THE IMPACT OF EXTRAVERSION VS. INTROVERSION ON IRANIAN EFL LEARNERS’ WRITING ABILITY

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ABSTRACT
The present study aims at exploring the role of individual differences in terms of extraversion vs. introversion on writing ability of EFL learners (In this study Introversion is a tendency to lower level of extraversion, and the introverts are who obtain lower scores in extraversion trait (Eysenck and Eysenck, 1975)). An additional aim is to find out whether there is a significant effect of gender differences’ extraversion/introversion on their writing ability. Therefore, 80 male and female students were selected based on Oxford Placement Test (OPT) scores and Eysenck Personality Questionnaire (EPQ) among low-intermediate participants in some English language institutes in Rasht, Iran. The study compared 40 extraverts and 40 introverts with their writing performance on a composition test. The collected data were analyzed by Statistical Package for Social Sciences (SPSS). Distribution of t was conducted for evaluating extraverts and introverts’ writing with respect to their gender differences. The main finding was extraversion vs. introversion has no significant impact on writing ability. Moreover, there was no significant effect of gender differences’ extraverts/introverts on their writing proficiency. The results revealed that both extraverts and introverts have the capability to be proficient in writing skill.

Keywords: Extraversion, Introversion, Writing ability, Oxford Placement Test (OPT), Eysenck Personality Questionnaire (EPQ)

INTRODUCTION
In recent decades, the affective factors and individual differences have received a considerable attention in language learning and educational psychology. Therefore, concerning with cognitive skills has been shifted to the whole person; the individuality of learners, their needs, feelings and personality. Among a number of personality variables in predicting English language proficiency, extraversion/introversion has been extensively studied than other personality traits. Extraverts are characterized as sociable, active, risk-taking, impulsive, expressive and they enjoy participating in groups while introverts tend to be, quiet, introspective and reserved except to intimate friends (Eysenck & Eysenck, 1975; 1985). Extraversion and introversion are potentially important factors in second language acquisition (Brown, 2007). Dewaele and Furnham (1999) mentions that extraverts are likely to be more fluent than introverts in both L1 and L2; however, they are not significantly accurate. Teachers admire sociable students, who always raise their hands to answer the questions. Extraverts are perceived as good learners who usually have something to say. This stereotypical extraversion side leads many educators to look at introverts as passive students who are not as bright as extroverts (Brown, 2007). However, Dörnyei (2005) believes that introverts’ better ability to consolidate learning, their less distractibility and better study habits may help them to obtain better results in learning than extraverts. Ellis (1994) identifies that extraverted learners do better in acquisition of basic interpersonal communication skills while introverted learners show a better performance at developing cognitive academic language ability. Thus it is worth investigating whether extraverts are active in writing classes than introverts where there is less requirement of oral interaction.

Writing is a way of communication that happens naturally through speaking. However, in writing task, the writer has more time to think about the topic, the materials, things, people, and phenomena which are expected to be involved in a text (Meyers, 2006).In terms of Language skills, writing is probably the most difficult ones in which native speakers never master, and it is a big challenge for L2 learners (Nunan,
Although different learners experience same writing classrooms and teaching methods, some write better than others. Most of the researches in English language learning with respect to extraversion/introversion have been concentrated on identifying the qualities of a good language learner and to what extent extraversion influences English language skills particularly oral proficiency (Oya et al., 2004; Van Daele, 2005). Unfortunately, there are a few studies that investigated personality variables in writing skills.

Therefore, this study aims to find out whether extraversion vs. introversion influences writing ability of EFL learners in respect of gender differences. The findings can be influential for educators to change their views over the role of personality factors in writing and other language skills in EFL classes also it affects teachers' pre-judgments and evaluating factors of students' writing. Besides, up to present, no study has been conducted to investigate the effect of gender differences’ extraversion/introversion in language skills. The present study aims at providing a conceivable answer to all disagreements existed in this area.

Statement of the Problem
In Iranian EFL learning context, teachers admire students who use more interactional strategies in the classroom, without having knowledge of extraversion/introversion’s biological bases. Consequently, teachers may have a positive view toward extraverts, and this positive view affects their judgments about the students’ ability in EFL. Additionally, the findings in the area of EFL skills in relation to Extraversion/introversion are not conclusive enough and the mixed results have been reported. BabaeiKhu (1995) explored the relationship between extraversion/introversion and Iranian EFL learners' proficiency. The results showed that extraverts outperformed than introverts. However, Karami (2001) found that there is no significant difference between the grammatical performances of Iranian extravert and introvert learners. Besides, the study evidently observed that some Iranian EFL teachers and learners have this assumption that introverts may perform better in conceptual task i.e. writing than extraverts where there is no requirement of oral performance and interactions. This Study investigates to what extent these claims are true in writing skill.

Research Questions
The following two research questions are addressed in the present study:
1. What is the impact of Extraversion vs. introversion on the writing ability of Iranian EFL learners?
2. Is there any significant impact of gender differences’ extraverts/introverts on their writing abilities?

Hypotheses of the study
The following two hypotheses are drawn:
1. Extraversion vs. introversion has no impact on the writing ability of Iranian EFL learners.
2. There is no significant impact of gender differences’ extraverts/introverts on their writing abilities.

Review of the Literature
Biological base of Extraversion-Introversion
There are two important personality taxonomies in psychology that organizes the traits in three and five bipolar dimensions, respectively. The first is so called Five-Factor (Costa & McCrae, 1992) and the latter is PEN (Eyseck, 1992) model. These two models compete; however, they proposed Extraversion as one of the super dimensions of human beings. The original concept of extraversion is linked to the ‘cortical arousal’ and ‘reactive inhibition’ theories (Eysenck, 1985). Eysenck proposed these theories to explain the causal roots of personality dimensions. Eysenck (1985) provides a biological explanation of extraversion in terms of cortical arousal via the Ascending Reticular Activating system (ARAS). ARAS is a network of fibers traveling upward from the lower brain stem to the thalamus and cortex (Ryckman, 2008). Activity in the ARAS stimulates the cerebral cortex that leads to higher cortical arousal and alertness. Due to the different levels of ARAS activity, introverts are characterized by higher levels of activity than extraverts and so are chronically more cortically aroused than extraverts (Eysenck & Eysenck, 1985). In the other words, introverts are over- aroused, so they are more sensitive to stimulation of cortex than extraverts.
While introverts are over-stimulated than extraverts, they seek for lower level of stimulation and avoid intense arousal behaviors through reflective, preserved and less- stimulating behaviors. Conversely, the brains of extraverts are less stimulated, so they seek to heighten their level of stimulation by social engagement, risk-taking and other stimulation seeking behaviors. Eysenck and Eysenck (1985) believe that some intermediate level of arousal is optimal for performance. Therefore, an Extravert by engaging in arousing behaviors and an introvert by avoiding those behaviors try to reach the mid-level of arousal to bring them up to an optimal level of performance. Eysenck used the concept of reactive inhibition from Hull’s (1951, cited in Ryckman, 2008) learning theory to explain the extraversion and introversion theoretically. He believed that extraverts are more influenced by inhibition than introverts; consequently, they are more likely to become bored with a given activity sooner and turn to another. In other words, extraverts are mentally more easily inhibited which implies that they are more susceptible to mental distraction; hence do not have as much mental concentration as introverts do (Kiany, 1998).

**Extraversion and Anxiety**

Lieberman (2000) explains that Extraverts are less sensitive to the punishment signals, so their insensitivity and their under-arousal condition makes them to be more stress-resident while introverts have higher level of neurotransmitter dopamine. Dopamine plays the important role of controlling movements or the ability to move, learning, working memory, cognition, and emotion. Introverts have already higher level of dopamine, so they require a limited level to not be very high or very low in order to make them relaxed out of the stress and depression (Lane, 2002). Psychologists believe that impulsive individuals are free and do better under high stressful circumstances (Revelle, 1997). However, Eysenck and Eysenck (1985) believe that extraverts act more quickly but less correctly in compound cognitive tasks, while introverts are slower but more precise. Introverts’ apprehension of punishment makes them to be cautious to act more carefully. Therefore, they act more precisely in using linguistic forms.

**Extraversion and brain processing**

Studies show that the brain of extraverts and introverts operates differently. According to Lane (2002), the introverts’ blood pathways are long and complicated than that of extraverts. This difference in the blood pass ways determines the central brain behaviors of extraverts and introverts. According to Lane (2002), “…the behavioral differences between introverts and extraverts result from using different brain pathways that influence where we direct our focus internally or externally. Extraverts work better under stressful situations than introverts. Stress releases additional dopamine, which impairs optimal stimulation in the dorsolateral prefrontal cortex and weakens the working memory (WM) and intentional processes (Lieberman & Rosenthal 2001). This difference in neurological system of extraverts and introverts can be an explanation for why extraverts work better with their short- term memory (STM; active memory) and WM than introverts (Lieberman 2000). Dewaele (2012) defines that Introverts have less STM capacity and the reduced STM capacity in L2 domain means that the linguistic information units would have to be line up before being processed which slowdowns the language proficiency and brain processing. He also believes that the combination of extraverts’ speed of retrieval of information from memory and their higher degree of physiological stress resistance would explain their better performance in high-stimulation environments such as a foreign language classroom (Dewaele, 2012). Although Extraverts are hypothesized to have better short term memory, introverts are believed to possess a wider long term memory and perform better in learning due to their long term memory and concentration than extraverts (Eysenck & Eysenck, 1985).

**Extraversion/Introversion and Writing Skill**

Carell et al., (1996) conducted a research on a group of Indonesian EFL learners participated in a longitudinal study, one-semester long course which included a series of EFL language measures like non-standardized, monthly tests of reading, grammar, vocabulary and writing, to investigate the relationship between extraversion and EFL proficiency. The participants’ personality types were measured by means of the MBTI instrument. The study found two results: first, there was a slightly negative link between extraversion and students’ vocabulary test performance. Second, there was no significant relationship...
reported between extraverts/introverts and their performance on grammar, writing and reading comprehension tests. Morimoto (2006) also clarified no significant differences between extraverts and introverts EFL learners and their vocabulary, grammatical and vocabulary knowledge. The authors recommended further research in this field. Karami (2001) conducted a research with 120 pre-university students in Hamadan, Iran, and the findings revealed that there was no significant difference between the grammatical performances of extraverts and introverts. Nejad et al., (2012), attempted to examine to what extent extraversion and introversion could foretell academic writing ability among 30 junior university students; male and female, studying English literature in junior at Ilam University, Iran. The result of study revealed that there is no significant relationship between extraversion/introversion and writing ability. Nejad et al. (2012) mentioned that the findings refuted the cliché that the extraverts outperform the introverts in skills like writing. Haji mohammadi and Mukundan (2011) investigated the impact of two different correction methods, on one hand, and extraversion/introversion, on the other hand, on 120 pre-intermediate Iranian female students. They were given five expository topics to write about in five-week duration. The findings of this study clarified that both extraverts and introverts can improve their writings and being extraverted or introverted has no significant impact of the writing progress of students. Ahmadian and Yadegari (2011) reported that in written Communication Extraverts EFL learners used interactional strategies more frequently than introverts whereas introverts used conceptual strategies more than extraverts.

MATERIALS AND METHODS

Participants of the Study

The study was conducted with 80 EFL learners participating at English programs at intermediate level (low intermediate) in some Language Institutes in Rasht, Iran. They were selected out of a pool of 200(AGE 16 to 24). In order to make sure of the homogeneity, the Oxford placement test (OPT) was administered between 200 participants. A total of 129 students were homogeneously selected based on their result on OPT (+ 1SD from the mean score). The procedures of conducting this study are as follow:

Step 1: Before conducting the main research, the degree of correlation coefficient between the scorers of the writing test (inter-rater reliability) and the reliability of writing test were computed through running Pearson correlation test (pilot study). The result showed an acceptable correlation between the raters’ given scores and writing tests. Besides, the reliability of Eysenck personality questionnaire 90- item (Persian version) was estimated through a pilot study on 15 EFL learners. The value of Cronbach’s Alpha for EPQ was reported .879, which shows the high reliability of the questionnaire to be used in this study.

Step2: The selected homogenous students were asked to fill up the Persian version of EPQ in 15 minutes. With a brief time interval after filling up EPQ, the students were given a situational writing task on a specific topic in order to write one paragraph composition in a determined time of 20 minutes (all the students finished before 20 minutes).

Step3: Out of these subjects, 80 students, 40 extraverts (20 males and 20 females), and 40 introverts (20 males and 20 females), with their writing scores, were selected based on their EPQ results. The study attempted to select students in higher and lower level of extraversion and leave the mid-level out of the analysis. Besides, the number of extraverted and female learners in Iranian EFL setting was naturally more than males. Therefore, 39 students were excluded and 10 students who were not truthful enough in answering the questionnaire (received a high score in Lie scale) expelled from the study.

Step4: Students’ writings were graded by three raters. The raters were all experienced teachers and they were trained in two sessions to score the writings based on Jacobs et al., (1981) scoring profile. Each teacher awarded a certain grade to five writing’s components; content, organization, vocabulary, language use and mechanics. The mean of scores given by three teachers on each student’s writing test was assigned as the score on writing ability of that student. After collecting data, the given scores by teachers and the personality traits of students (extraverted-introverted) were analyzed by Statistical package for social sciences (SPSS).
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Materials
1. Oxford Placement Test (OPT): It is a standardized test in English language provided by Oxford University Language Center.
2. Eysenck personality questionnaire (EPQ): It has been developed by Eysenck and Eysenck (1975) measures certain personality dimensions, namely extraversion, neuroticism and Psychoticism. EPQ is a standardized test and refined several times. The reliability of 90 items EPQ (Persian version) has been evaluated in Iranian context (E=.92), which shows a high degree of value (Ashtiani, 2009).
3. The composition test: the composition test was selected from a situational topic provided by Heaton’s (1990) in a book named ‘Writing English Language test.’ The Pearson correlation reported the value of .975, that was interpreted a substantial high correlation between the results of the writing tests on two different administrations.
4. Composition scoring profile: The selected writing scale for the current study is Jacobs et al.’s (1981) scoring profile.

RESULTS AND DISCUSSION

Results
First Question Analysis: Before running the required parametric tests, the normality assumption of the distributions was confirmed. After running the experiment, independent samples t-test were employed for the computation of the data. To the extent that the first research question is examined, an independent samples t-test run to the results of the writing tests of introverts and extraverts. It was applied to compare the extraverts and introverts in terms of their writing ability.

Table 1: Descriptive statistics for the introverts and extraverts’ writing scores

<table>
<thead>
<tr>
<th>Personality Type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Score</td>
<td>introvert</td>
<td>40</td>
<td>70.6590</td>
<td>17.60937</td>
</tr>
<tr>
<td></td>
<td>extravert</td>
<td>40</td>
<td>66.9860</td>
<td>18.60133</td>
</tr>
</tbody>
</table>

Table 1 depicted the values of means and standard deviation along with standard error of the mean for the two groups on writing. The mean score of the introvert group was 3.67300 points higher than that of the extravert group.

Table 2: Independent samples T-test for the introverts and extraverts’ writing scores

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing Score</td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
</tr>
</tbody>
</table>

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The independent sample T-test procedure (table 2) offered two tests of the contrast between the introvert and extravert groups. The significance index of the Levene statistic was .421 (greater than .05); it could be assumed that the groups had equal variances. Based on Table 2, there was no significant difference between the mean scores of the two groups in terms of their writing test (p ≥ 0.05). Therefore, the extraverts and introverts were almost at the same level of proficiency in terms of their writing ability in the administered writing test. Such a result answered to the first research question and confirmed the first null hypothesis, that extraversion vs. introversion has no impact on the writing ability of Iranian EFL learners.

Figure 1: The comparison of extraverts with introverts students in terms of their writing scores

Second Question Analysis: In addition to examining the possible difference between extravert and introvert learners with respect to their writing ability, their writing knowledge was also scrutinized in relation to their gender. Two independent samples t-tests was used to analyze female and male extravert and introvert students’ writing scores to examine the impact of gender differences’ extraversion/introversion on their writing proficiency. The results are available in the following section:

Table 3: Group Statistics for the writing scores of introverts (both males and females)

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Score</td>
<td>male</td>
<td>20</td>
<td>70.6520</td>
<td>21.36557</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>20</td>
<td>70.6660</td>
<td>13.41688</td>
</tr>
</tbody>
</table>

Table 3, represented that the mean score of the introvert females’ group was .01400 points greater than that of the introvert males’ group. Moreover, the degree of dispersion of the writing scores for the introvert males’ group (SD=21.36557) was larger than that of the introvert females’ group (SD= 13.41688).

Table 4: Independent samples test for the writing scores of introverts (both males and females)

<p>| Levene’s Test for Equality of Variances  | t-test for Equality of Means  |</p>
<table>
<thead>
<tr>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Score</td>
<td>Equal variances assumed</td>
<td>.616</td>
<td>.437</td>
<td>-</td>
<td>38</td>
<td>.998</td>
<td>-.01400</td>
<td>5.64137</td>
<td>-11.43435</td>
</tr>
<tr>
<td>Writing Score</td>
<td>Equal variances not assumed</td>
<td>.002</td>
<td>.002</td>
<td>-</td>
<td>31.968</td>
<td>.998</td>
<td>-.01400</td>
<td>5.64137</td>
<td>-11.50553</td>
</tr>
</tbody>
</table>

The results of independent samples t-test for the writing test in tables 4 reflected that there was not a significant difference between the two groups in their writing test (p ≥ 0.05). The results showed that
introvert male and introvert female EFL learners were not statistically different in terms of their writing ability. The next step was to analyze extravert males and females’ writing scores. The results of the descriptive statistics are provided in the following table.

### Table 5: Group Statistics for the writing scores of extraverts (both males and females)

<table>
<thead>
<tr>
<th>gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing Score</td>
<td>male</td>
<td>20</td>
<td>66.6190</td>
<td>15.87287</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>20</td>
<td>67.3530</td>
<td>21.40090</td>
</tr>
</tbody>
</table>

The mean score for female extravert learners was .73400 points higher than that of the male extravert learners. In addition, the degree of dissimilarity of the scores for the female extravert learners (SD=21.40090) was slightly higher than the degree of scattering of scores around the mean score for the male extravert learners (SD=15.87287).

### Table 6: Group statistics for the writing scores of extraverts (both males and females)

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Writing Score</td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

The Independent Samples t-test procedure (table 6) weighed up the means for the extravert male and female learners. This time the outcomes revealed that there was no significant difference between the two groups with respect to their writing ability (p≥0.05). Therefore, the findings of exploring the second research question confirmed the second null hypothesis, and declared that the gender differences’ extraversion/introversion has no impact on the writing ability of Iranian EFL learners. The following figure compares extraverts (males & females) with introverts’ (males & females) performances in writing test.

![Figure 2: The comparison of extraverts with introverts' writing scores in terms of gender differences](image-url)
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Conclusion and Discussion
Independent samples t-tests were applied for comparing extraverts and introverts’ writing scores with respect to their gender differences. The findings confirmed the first null hypothesis and declared that extraversion vs. introversion does not significantly affect the writing ability of Iranian EFL learners at intermediate level. Furthermore, the results of independent samples t-tests for male and female extravert and introvert learners confirmed the second null hypothesis that there was no significant difference between extravert male and female learners in terms of their writing proficiency. Besides, introvert male and female learners were not also significantly different with respect to their writing abilities.
The results can be discussed in other way that the view to extraverts as good learners due to their sociability behaviors is misleading. Unfortunately, such admiring positive views toward extraverts have influenced teacher’s perceptions and judgments about the students (Brown, 2007). In EFL teaching classrooms, the speaking skill is most dominated than other skills. In fact, students who speak more and use the chances to interact would be considered as active learners and the positive attitude of teachers to such students will influence on their judgments about those students’ learning abilities. The result of this research resolves these problems that extraverts are not better than introverts. To sum up, it seems that both extraverts and introverts have specific strengths and weaknesses in SLA and oral L2 production. Overall, these strengths and weaknesses cancel each other out, so that it impossible to conclude which is the desirable end of the extraversion–introversion dimension for SLA and oral L2 production (Dewaele, 2012). In addition, McDonough (2002) believes that although some personality types such as; introversion, self-confidence and self-efficacy have been suggested that they are conducive to learning a foreign language; these correlations have proved to be rather weak.
The finding of the present study seems to be compatible with the above said studies, and the findings of Carell et al.,’s (1996) study that reported there was no significant relationship between extraverts/ introverts and their performance on grammar, writing and reading comprehension tests. Also it supports the findings of Nejad et al. (2012) which found no significant relationship between personality and writing ability.
Moreover the findings of this research are on the opposite side of some linguists and psychologists theories at least in writing skill. Ahmadian and Yadegari (2011) believes that teachers can group students based on their personality traits and give them appropriate communicative tasks to develop their speaking skills and writing skills as well. The findings, with emphasizing on no impact of extraversion and introversion with respect to gender differences on language ability, could resolve all disagreements. It gives a clear answer to the previous mixed results in this area and decreases the role of personality in language proficiency, particularly writing. In the other word, the notion of the person who is skilled at learning who then applies that skill to a language resolves some of the problems of conceptualizing individual differences and their significance (McDonough, 2002).

Implications of the Study
The implications of this study can provide teachers, educators, students' parents and syllabus designers a comprehensive answer to their prejudgments about the students’ ability in different language skills. Besides, the implications may be applied to both male and female population of Iranian language learners at intermediate level. This also can settle the contradictory ideologies concerning with individual differences in Language learning. Every student can reach to the optimal level of performance. Additionally, the finding can change the views toward writing task as a mere conceptual activity that required introspective students to be mastered. This also proves each task has an optimal level of arousal that being proficient on the task and skill may not contribute with the learners differences in their personality.

Suggestions for Further Research
Further research in the area of personality in EFL might well consider other personality traits (such as Neuroticism) and their effects on writing ability where the stress and self-confidence may respectively link to the learning performance. Moreover, this study suggests further researches in this area among other cultures and countries using English as a foreign or second language with a larger sample.
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