

Extroversion/Introversion and Test Performance of Iranian EFL Students on Multiple-Choice and True/False Reading Comprehension Test

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Abstract: *A host of factors contribute to test performance of testees in language learning contexts. The study is an attempt to investigate any probable role that personality types might play in the performance of language learners in their performance on multiple-choice and true/false reading comprehension tests. Attempts were made to examine whether being an introvert or extrovert makes any significant difference in their performance on multiple-choice and true/false reading comprehension tests or not. To achieve such a purpose, 61 English language learners were selected on the basis of availability sampling procedure and their personality type was determined by using Eysenck's Personality Questionnaire (EPQ). Next, a series of multiple-choice and true/false reading comprehension tests were administered to the participants with the two personality types. The result of t-test revealed no statistically significant difference between the personality types of the participants in the study and their performance on the multiple-choice and true/false tests. The results could have implications for educators concerned with the validity of tests interpretations, testing researchers, and practitioners as well.*

Keywords: *Multiple-Choice Reading Comprehension Test, True/False Tests, Introversion, Extroversion, Eysenck's Personality Questionnaire*

Introduction

Personality

Measuring performance of students is challenging since performance is product of socio-economic, psychological and environmental factors. Ellis (2003) believes, "second language acquisition is a complex process, involving many interrelated factors" (p. 4). Therefore, in order to deal with this complexity, language researchers have offered theories that were generalized in nature and hence often not very productive. As Brown (2000) mentions, "These theories ruled out individual differences and sought only to explain globally how people learn, and what common characteristics there are in language learning" (p. 274).

Accordingly, one of the most significant aspects of any kind of pedagogy is to take into account the impact of these differences on the learning and teaching processes (Snow, 1997). According to Ellis (2003), general and personal factors have social, cognitive, and affective aspects. Because people are often assessed based on their personality, personality is recognized as a very prominent category of individual differences. So it is assumed that any given individual will act in a plausibly coherent manner on different situation. Over the last few decades, researchers have done many works in order to find an extensive definition of personality. They clarify personality on different levels such as social, psychological, and educational. In teaching and learning, we seek those aspects of personality that have influence on the nature and quality of learning. Many psychologists agree that personality has effect on learning.

Despite the fact that previous research has investigated the relationship between personality and academic performance (Cattell & Butcher, 1968; Eysenck, 1967; Kline & Gale, 1977), academic achievement has been generally went with intelligence rather than personality (e.g., Elshout & Veenman, 1992; Harris, 1940; in addition, some researchers (Allik & Realo, 1997; Dollinger & Orf, 1991; Green, Peters, & Webster, 1991; Mehta & Kumar, 1985; Rothstein, Paunonen, Rush, & King, 1994) inferred that personality is not significantly connected to academic achievement and is not of real significance in educational environments. Nevertheless, empirical evidence continued for a long time showing that both personality and intelligence are important forecaster of academic performance in the way that both of them have been recognized to be related to learning (Busato, Prins, Elshout, & Hamaker, 1999; Eysenck, 1981).

Stanger (1933) had proposed that “the energy output of the individual student . . . varies independently of ability” (p. 648). Thus treating personality characteristics as forecasters may be responsible for extra variance in performance. Lately It has been asserted that personality dimensions, on their own, are influential enough to illustrate a moderate percentage of the difference in academic performance (Blickle, 1996; Cacioppo, Petty, Feinstein, & Jarvis, 1996; De Raad & Schouwenburg, 1996; Goff & Ackerman, 1992; Rindermann & Neubauer, 2001; Wolfe & Johnson, 1995)—despite of the fact that a few earlier studies had asserted this before (especially Chorro, 1981; Hamilton & Freeman, 1971).

Although numerous dimensions of personality have been identified by different psychologists, the research in personality psychology has revealed increasing general agreement on the nature and number of fundamental personality measures (Digman, 1989), sometimes named Big Five. Big Five includes neuroticism vs. emotional stability, extroversion vs. introversion, openness to experience, agreeableness, and conscientiousness. The scope of the current study is limited to extroversion/ introversion personality dimension. Thus, it will be elaborated on in the following section.

Extroversion/ Introversion

Individual differences are the variables that describe learners and donate each one his/her individual singularity. The aim of probing individual differences is to investigate the variety of intellect, shapes of cognitive procedure, and various intellectual functions (Skehan, 1989). Personality is recognized as a very influential category of individual differences because the individual is often assessed based on her/his personality. Researchers who investigate human

personality are often curious about individual differences. They believe that there are substantial individual differences in personality and they will be shown by differences in treating and responding in a granted occasion (Eysenck, 1985). Because of this point, one characteristic similar to the most of personality theories is the focus on the individual.

Eysenck (1970) specified personality as the more or less fixed and lasting organization of a person's trait, nature, intellect and physique which specifies individual's personality. Guilford (1959) believed that personality includes all of an individual's traits, his physical characteristics, intellectual qualities, aptitude and talents as well as his temper and mental qualities, interests, expressive behavior, and pathological symptoms. He defines personality as an individual's "unique pattern traits" (p. 5).

Personality is considered as one of the individual differences which is greatly agreed to have an influence on learning in general and second language acquisition (SLA) in particular. It should also be emphasized that people should not be regarded to be either extraverts or introverts because it is a continuum which specifies one's degree of outgoingness.

Eysenck (1965, p.59) characterizes a representative extravert as:

...sociable, enjoys parties, has a lot of friends, hates reading or studying by himself. He desires excitement, takes opportunities...and is usually an impulsive individual. He is fond of useful jokes, always has a prepared answer...likes change...and becomes irritated fast.

From another point of view, he clarifies a representative introvert as:

....peaceful, timid, introspective, enthusiastic about books rather than people; he is reticent and reserved except to close friends. He enjoys planning ahead, "looks before he leaps", and mistrust the impulse of the moment. He hates excitement, takes issue of everyday life with suitable seriousness....does not lose his temper fast.

Review of Literature

Rankin (1963 as cited in Farley and Truog, 1970) reported significantly better reading test performance for introverts than extraverts, whereas, Vehar (1968) determined no such significant differences in reading test performance between personality dimensions of extroversion and introversion, although, a small but significant correlation was gained between extroversion-introversion personality test scores and reading among *male introverts*. Introverts performed five times better than extroverts.

Related to reading and grammar components of the standardized English tests, Busch (1982) stated that extroverts had a significant negative correlation with pronunciation and introverts tend to have higher scores. The relationship between the personality dimensions of introversion/extroversion and EFL reading comprehension among the Iranian students was investigated in Pazhuhesh' study (1994). The result of this study showed that introverts

outperformed extroverts peers. In her study, introverts were significantly better than their extrovert peers.

Astika, Carrell and Prince Moneta (1996) studied the relationship between Extroversion/Introversion and English proficiency of Indonesian university students through non-standard monthly tests of reading comprehension, vocabulary, grammar, and writing. They reported a very weak negative relationship between extraversion and vocabulary as well as the composite course scores but did not report any relationship with other measures of English proficiency.

Statistical analysis of Zandi's study (2001) showed that the introversion/ extroversion personality dimensions of the students did not have a significant effect on their proficiency. In this study the relationship between introversion/ extroversion, gender and the EFL proficiency of Iranian students were investigated in an educationally deprived region. Babaeikhou (1995) studied the relationship between extroversion/introversion and Iranian EFL learners' English proficiency. The results showed that extrovert learners outperformed their introvert peers.

Kiany (1997) examined the relationship between extroversion and English proficiency of 237 Iranian postgraduate students studying in English-speaking countries. He used Persian version of EPQ, and TOEFL, IELTS, MCHE, and cloze tests. The results showed a negative and a significant relationship between extroversion and TOEFL subcomponent of reading comprehension; more extroverted learners tended to have lower scores on the reading comprehension. In addition, this study revealed that introverts outperformed extroverts at least in receptive proficiency tests and general academic achievement.

Busch (1982) explored the relationship between introversion-extroversion and English language proficiency of 105 adult school and 80 junior college learners in Japan. A Japanese version of EPI and a nationally standardized English test, consisting grammar / vocabulary, reading, aural comprehension, and dictation, were used to collect the data. In general, no significant relationship was found between extroversion and language measures. Only, pronunciation, a subcomponent of the oral test, was significantly and negatively correlated with extraversion. Lately, Kim (1998) examined the relationship between extroversion/introversion and EFL proficiency of Korean elementary school children measured in the Level Test. In this study grade and gender were specified as two independent variables. The results of this study did not display any significant main effect of personality variables.

A research project conducted with 120 pre-university students in Hamadan, Iran, revealed that there was no significant difference between the grammatical performances of extroverts and introverts (Karami, 2001). Another relevant study conducted in Tehran with Islamic Azad University students and those of Teacher Training University also showed no significant difference between EFL proficiency of introvert and extrovert students (Farnia, 1993). This study also took other variables, such as sex and subcomponents of an English proficiency test into consideration. No difference was observed.

Rastegar (2002) found a non-significant but negative relationship between extroversion and EFL proficiency of Kerman and Shiraz university students. In a study considering various kinds of

writing strategies, Validy (1998) evaluated English language proficiency of Allameh University students by a CELT test and measured their extroversion scores on the EPQ scale. He indicated that extroverts, who are more inclined toward risk taking compared to introverts, tend to use achievement strategies, whereas introverts are more likely to use reduction strategies.

Swain and Burnaby (1976) investigated the effect of extroversion, sociability and talkativeness on the performance of French kindergarteners. The results of their study showed no influence of the forecasting variables on both comprehension and production tests in French.

Conflicting results relating the effects of personality traits stressed the importance of the present study. Two different questions were planned to accomplish the purpose as follows.

RQ1: Is there any significant difference between the performance of extrovert and introvert Iranian EFL learners on multiple-choice test?

RQ1: Is there any significant difference between the performance of extrovert and introvert Iranian EFL learners on true/false test?

Methodology

Following Mackey and Gass (2005), and considering the nature of the variables and samples under study, a comparison study design was applied to test the hypotheses.

Participants

A sample of 75 English learners from different language institutes in Sari, Iran, participated in this research. The subjects were non-randomly selected using the availability sampling method. A version of Cambridge Placement Test was used to homogenize the participants in the study, comprising 45 female and 30 male learners. Their age ranged from 14 to 26. The type of non-random sampling used for the study was the convenience one in which the participants were those who happened to be available for the study (Mackey & Gass, 2005) after receiving pass mark in a standard homogenizing test. Cambridge Placement Test (CPT) was used to homogenize the students' level. There were initially 75 participants, but 14 of them had to be excluded because they weren't in the level of knowledge that the researcher wanted.

After administering the Eysenck personality questionnaire, it became clear that 11 subjects were at the medium level; as a result, their data were eliminated from the study. Finally 50 subjects (17 male and 33 female) were considered the main participants for the current study. Due to practicality problems and the number of subjects needed, the sampling was a non-random one despite the probable external validity problems.

Materials

Eysenck Personality Questionnaire

The Persian restandardized form of the Adult EPQ (Eysenck personality questionnaire, 1975) was used to measure the degree of extroversion in the study. This measure is an internationally

reliable instrument which has been translated and validated in Iran (Kiani, 1997). The EPQ is an established and popular personality test with a world-wide usage. It has also been extensively studied, translated and restandardized in more than 50 countries. Although it has been originally developed for an English population, it does not carry cultural load and has a high reliability and validity. It is comprised of 90 questions which measure psychological factors of Extroversion (E), Neuroticism (N), and Psychoticism (P). It also has a Lie (L) scale which aims at identifying possible faking on the part of the subject. Twenty one items are related to Extroversion. However, the whole questionnaire was taken by the subjects to avoid violation of the reliability and validity.

Multiple-Choice and True/False Tests

Because the researchers aimed to study the relation of personality traits on different test formats, they selected some reading comprehension passages from the books which were written for the upper intermediate and advanced students who were the researchers' main purpose then the level of difficulty of each subset is suitable for them. The researchers asked the participants to read them and answer the multiple-choice questions. The reading passages were selected based on their proficiency levels. The researchers decided to choose the texts which had interesting topics and caused the participants to read and answer the questions eagerly.

Procedure

Eysenck Personality Questionnaire

The introversion/ extroversion questionnaire which was introduced before contained 90 questions. Although 21 questions were related to the study, the researchers administered all questions to the participants. The participants were required to read the instruction prepared for the questionnaire. They were asked them to answer the items quickly and not to analyze the questions. Based on participants' answers to extroversion/introversion section of the questionnaire, they were assigned into two groups named extrovert/introvert. Some of their answers showed that they were ambivert, so they were crossed out from data analysis.

Multiple-Choice and True/False Tests

The researcher administered two types of the tests, multiple-choice and true/false reading comprehension tests during a term in the institute.

The Procedure of Scoring and Data Analysis

The items of the tests were scored objectively due to their format. Equal weight was given to each item. Both numerical and graphical techniques were applied to test the normality of obtained data. Then, independent and paired-samples *t-test* were run to analyze the data.

Research Results

Testing Normality

For EFL researchers, a pivotal decision to be made is concerning the choice of appropriate statistical techniques; that is, whether to apply a parametric test or a non-parametric one to interpret the research results (Soleimani, 2009). Two normality examination methods were used for the present study: descriptive numerical method (*skewness*) and theory-driven graphical and numerical method (Q-Q plot; *Kolmogorov-Smirnov*). According to the results of testing normality, the data distribution was normal, thus parametric statistics were applied to test each null hypothesis.

Testing Hypotheses

Testing Null Hypothesis 1

RHO 1: Introverts do not outperform extroverts in multiple-choice test.

Table 1 shows independent-samples *t-test* between introvert and extrovert performance in multiple-choice tests. As the table shows, obtained *sig.* value is .76, which is greater than the value of .05. Therefore, the data did not violate the assumption of equal variances and the first line of Table 1 was used to interpret the results. Based on Table 1, the obtained *sig.* (2-tailed) value is .25 and above .05. Hence, there is not a significant difference between two groups.

Table 1.Independent Sample t-test Between Introvert and Extrovert: *MC-test*

		Levene's Test for Equality of Variances		<i>t-test</i> for Equality of Means					
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	<i>MD</i>	<i>SEM</i>	95% Confidence Interval of the Difference
								Lower	Upper
<i>t-test</i> between Mc	Equal variances assumed	.093	.762	1.153	48	.254	.720	.624	-.535 1.975
	Equal variances not assumed			1.153	47.99	.254	.720	.624	-.535 1.975

According to Table 2 the mean of the introvert is 8.80 out of 12 and the mean of the extrovert is 8.08 out of 12. The mean difference here is .72. It shows that there is a difference between groups but this difference is not significant. Based on these results it can be claimed that there is

no significant difference between the introvert and extrovert groups' mean scores in multiple-choice reading comprehension questions and the first hypothesis is rejected.

Table 2. Group Statistics between Introvert and Extrovert: MC -Test

group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>
<i>t-test</i> between : Mc Introvert	25	8.80	2.198	.440
Extrovert	25	8.08	2.216	.443

Testing Null Hypothesis 2

RHO 2: Introverts do not outperform extroverts in true/false test.

Table 3 shows independent-samples *t-test* between introverts and extroverts in true/false test. As the Table displays, the obtained *sig.* value is (.092) which is greater than the value of .05. Therefore, the data did not violate the assumption of equal variances and the first line of Table 3 was used to interpret the results. Based on Table 3, the obtained *sig.* (2-tailed) value is .184 which reveals no significant difference between two groups.

Table 3. Independent Sample t-test Between Introvert and Extrovert: True/False test

		Levene's Test for Equality of Variances		<i>t-test</i> for Equality of Means						
<i>t-test</i>	Equal variances assumed	<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	<i>MD</i>	<i>SEM</i>	95% Confidence Interval of the Difference	
									Lower	Upper
<i>t-test</i> between true/false	Equal variances assumed	2.963	.092	-1.347	48	.184	-.32	.237	-.797	.157

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	<i>MD</i>	<i>SEM</i>	95% Confidence Interval of the Difference	
								Lower	Upper	
<i>t</i> -test	Equal variances assumed	2.963	.092	-1.347	48	.184	-.32	.237	-.797	.157
	Equal variances not assumed			-1.347	46.46	.184	-.32	.237	-.797	.157

As Table 4 displays, the mean of the introvert is 3.60 out of 5 and the mean of the extrovert is 3.92 out of 5 with a difference of .32. However, the difference is not significant. Based on these results, it can be concluded that there is no significant difference between the introvert and extrovert groups' mean scores in true/false tests, and the second hypothesis is rejected.

Table 4. Group Statistics between Introvert and Extrovert: True/False test

		<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>
<i>t</i> -test	between : Introvert	25	3.60	.912	.182
	True/False test				
	Extrovert	25	3.92	.759	.151

Discussion

An independent *t*-test was used to examine the difference between two sample means. The analyses for hypotheses indicated that although there is a difference between performance of introvert and extrovert Iranian EFL learners on different test formats, the difference was not statistically significant. The research questions were to find if there was any difference between

the personality tendencies of introversion/ extroversion of Iranian learners of English on the one hand, and their performance on multiple-choice and true/false tests, on the other. The findings revealed that there exists no significant difference between introversion/ extroversion dimension and participants' performance on these two types of tests, despite the fact that there was a small mean difference between groups. Failing to discover any difference between these two categories of variables was not surprising, since some past studies, as was mentioned in the literature review, have more or less obtained the same findings. Psychological phenomena are among the most sophisticated concepts, and of vague and intricate transactions with other phenomena. Therefore, discovering relations within this intertwined web is not an easy task. It requires lots of research and long studies to explain them.

The aforementioned findings may be clarified in different ways. One conceivable explanation can be in light of Brown's (1997) view that it is misleading to say extroverts are smarter than introverts in language learning. Introverts can have an inner strength of trait that extroverts do not have. Unluckily, these stereotypes have effect on teachers' intuition of students. There is enough evidence that teachers are often impressed by talkative and outgoing students who take part freely in class discussions. Educators have warned against prejudging students on the basis of perceived extroversion. Chastain (1988) believes that extroverts can control classroom communicative activities with less fear of risk-taking comparing to their introvert peers; however, introverts are probably more conscientious and devoted to their task. These personality differences cannot represent the priority of extroverts to introverts in learning reading, speaking, and writing skills. The findings of this study seem to coincide with the above-mentioned opinions.

The current findings can illustrate the issue Stern (1983) stated related to an obvious contradiction of language teachers in Iran, like what most of their counterparts in other countries do, who like to support extroversion and to behave quiet reserved students as problems. The emphasis in modern communicative classes on speaking skills and neglecting the grammatical accuracy of what the EFL learners produce result in this valuing over introversion. However, Chastain (1988) mentioned that some students are so shy and so timid and unsure of themselves even in their first language, and then trying to communicate in a second language can be traumatic for them. Students' reclusiveness is not going to be considered as their inability in language learning.

In the study done by Kiany (1997), the results of the test indicated a negative and a significant relationship between extroversion and TOEFL subcomponent of reading comprehension. Babaeikhou's study (1995) showed that extrovert learners performed significantly better on a measure of language proficiency than did their introvert counterparts. Hence, the result of the first and second research questions of this study, which showed no significant differences between groups, was in sharp contrast with the claims and findings of Kiany (1997) and Babaeikhou (1995).

According to Karami (2001), there is no significant difference between the grammatical performances of extraverts and introverts. Rastegar (2002) found a non-significant but negative relationship between extroversion and EFL proficiency of Kerman and Shiraz university students. Based on Pazhuhesh (1994), introverts are significantly better than their extrovert

counterparts. Swain and Burnaby (1976) revealed no impact of the predictive variables on both comprehension and production tests in French. Statistical analysis of Zandi's study (2001) demonstrated that the introversion / extroversion tendencies of the students did not have a significant correlation with the EFL proficiency. In addition; Busch's study (1982) showed no significant relationship between extraversion and language measures. Consequently their finding is in the same trend with the results of the research questions in a way that no significant difference was found between extroverts and introverts in different kinds of test formats.

Conclusion

The study was, in fact, an attempt to probe any plausible role of the personality traits of language learners in their performance of two types of the test: multiple-choice reading comprehension tests and true/false tests. In other words, the study attempted to understand if being introversion/extroversion makes any significant difference in their performance on these two tests or not. Administering a series of multiple-choice tests and true/false tests among the two types of learners, the study revealed that there is no significant difference between the personality factors of learners and their performance on the multiple-choice and true/false tests.

In this study, the construct introversion and extroversion was found to have no or very little effect on the multiple-choice and true/false tests of the Iranian upper intermediate and advanced students. This finding questions the strong version of the theories that predict all individual factors play crucial roles in EFL success. Therefore, according to the results of this study, it can be claimed that at least some individual characteristics such as introversion/extroversion may have little or no bearings on adult EFL success.

As the findings of this study suggest, personality traits do not slow down or enhance the performance of EFL learners. Because of the problems the researchers faced with regards to the availability of the participants, the factors of gender and age were not considered in the research. Doing more studies on the grammaticality judgment of the female and male EFL Iranian learners concerning their age limit is the researcher's preoccupation.

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