues to foster their intellectual growth (Eliason in Kang, 1999). 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. Robert Wyss (2002) has created the following learning styles checklist to enable teachers of EFL gauge their learners' tendencies towards FI/FD. This kind of assessment does indicate students' preferred general learning styles.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   5

Learners whose response tend toward the right-hand side of the list, indicate a preference for FD, conversely, those who check more on the left show a preference for FI (sited in Maghsudi 2007).

4-   *Ambiguity tolerance / Intolerance:* Ambiguity tolerance is a style in which an individual is withstand or tolerate a high degree of uncertainty in a linguistic context.

Ambiguity intolerance is a style in which an individual is ill- equipped to talented a high degree of uncertainty in a linguistic context. For example some people are open – minded in accepting events and facts that contradict their own view; they are ambiguity tolerant. Others more closed- minded and dogmatic. Tend to reject items that are contradictory with their existing system; they are ambiguity intolerant.

Learners' style is always the most important issue for teachers and professors in applied linguistic. Jack C. Richard (1985) in his Dictionary of Language Teaching and Applied Linguistic gave a definition for Learning Style:

"Learning style/Cognitive style or cognitive strategy is the particular way in which a learner tries to learn something. In second or foreign language learning, different learners may prefer different solution to learning problems. For example, some may want explanations for grammatical rules; others may not need explanations. Some may feel writing down words or sentences helps them to remember them. Others may find they remember things better if they are associated with pictures. These are called differences of cognitive style."

Several different dimensions of cognitive styles are often referred to:

1. *Analytic* versus *Global*: It refers to where the learner focuses on the details or concentrates on the main idea or big picture.
2. *Visual* versus *Auditory* versus *Hands-on* or *Tactile*: It refers to different sensory preferences in learning.
3. *Intuitive/Random* versus *Concrete/Sequential* learning: It refers to difference between thinking in an abstract or nonsequential way versus a focus on concrete facts or a preference to approach learning in a step by step, organized fashion. The main goal of this research is to focus on gender of participants by different learning style such as field

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   6

dependent and field independent in FLL. We want to measure the effect of gender in choosing different learning styles by students.

Jack C. Richards (1985) defined the terms:

"A learning style is in which a learner tends to look at the whole of a learning task which contains many items. The learner has difficulty in studying a particular item when occurs within a "field" of other items."

A filed independent learning style is one in which a learner is able to identify or focus on particular items and is not distracted by other items in the background or context. Field dependence and independence have been studied as a difference of Cognitive Style in language learning. In addition to this definition, H. Douglas Brown (2007) in Principles of Language Learning and Teaching stated that: "The way we learn things in general and the way we attack a problem seem to hinge on a rather amorphous link between personality and cognition; this link referred to as **cognitive style**. When cognitive styles are specifically related to an educational context, where affective and physiological factors are intermingled, they are usually more generally referred to as **learning styles**. He also expressed the field independent style: "Your ability to perceive a particular, relevant item or factor in a "field" of distracting items. In general psychological terms, that field may be perceptual, or it may be more abstract and refer to a set of thoughts, ideas, or feelings from which your task is to perceive specific relevant subsets." And he also describe the term "field dependence style": "It is conversely, 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. Filed dependence is synonymous with field sensitivity, a term that may carry a more positive connotation. Therefore, the following hypothesis is formulated in the present study:

1. Iranian field independent EFL learners outperform their field-dependent peers in Openness and Neuroticism test.

1.2. Methodology

1.2.1 Subjects:

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   7

To accomplish the objectives of this study a total population of 200 males and females students of English school, Qom, Iran will be selected. Subjects will be homogeneous according to their level that is post intermediate. So a PET general English proficiency test will be used to measure students' General English Proficiency. Although the language proficiency level of the subjects due to administered placement test in the English school will be the same, to ensure the homogeneity and proficiency level of students a 43-item piloted PET Test will be administered to 20 classes totaling 200 students. Maybe they are so gifted students or vice-versa. Afterwards, 200 ones were randomly assigned to 2 groups. So we will have 1 male group with 100 members and 1 female group with 100 members. They are students of post intermediate English school who will graduated from university and were supposed to finish and will be graduated in the second semester successfully. In this research their gender are male and female that all of them are Iranian. This research will be studied in 5 different English schools of Qom. All of them have passed elementary, pre intermediate level successfully.

Group A: 100 males who will receive treatment during an educational year by their own teacher.

Group B: 100 females who will receive treatment during an educational year by their own teacher.

1.2.2. Instruments:

The instruments used in this study are as follows:

1. A background questionnaire:

In order to elicit information about participants, a background questionnaire was developed by the investigator. It covered issues such as the subjects' age, gender, linguality status, their parents' socio-educational background and occupation. The subjects were assured that the elicited information would be kept in full secrecy.

2. A General English Proficiency Test:

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   8

(PET General English Language Proficiency Tests) that determines the proficiency level of the subjects in English.

3. *Learning Style Test:*

A number of instruments have been developed to measure a person's learning style. One of the easiest to administer, especially in group situations, is the Group Embedded Figures Test (GEFT) (Witkin, Oltman, Raskin, and Karp, 1971). The GEFT is a perceptual test, which requires the subject to locate a figure within a larger complex figure. The GEFT, which comprises of 18 complex figures, can be administered in 20 minutes and can be quickly scored using answer templates from the test distributor. This test is designed to distinguish field-independent from field-dependent cognitive types; a rating which is claimed to be value-neutral. Field-independent people tend to be more autonomous when it comes to the development of restructuring skills; that is, those skills required during technical tasks with which the individual is not necessarily familiar. They are, however, less autonomous in the development of interpersonal skills.

4. *Big Five Inventory Test:*

A number of questionnaires are taken to students in order to unhide 5 criterions such as Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness.

44-item inventory that measures an individual on the Big Five Factors (dimensions) of personality (Goldberg, 1993).   Each of the factors is then further divided into personality facets.

The Big Five Factors are (chart recreated from John & Srivastava, 1999):

Big Five Dimensions	*Facet (and correlated trait adjective)*
Extraversion vs. introversion	**Gregariousness (sociable)** **Assertiveness (forceful)** **Activity (energetic)** **Excitement-seeking (adventurous)** **Positive emotions (enthusiastic)** **Warmth (outgoing)**
Agreeableness vs. antagonism	**Trust (forgiving)** **Straightforwardness (not**

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   9

	demanding) **Altruism** **(warm)** **Compliance(not stubborn)** **Modesty (not show-off)** **Tender-mindedness** **(sympathetic)**
Conscientiousness vs. lack of direction	**Competence (efficient)** **Order (organized)** **Dutifulness (not careless)** **Achievement striving** **(thorough)** **Self-discipline (not lazy)** **Deliberation (not impulsive)**
Neuroticism vs. emotional stability	**Anxiety** **(tense)** **Angry hostility (irritable)** **Depression (not contented)** **Self-consciousness(shy)** **Impulsiveness (moody)** **Vulnerability (not self-** **confident)**
Openness vs. closeness to experience	**Ideas** **(curious)** **Fantasy (imaginative)** **Aesthetics (artistic)** **Actions (wide interests)** **Feelings (excitable)** **Values (unconventional)**

Psychological researchers typically distinguish five major domains of individual differences in human behavior: cognitive abilities, personality, social attitudes, psychological interests, and psychopathology (Lubinski, 2000). The big Five Inventory (BFI) is a self-report inventory designed to measure the Big Five dimensions. It is quite brief for a multidimensional personality inventory (44 items total), and consists of short phrases with relatively accessible vocabulary. In psychology, the **Big Five personality traits** are five broad domains or dimensions of personality that are used to describe human personality. The theory based on the Big Five factors is called the **Five Factor Model** (FFM). The Big Five factors are *extraversion, agreeableness, conscientiousness, neuroticism and openness.*

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   10

A summary of the factors of the Big Five and their constituent traits:

1. **Extraversion** – (*outgoing/energetic* vs. *solitary/reserved*): Energy, positive emotions, surgency, assertiveness, sociability and the tendency to seek stimulation in the company of others, and talkativeness.

2. **Agreeableness** – (*friendly/compassionate* vs. *cold/unkind*): A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. It is also a measure of ones' trusting and helpful nature, and whether a person is generally well tempered or not.

3. **Conscientiousness** – (*efficient/organized* vs. *easy-going/careless*): A tendency to show self-discipline, act dutifully, and aim for achievement; planned rather than spontaneous behavior; organized, and dependable.

4. **Neuroticism** – (*sensitive/nervous* vs. *secure/confident*): The tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability. Neuroticism also refers to the degree of emotional stability and impulse control, and is sometimes referred by its low pole – "emotional stability".

5. **Openness to experience** – (*inventive/curious* vs. *consistent/cautious*): Appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience. Openness reflects the degree of intellectual curiosity, creativity and a preference for novelty and variety a person has. It is also described as the extent to which a person is imaginative or independent, and depicts a personal preference for a variety of activities over a strict routine. Some disagreement remains about how to interpret the openness factor, which is sometimes called "intellect" rather than openness to experience.

1.2.3. Design and Procedures

This project will be implemented on the basis of an ex-post facto design. The reasons behind choosing such a design are as follows:

1. No control group over the manipulation of the independent variables;

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   11

2. No treatment to be given to the subjects;

3. The present researcher in this study has to look for some degree of influence of the gender variable on FD/FID learning style rather than a cause and effect relationship.

At the beginning of the tests learners were justified about everything that they were expected to do. They were told that they have to answer Background questionnaires, PET tests, GEFT and Big 5 Inventory tests which are suitable for their levels. Easy start and stage number one of post-intermediate level were recommended.

The questionnaires were included 3 different parts.

At the first part, students were supposed to fill the background questionnaires including their:

1- The Name Of The School
2- Age
3- Gender: male / female
4- Educational level of your parents: (Nil / Below Middle / Middle / High School / Graduation / Post Graduation)
5- The occupation of parents
6- Your first language
7- The number of people in your family
8- The approximate monthly income of parents
9- The province and city of residence

Next part is included PET test that were gathered 43 multiple choice and open ended tests which measure their general English proficiency. Students were supposed to answer these tests according to their knowledge of grammar, vocabulary had been taught them during the second semester. According to my reader professor Dr. Maghsoudi in his research, the first phase should be accomplished in 1 hour 30 minutes.

The next part is to performing GEFTs in 20min. Also, they had to follow a specific procedure for answering GEFTs. This technique has got 3 stages that were explained for subjects. This technique which was offered by Philip K. Oltman, Evelyn Raskin, & Herman A.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   12

Witkin is as follow: in this phase they have to take a look at last page of Learning Style Test (LST), simple form page. All of the shapes that students have to realize are put in this page. This test is included 3 different sections. At first section, students have to find 7 different shapes that all are one-dimensional. In the second section, there are 9 different shapes that all are more complicated with both white and black color. And finally in the last section, students were asked to find 9 difficult multidimensional shapes. According to my professor the specific time should be about 20min.

Based on GEFT, Subject's scores range from 0 to 25. The higher the score above the group mean, the higher is the subject field-independent. Conversely, the lower the subjects' score below the group mean, the lower is the subject field-dependent. It must be stressed that learning styles are independent of intelligence. Field-dependence/field-independence is more related to the PROCESS of learning, not the APTITUDE for learning (sited in Maghsoudi 2007).

The last section is to performing BFI (Big 5 inventory tests):

Students were supposed to answer 44 multiple choice items in order to unhide 5 criterions in their personality. These criterions are included: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness.

2. Results and Discussion:

At first, in order to define Iranian field Independent (FI) EFL learners and field-dependent (FD) EFL learners, mean and standard deviation of the learning style's scores (GEFT) were calculated. Then +1 SD was defined as field independent (FI) EFL learners and -1SD was defined as field-dependent (FD) EFL learners. The following table shows the mean and standard deviation for learning style's scores. (GEFT)

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   13

Table 1: Descriptive statistic table for Learning style's scores (GEFT)

N	Valid	200
	Missing	0
Mean		17.21
Std. Deviation		5.162

The above table shows that the mean for EFL learners learning style's scores is 17.21 and their standard deviation is 5.162. So those students who received learning style's scores more than 2.372 are defined as field independent EFL learners and those who received learning style's scores less than 12.048 are defined as field-dependent EFL learners. As result, 2 independent groups for this test were denoted. By the way, the sample volume was decreased to 74 by new coding for scores.

In order to investigate this hypothesis, the following table, which is contained statistical indexes such as Mean, Std. deviation and Std. Error Mean for both independent groups (Field Independence and Field Dependence EFL Learners) in Neuroticism test:

Table 2: Descriptive Statistic for FI/FD EFL learners' performance variable in Neuroticism test

Learning Style	N	Mean	Std. deviation	Std. Error Mean

Language in India www.languageinindia.com **ISSN 1930-2940** **13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   14

Neuroticism	Field Dependence	39	21.64	6.409	1.026
	Field Independence	35	22.29	5.824	.984

According to reported values in above descriptive statistic table, it is shown that mean (standard deviation) for performance scores of 39 FD-EFL learners in Neuroticism test is equal 21.64 (6.409) and mean (standard deviation) for performance scores of 35 FI-EFL learners in Neuroticism test is equal 22.29 (5.824). It seems there is no significant difference between 2 groups. In other words, the mean (standard deviation) for performance scores of FI-EFL learners in Neuroticism test is the same as the mean (standard deviation) for performance scores of FD-EFL learners in Neuroticism test.

The following box graph has summary of descriptive statistic for (Minimum, Maximum, First Quartile, Mode and Third Quartile):

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   15
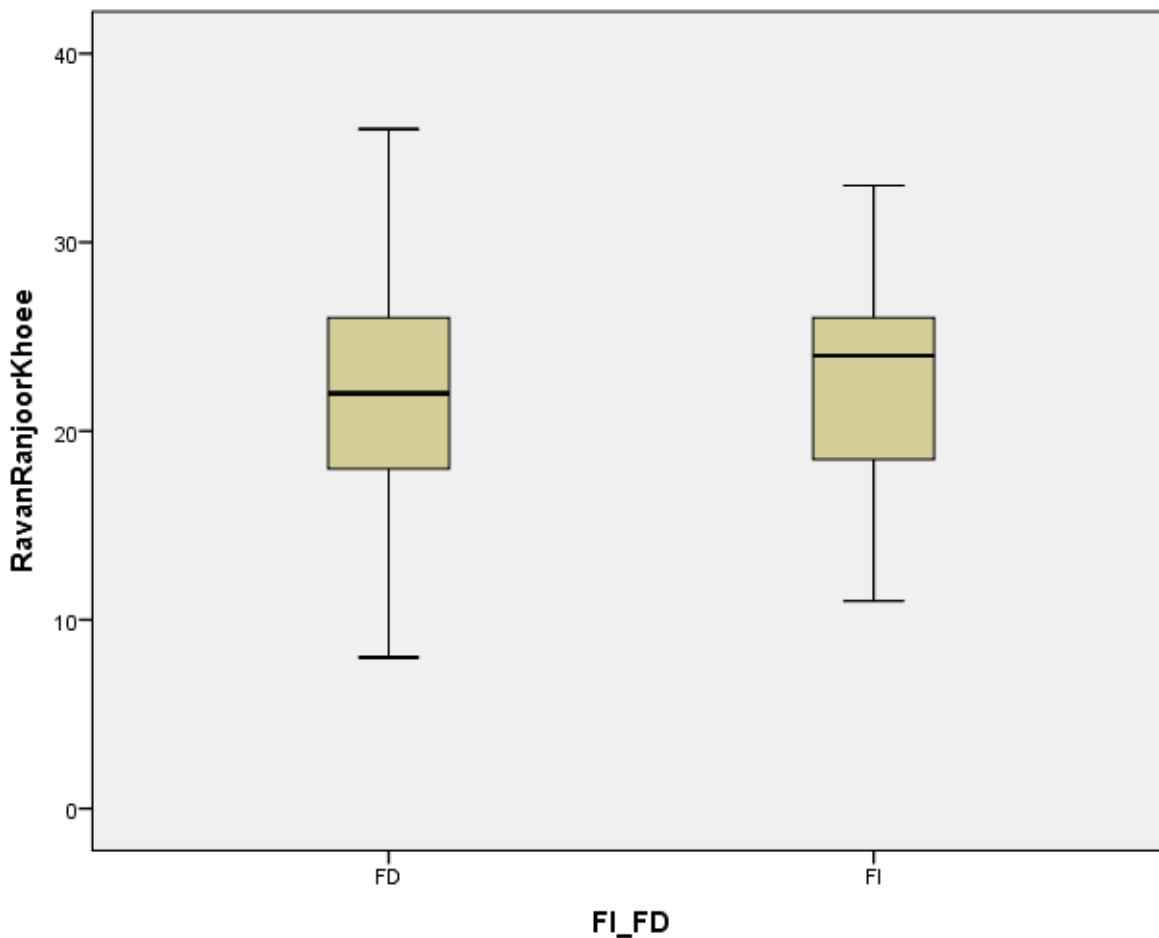
Figure 1: Box Graph for mean FD/FI-EFL learners' performance variables in Neuroticism test

Regarding the above box graph, the vertical axis shows Iranian EFL learners' performance scores in Neuroticism test and the horizontal axis shows learning style (FD/FI). It describes that Minimum, First Quartile and Mode values for FI-EFL learners in Neuroticism test are a little more than FD-EFL learners' Minimum, First Quartile and Mode values in Neuroticism test. But in Maximum point, there is a difference for all reported indexes. Totally, it seems that there is no correlation between Iranian EFL learners' performance in Neuroticism test and their learning style (FD/FI).

In other words, the FI-EFL learners' performance is similar to FD-EFL learners' performance in Neuroticism test.

16

Student's t-test is used in order to investigate the significant difference hypothesis between the means for FI-EFL learners' performance and FD-EFL learners' performance in Neuroticism test. The Student's t-test has different action for equality and inequality of variances in both groups. Therefore at first, it's necessary to test the hypothesis of equality of variances for both independent groups for EFL learners' performance scores in Neuroticism test by using Levene's Test that the results are shown in the following table:

Table 3: The Equality of Variance Test for 2 Independent Groups

		Levene's Test for Equality of Variances	
		مقدار فیشر (F)	Significant Level
Performance	Variances are Equal	.112	.739
	Variances are Unequal		

High significant level (Sig=.739) in above Levene's Test, states that there is no reason for rejecting the hypothesis for equality of variances for both independent groups (filed dependent and field independent).

As result, for both independent groups with equality of variances, the Student's t-test is used to investigate the equality hypothesis of means for both independent groups that their hypothesis is $H_0: \mu_1 = \mu_2$ against $H_1: \mu_1 \neq \mu_2$ and the following results can be seen in the table 30.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   17

Table 4: The t-test for Equality of Means in 2 Independent Groups

T amount	Degree of Freedom	Significance Level	Means Difference	Standard Error of Means Difference	95% Confidence interval for Means Difference	
					Lower Bound	Upper Bound
-.451	72	.653	-.645	1.430	-3.494	2.205

Since, the Student's t-test statistic value is equal (-0.451) with 72 degree of freedom, and the significance level (Sig=.653), then there is no reason for rejecting zero hypothesis (the hypothesis for equality of performance for both independent groups {FD and FI}) in Neuroticism tests. In other words, there is no significant difference between the means of FI/FD-EFL learners' performance scores in Neuroticism test. And also the 95% confidence interval for means differences in 2 groups is (2.205 and -3.494).

For better explaining significant difference between 2 groups, linear graph is presented for investigating means of Iranian FI-EFL learners' performance scores and means of Iranian FD-EFL learners' performance scores in Neuroticism tests:

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   18
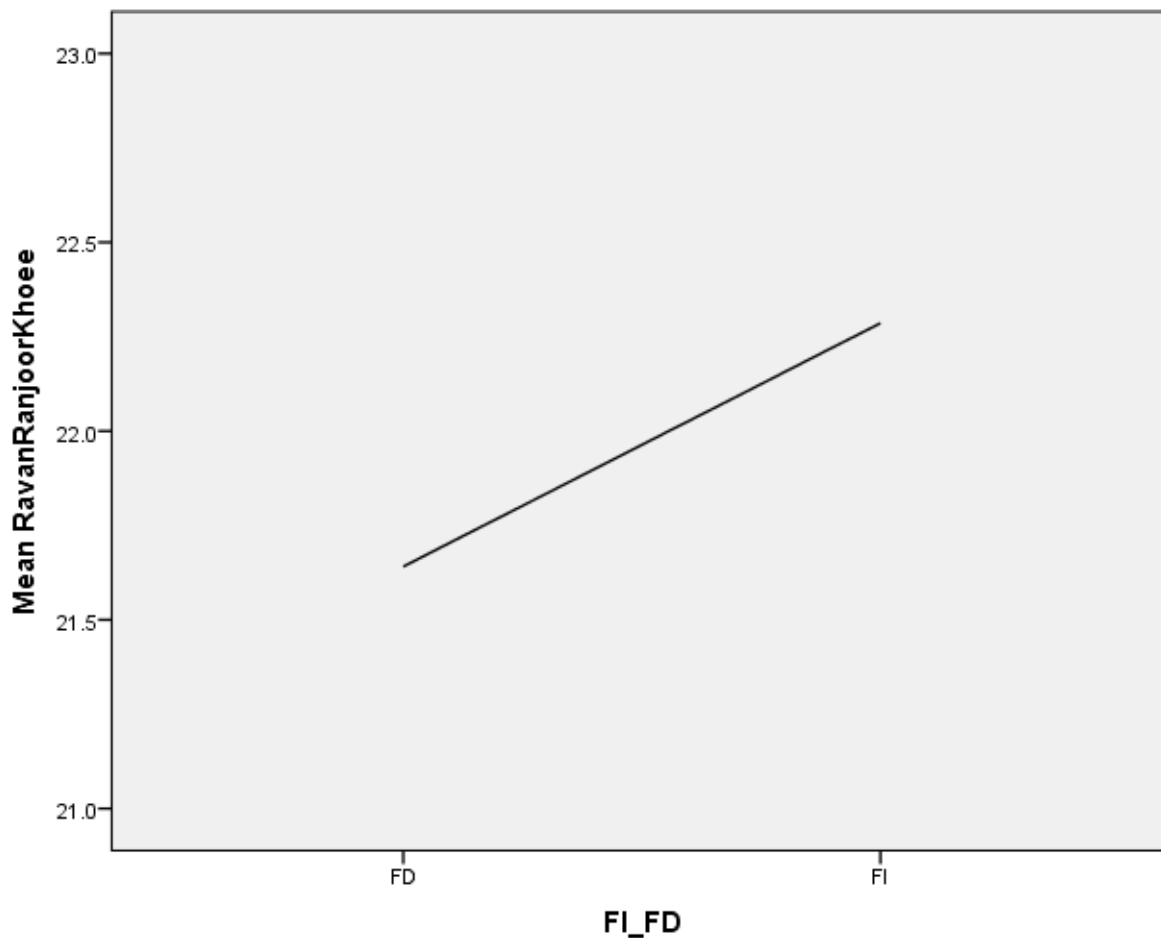
Figure 2: Line Graph for mean of FI/FD-EFL learners' performance scores in Neuroticism test

The above linear graph is drawn intuitively to investigate the difference between means of Iranian EFL learners' performance scores in Neuroticism tests (vertical axis) and EFL learners' learning style {FD/FI} (horizontal axis). According to the graph, it can be seen that the means of FD-EFL learners' performance scores is around 21.7 and the means of FI-EFL learners' performance scores is around 22.3 in Neuroticism tests.

It is clear that there is no significant difference between 2 independent groups. In other words, FI-EFL learners' performance is the same as FD-EFL learners' performance in Neuroticism tests. So the hypothesis is rejected.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   19

The following table is included statistical indexes such as Mean, Std. deviation and Std. Error Mean for briefly reporting from EFL learners' performance scores in Openness test for both independent groups (Field Independence and Field Dependence EFL Learners):

Table 5: Descriptive Statistic for FI/FD EFL learners' performance variable in Openness test

Learning Style		N	Mean	Std. deviation	Std. Error Mean
Openness	Field Dependence	39	34.54	7.145	1.144
	Field Independence	35	33.77	6.992	1.182

Reported values in above descriptive statistic table, express that mean (standard deviation) for performance scores of 39 FD-EFL learners in Openness test is equal 34.54 (7.145) and mean (standard deviation) for performance scores of 35 FI-EFL learners in Openness test is equal 33.77 (6.992). It must be considered that there is no significant difference between 2 groups. In other words, the mean for performance scores of FI-EFL learners in Openness test is the same as the mean for performance scores of FD-EFL learners in Openness test.

The following box graph has a summary of descriptive statistic for Minimum, Maximum, First Quartile, Mode and Third Quartile:

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   20
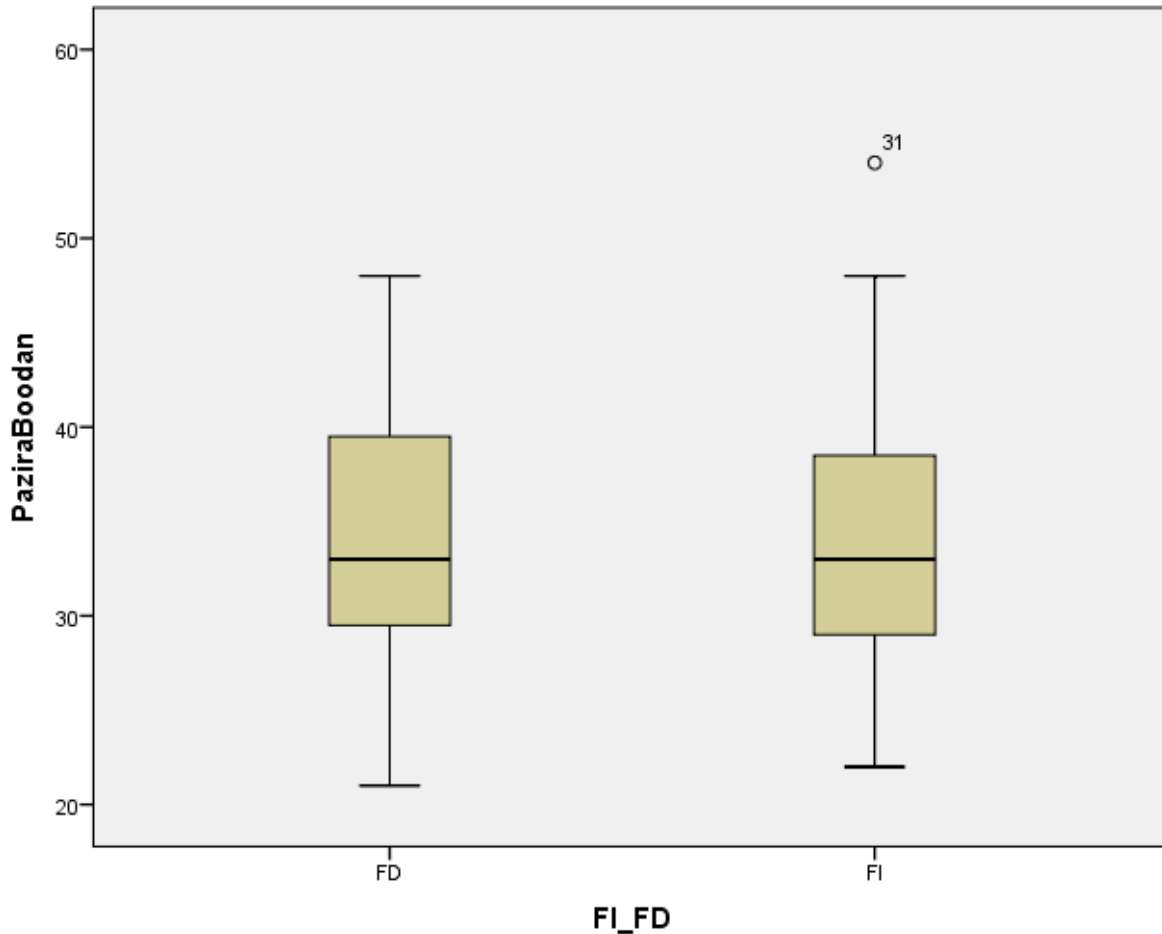
Figure 3: Box Graph for FD/FI-EFL learners' performance variables in Openness test

In the above box graph, the vertical axis shows Iranian EFL learners' performance scores in Openness test and the horizontal axis shows learning style (FD/FI). It describes that Minimum, Maximum, First Quartile, Mode and Third Quartile values for FI-EFL learners in Openness test are the same as FD-EFL learners' Minimum, Maximum, First Quartile, Mode and Third Quartile values in Openness test.

Totally, it seems that there is no correlation between Iranian EFL learners' performance in Neuroticism test and their learning style (FD/FI). In other words, the FI-EFL learners' performance is similar to FD-EFL learners' performance in Openness test.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   21

Student's t-test is used to investigate the significant difference hypothesis between the means for FI-EFL learners' performance and FD-EFL learners' performance in Openness test. The Student's t-test is sensitive to equality and inequality of variances in both groups. In order to test the hypothesis of equality of variances for both independent groups for EFL learners' performance scores in Openness test, Levene's Test is used that the results are shown in the following table:

Table 6: The Equality of Variance Test for 2 Independent Groups

		Levene's Test for Equality of Variances	
		(Fisher value)	Significant Level
Performance	Variances are Equal	.136	.713
	Variances are Unequal		

Significant level (Sig=.713) and also the Fisher value (0.136) in above Levene's Test, show that there is no reason for rejecting the hypothesis for equality of variances for both independent groups (filed dependent and field independent). As result, the Student's t-test for both independent groups with equality of variances is used that its zero hypothesis is $H_0: \mu_1 = \mu_2$ and the following results can be seen in the table 33.

Table 7: The t-test for Equality of Means in 2 Independent Groups

T amount	Degree of Freedom	Significance Level	Means Difference	Standard Error of Means Difference	95% Confidence interval for Means Difference	
					Lower Bound	Upper Bound

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   22

.466	72	.643	.767	1.647	-2.516	4.050

According to above table, the Student's t-test statistic value is equal (-0.466) with 72 degree of freedom. Also the significance level (Sig=.643) shows that there is no reason for rejecting zero hypothesis (the hypothesis for equality of performance for both independent groups {FD and FI}) in Openness tests. In other words, there is no significant difference between the means of FI/FD-EFL learners' performance scores in Openness test. And also the 95% confidence interval for means differences in 2 groups is (-2.516 and 4.050).

For better understanding significant difference between 2 groups, linear graph is presented for investigating means of Iranian FI-EFL learners' performance scores and means of Iranian FD-EFL learners' performance scores in Openness tests:
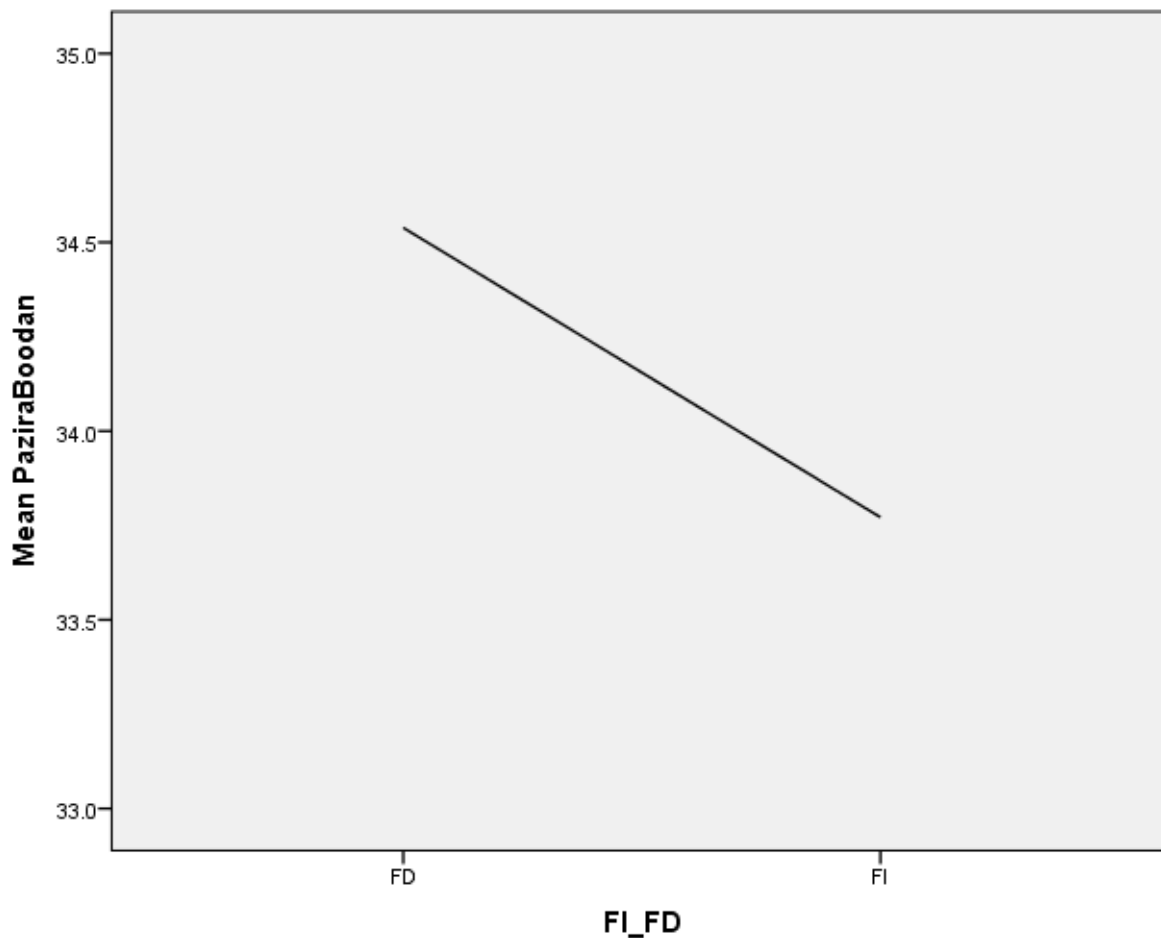
Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   23

Table 8: Line Graph for mean of FI/FD-EFL learners' performance scores in Openness test

According to the graph, it can be seen that the means of FD-EFL learners' performance scores is around 34.5 and the means of FI-EFL learners' performance scores is around 33.8 in Openness tests. It must be noted that vertical axis shows means of Iranian EFL learners' performance scores in Openness test and horizontal axis shows EFL learners' learning style (FD/FI). It is clear that there is no significant difference between 2 independent groups. In other words, FI-EFL learners' performance is the same as FD-EFL learners' performance in Openness tests. So the hypothesis is rejected.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   24

3.   Conclusion and Implications:

Perhaps the educational methods are used in Iran are only organized for only filed dependent students, whereas classes are combination of both FD and FI students. So through this atmosphere, only FD students are favored and get advantages. So as a result, educational costs/expenses, students' energy, teachers' energy and time are wasted. Therefore, by defining an appropriate learning style and drawing suitable procedures and methods for different types of students by different genders, teachers can improve their students' learning styles and cause to have the gained and rich students. So better learning will be achieved.

To accomplish the purpose of the study, first 200 male and female subjects were chosen from 5 different English language schools in Qom, Iran. All of them were chosen from post intermediate.

Second, a standardized piloted PET test of proficiency was administered to establish the homogeneity of the subjects but the subjects were homogenized by supervisor of language school at the beginning of course. So, Pet test of proficiency was used in order to measure their general English proficiency. The students were assigned to 2 groups (male and female). Each group has 100 participants. As it mentioned before, there is no control group, and both groups are experimental and there is no treatment.

At the end of course, students were supposed to answer 4 different tests that are:

1. Background Questionnaire
2. PET (General English Proficiency Test)
3. GEFT (Group Embedded Figure Test)
4. Big 5 Inventory test

After scoring each test the following results for each hypothesis were presented:

Iranian EFL Field Independent Learners outperform their Field Dependent ones in Openness and Neuroticism

As a result, there is no correlation between students' learning styles and their openness and Neuroticism. It means the performance of both filed-dependent and independent students are the same in Openness and Neuroticism.

Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   25

Regarding the present study, the following areas may be worthy of further investigation:

1. The present study dealt with the effect of learning styles on Openness and Neuroticism for post intermediate Iranian EFL learners, thus it can be examined on different methodology course.

2. It might be a good idea to see if there is any correlation between learning styles for post intermediate EFL learners and their performances in English for Specific Purposes (ESP) proficiency test.

3. General English language proficiency level of the participants in this research was post intermediate. Nature of the effect of learning and Openness and Neuroticism styles could be examined among advanced learners as well.

4. Based on the study, students' personality has various forms, thus, various forms of personality and their effects on students' learning style and general English lg. proficiency may be examined thoroughly.

5. In this study, the results of the data analysis indicated only the learners in groups of males and female at the same age. Therefore, further research is needed to investigate different aged participants as well in order to investigate the possibility for learning or acquisition.

6. The present study was conducted only about Iranian EFL learners, so it can be done for other EFL learners in other countries.

   In brief, it should be noted that many questions concerning learning styles are still left unanswered and empirical research is required to shed light on those problematic areas.

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Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   26

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Appendices

Background Questionnaire

PET-General English Proficiency Test

Big 5 Inventory Test

GEFT-Group Embedded Figure Test

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Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and Neuroticism Tests   27

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Language in India www.languageinindia.com **ISSN 1930-2940 13:10 October 2013**
Saeed Abdolhosseini, Davood Madani, Ph.D., and Mojtaba Maghsoudi, Ph.D.
Iranian EFL Field Independent and Field Dependent Learners' Performance in Openness and
Neuroticism Tests   28