

# THE RELATIONSHIP BETWEEN PERSONALITY TYPES AND COGNITIVE LEARNING STYLES

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**Abstract** - This research introduces the Students' Learning Styles and the Success of English Teaching and Learning as a Foreign Language. The population of the study is students of grade eight who were registered in 2018 at SMPN 5 Kendari. The total number of them is 326. From that number, it was taken 97 students (30%) as samples. The students of grade eight answered questionnaires asking their opinions towards the relationship between students' personality types and their cognitive learning styles, the data was collected by using questionnaires technique. Data was analyzed correlation between Students' Personality Types and Their Students' Cognitive Styles. The students' personality types correlate significantly with their cognitive styles at .05 level. This means that there is a strong correlation between the students' personality types and their cognitive styles. By the result, the most of the students who are extrovert dominant have field-independent cognitive style, and those who are introvert dominant have field-dependent cognitive style. In addition, there is a strong correlation between the students' personality types and their cognitive styles. Thus, the hypothesis of this study is accepted.

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**Keywords** - Students' Learning Styles, Cognitive Learning, Introvert, Extrovert

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## I. INTRODUCTION

This research study was initiated by the researchers' experience in teaching practice at a public school in Indonesia. It might be argued that its environment facilitating learning is of concern. Learning materials in the country are insufficient and out of date. Particularly, teaching heavily rely on textbooks. Relevant to this, Exley (2005, p. 11) reports that Indonesian students in EFL context are posited with the dominance of passivity, shyness and quietness. This implies that teaching in Indonesia is required to take students' learning styles into consideration. Pithers (2001, p. 130) points out that the students' personality types and their cognitive learning style that optimum student achievement occurs when the students' personality types, their cognitive learning styles, and teacher's instructional methods are aligned. Alongside Pithers' (2001) claim, this research study employs a new perspective that in the teaching-learning process, it is the student – the learning performer, the agent of the learning activity – who primarily determines whether learning happens, whereas the teacher only facilitates the process. Similar to Passasung (2003, p. 45), no matter how good the teaching is, learning will not take place if learners do not want to participate in the process.

Based on those perspectives, EFL learning students' personality and their learning styles are as two important variables of the present study. It mainly concerns on investigating the students' personality types and their cognitive learning styles with an implication on improving the teaching and learning

process. In addition, understanding differences of personality types and cognitive learning styles allows predicting the way learners react and feel about different situations (Putintseva, 2006, p.5). Moreover, ignoring a student's personality type can lead to a conflict in the educational process, since an individual's personality type and learning style are related to each other (Fallen, 2006; cited in Threton & Walter, 2009:49).

## II. LITERATURE REVIEW

### 2.1. Personality Types

In current days, the term personality is used to show an attribute for individuals or to describe what, why and how concerning human behavior (Kuntjojo, 2009: p.1). Hall dan Lindzey (year) also states that personality theory is a set of propositions or concepts about human behavior which show interrelationship (Koeswara, 2001, p.5). Concerning personality types, this present study applied a theory proposed by Carl Jung. According to Carl Jung, people are all different in fundamental ways. Their aptitude and competence to process different information is limited by their personality type (Jung cited in Boeree, 2006, p.84). Based on Jung's (2011) theory, people can be either 'Extroverts' or 'Introverts' depending on the direction of their activity. The two attitudes: introversion and extroversion are to combine with four functions: feeling, thinking, sensation, and intuition. Based on Jung's (2011) theory, the Myer-Briggs Type Indicator Myers were created with two additional functions: judging and perceiving (Myer & McCalley, 1985 cited

in Putintseva, 2006). For example, an ENFJ in this study, are referred to a student having a preference for 'extroversion', 'intuition' feeling' and 'perception'. The students' personality types of the present study are shown in Table 3.

## 2.2. Cognitive Learning Styles

According to Messick (cited in Pither, 2002, p.117 and Onyekuru, 2015, p.77), cognitive style is the constant procedures, preferences and perceptions which direct how a person perceived, remember and solve problems. Reid (2002,p.175) divides the cognitive learning-styles into four categories, namely field-independent and field-dependent learning styles, analytic and global learning styles, reflective and impulsive styles, and Kolb's Experiential Model.

In recent times, the relationship between field-dependent, field-independent and academic achievement are mostly investigated. For example, a study conducted by Onyekuru(2015) on field dependent-field independent cognitive style and academic achievement of secondary school students (N = 320), using Group Embedded Figures Test (GEFT), revealed that the field dependent learners had lower mean achievement in science than the field independent learners and there was a significance in mean achievement between the two. In this study (Onyekuru, 2015), it also found that the field independent learners had significantly lower mean achievement in arts than the field dependent learners. Research on the field-independent learner and her academic achievement particularly in English was conducted by Rezaee and MajidFarahian(2012). In this case study, Rezaee and MajidFarahian(2012) used data collection for five instruments such as observation, grammar test, interview, private classroom interaction, and embedded figures test and found that a freshman student is a field-independent

learner. With this cognitive learning style, the learner understands the grammar structure but can't make correct sentences. This implies that field independence and grammatical are related but not with communicative skill (Rezaee and MajidFarahian, 2012). However, this study only focuses on the attempt to find out whether the students are field-dependent or field-independent. Most of the field dependent students in cognitive style, are influenced by their surroundings (Nozari& Siamian,2015, p.39). On the other hand, For the field independent students, learning is conducted by their analytical skill and their inner knowledge in order to analyze problems rather than relying on their surroundings (Witkin and Goodenough, 1977) Reid (2002, p.176) summarizes the general tendencies of field independent learners as follows:

1. Perceive objects as separate from the field.
2. Can dissembled relevant items from non-relevant items within the field.
3. Provide structure when it is not inherent in the presented information.
4. Reorganize information to provide a context for prior knowledge.
5. Tend to be more efficient at retrieving items from memory.

Unlike Field Independent, field dependent (FD) people are more likely to be better at recalling social information such as conversation and relationships. They approach problems in a more global way by perceiving the total picture in a given context (Reid, 2002, p.177). The most specific principal characteristics of the field-dependent/field-independent styles were developed by Reid (2002, p.180), as shown in the following Table 1.

**Table1: Different Characteristics of Field-Independent and Field-Dependent Learners**

<b>Field-Independent</b>	<b>Field-Dependent</b>
1. Impersonal orientation i.e. reliance on internal frame of reference in processing information	1. Personal orientation i.e. reliance on external frame of reference in processing information
2. Analytic i.e. perceives a field in terms of its component parts; parts are distinguished from background	2. Holistic i.e. perceives field as a whole; parts are fused with background
3. Independent i.e. sense of separate identity	3. Dependent i.e. the self-view is derived from others
4. Socially sensitive i.e. greater skill in interpersonal/social relationships	4. Not so socially aware i.e. less skilled in interpersonal/social relationships

A very important question for language researchers is the effect of individual differences on the efficacy of

language learning. For example, learners differ from one another in the ways in which they process

information from the environment. The way we learn things in general and the way we try to solve a problem is based on our personality and cognition; Brown (2007, p.119) calls it as "cognitive style". When cognitive styles are related to education contexts, then they are referred to as "learning styles" (Brown 2007, p.120). Learning styles relate emotion to cognition. For instance, a reflective style is rooted in a reflective personality or a reflective mood. Or, an impulsive style usually arises out of an impulsive emotional state. The learners' styles depend on how they internalize their total environment. Since this internalization process is not a merely cognitive process, we can see that physical, affective and cognitive factors play great roles in learning styles.

### III. METHODOLOGY

The present study uses correlational design in order to describe the linear relationship between students' personality types and their cognitive learning styles. Gay (1982, p.430) cited in Sukardi(2008, p.166) confirms that correlational research is a research study that involves collecting data in order to determine whether and to what degree a relationship exists between two or more quantifiable variables. Since the correlation is linear the picture of the design is as follows:



Fig. 1. Model of Correlational of the Present study

X : personality types

Y :cognitive learning styles

The population of this study is all students of grade eight who were registered in 2018 at SMPN 5 Kendari. The total number of them is 326. From that number, it was taken 97 students (30%) as samples.

#### 3.1. Instruments

Two kinds of instruments were used to collect the research data. Standardized Myer-Brigg's Type Indicator questionnaires (Berens, 2009, p.1-5) was used to gather data of students' personality types. It consists of 60 items. Another instrument is cognitive learning type (field-independent/field-dependent) test. which is developed by Hawkey will be used (Wyss, 2002, p.2 cited in Maghsudi, 2007). This test consists of 12 items. In order to correlate the students' personality types and their cognitive learning styles, their responses towards the given questionnaires were scored previously. In order to get the scores of either

personality types and cognitive learning styles, Likert's scales (Cohen et al, 2007, p.326) were used.

#### 3.2. Data Analysis

Data of student' personality types and those of students' cognitive learning styles were analyzed by means of percentage analysis. Table 2 shows the percentage of the students' personality types derived from Standardized Myer-Brigg's Type. In terms of cognitive learning styles, field independent style is determined when a student achieves percentage of scores 50% and above. When a student achieves percentage of scores below 50%, it is field-dependent (Wyss, 2002, p.6 cited in Maghsudi, 2007).

Table 2: Personality Types Analysis

Personality Types			
Introvert (I)	73%	27%	(E) Ekstrovert
Sensing (S)	33%	67%	(N) Intuition
Thinking (T)	67%	33%	(F) Feeling
Judging (J)	20%	80%	(P) Perceiving

Pearson's Product Moment correlation formula was used (Guilford and Fruchter, 1986, p.83). to test the hypothesis about the relationship between the students' personality types and their cognitive learning styles. If  $r_{XY} > r(\alpha = 0,05)(N-2)$ , the hypothesis is accepted, meaning there is a significant relationship between the students' personality types and their cognitive learning styles. If  $r_{XY} < r(\alpha = 0,05)(N-2)$ , the hypothesis is rejected, meaning there is not any significant relationship between the students' personality types and their cognitive learning styles.

### IV. RESULTS AND DISCUSSION

The collected data show that there are various types of students' personality type and so are their cognitive styles.

Table 3 shows that there are 11 personality types which belong to grade eight students at SMPN 5 Kendari, namely ENFJ, ENFP, ENTJ, ENTP, ESFJ, ESFP, INFJ, INFP, INTJ, INTP, and ISFJ. Table 3 displays detailed data of those personality types.

Table 4 shows that the number of students who are field independent and that of students who are field dependent is also comparable. It counts 55 students who have field-independent cognitive style. While 42 students have field-dependent cognitive style.

#### 4.1 Correlation between Students' Personality Types and Their Students' Cognitive Styles

Following the trend of data of students' personality types and their cognitive styles, it was found that

there is a linear direction in the relationship between the two variables. It was found that most of students who are extrovert dominant have field-independent cognitive styles. Similarly, students who are introvert dominant have field-dependent cognitive style. So, in order to prove the relationship between the two variables, Table 5 displays the analysis results.

**Table 3: The Participants' Personality Types**

No	Personality Types	The Number of Students
1.	ENFJ	9
2.	ENFP	7
3.	ENTJ	10
4.	ENTP	12
5.	ESFJ	10
6.	ESFP	7
7.	INFJ	13
8.	INFP	8
9.	INTJ	7
10.	INTP	5
11.	ISFJ	9
	Total	97

**Table 4: The Participants' Cognitive Learning Styles**

No	Cognitive Styles	The Number of Students
1.	Field-Independent	55
2.	Field-Dependent	42
	Total	97

**Table 5: Product Moment Correlation Analysis Between the Students' Personality Types and Their Cognitive Learning Styles**

No	Variables	R	Sig.05
1.	Personality Types	0.95	0.000
2.	Cognitive Styles		

Table 5 shows that Students' personality types correlate significantly with their cognitive styles at .05 level. This means that there is a strong correlation between the students' personality types and their cognitive styles. Thus, the hypothesis of this study is accepted.

## CONCLUSION

On the basis of analysis of the relationship between the students' personality types and their cognitive styles, several conclusions could be drawn. In terms of personality types, 11 types, namely ENFJ, ENFP, ENTJ, ENTP, ESFJ, ESFP, INFJ, INFP, INTJ, INTP,

and ISFJ, were found. In terms of cognitive styles, field-independent and field-dependent belong to them. Then, most of the students who are extrovert dominant have field-independent cognitive style, and those who are introvert dominant have field-dependent cognitive style. In addition, there is a strong correlation between the students' personality types and their cognitive styles.

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