

The Effect of Extraversion-Introversion On EFL Reading Comprehension

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Abstract

The Present study was conducted to investigate the role of Extraversion-Introversion personality factor in EFL reading comprehension. Accordingly, it was hypothesized that the differences between introverts and extraverts were also meaningful in comprehension task. Also, some other factors; namely, sex, age, and the combination of Extraversion-Introversion and sex were investigated in relation to EFL reading comprehension. Five hundred and seventy five university students majoring in English from four different universities comprised the population of the study. On the basis of their scores on a Test of English As a Foreign Language (TOEFL, 1992) and the Eysenck Personality Questionnaire (EPQ), 180 students were randomly selected. They were all intermediate students who were assigned randomly to two groups of Extraverts and Introverts. The distribution of male and female students was equal in both groups. The Nelso Standard Reading Test was then administered to find the relation between personality factor, sex, and reading. The data obtained were analyzed through the statistical technique of two-way ANOVA, T-test and Scheffe Test. Since significant differences were observed among the male and female extraverted and introverted EFL Students in their reading performance, it was concluded that the two factors of Extraversion- Introversion and sex have a determining role in the EFL reading comprehension. However, no interaction effect was shown in this context which means that the differences observed have been due to the main effects.

Also, no correlation was shown between the age of the students and their reading scores. Thus it cannot be claimed that the older or younger the students are, the higher or lower scores they may obtain in reading comprehension.

Introduction

Reading Proficiency is the royal road to knowledge; it is essential to the success in all academic subjects. In modern life, learning depends upon one's ability to interpret the printed page accurately and fully. In language learning, reading is a basic and complementary skill as far as the language students need to read for communication and to read a prodigious amount of authentic materials as a primary source of comprehensible input as they learn the language.

Branitz (1985) sums up three essential elements of an adequate model of reading as 1) a "multileveled" process in which native readers use various levels of language simultaneously to extract meaning. Readers use their knowledge of the world and their morphological, syntactic, pragmatic, and discursal knowledge in constructing and reconstructing meaning; 2) an "interactive" process in that the reader's comprehension is driven by the knowledge structures or schemata of the reader and the specific content and linguistic structures in the text. All the levels of background knowledge (social, linguistic, conceptual) interact simultaneously as the reader deduces meaning from the text; and 3) a process which involves the generation of hypotheses as the reader makes predictions about the meaning of a text. In this regard, the meaning of a text does not reside in a fixed, static form frozen within the words. Rather, as Devine (1988) says, it emerges anew in each encounter of a reader with a text. Thus, meaning is not in the words but largely in the reader (Huey, 1968).

Reading is a process of recognition of words and structures while associating meaning to them and understanding the contextual, conceptual, scriptual and schematic meanings which lead to global comprehension. Comprehension of a text involves seeing inter relationship, intra relationship, and suprarelationship of the sentences, paragraphs, the organization of longer passages and many other factors. (Varzegar, 1995, P.)

The reader brings his cognitive style, personality traits into the comprehension of the printed material. A text only provides directions and guidelines for the reader to decipher the denotative, connotative and psychological meanings of the message.

Regarding the new psycholinguistic theories of reading and the important role of the reader in the "creative" process of reading, it is evident that the reader reads a text while he is under the influence of linguistic, extralinguistic, cognitive, and affective factors. Thus, such an intertwined network can provide and answer to the wide individual differences within the classroom where they already exist to a complex degree (Naiman, 1971). But the contrivution of these factors varies in different individuals. Perhaps the degree of contrivution of any of these factors determines the rate and accuracy of comprehension from individual to individual in mature readers and specifically in a second language. Large differences have been observed among individuals in all reading processes; some readers read with an abnormally higher number of fixations per line and exhibit many more regressions; some read with markedly fewer fixations; few individuals have approximately the same speed.

Obviously, there are wide differences in the rate and accuracy of comprehension.

For those who have been actively involved in the study of innumerable factors which influence the reading process, the professional shifts of opinions become alternately significant. During the 1960's the so-called personality specialists in the reading field were besieged by opinion and research which purported the tremendous importance of psychogenic factors in determining how well a person/child would learn to read and the significance of these factors in the reading disabilities. There was infact, absolutely nothing in the way of personality dynamics which could not in some way be associated with the child's failure to learn to read. The strides which have been made in medicine, psychiatry, psychology, neurology, and education should contribute greatly to the understanding of learning in general, and reading more specifically.

Furthermore, any survey of the current state of art in language teaching leaves little doubt that the profession is undergoing a revolution. There is clearly a strong tendency toward interdisciplinary solutions to language teaching problems, with psychology occupying a key role, as it has done with the audio-lingual method and the cognitive approach and the innovative methods. But an equally important psychological domain to explore in trying to understand the process of second language learning and acquisition is the affective domain.

Brown's (1987) classification of various factors contributing to language learning and acquisition shows that there are three types of

variables; namely, cognitive, affective, and social variables. The affective or personality factors deal with the intrinsic side of individual learners, with their emotional reactions and motivations in the process of learning. According to Brown, the affective variables can be divided into two types of 1) egocentric and 2) social variables. Among social variables, empathy, aggression, and extraversion-introversion (here referred to as E/I) can be mentioned, while self-esteem and self-concept can be subsumed under egocentric category. It is suggested that the social variables may be keys to understanding the social nature of second language learning since the human being is a social being and the chief mechanism for maintaining the bonds of society is language.

From such a social perspective, "extraversion" is defined as the extent to which a person has a deep-seated need to receive ego-enhancement, self-esteem, and a sense of wholeness from other people, as opposed to receiving that affirmation within oneself. Extraverts actually need other people in order to feel "good"; however, they are not necessarily loudmouthed and talkative. They may be relatively shy, but still need the affirmation of others. Introversion, on the other hand, is the extent to which a person derives a sense of wholeness and fulfillment apart from a reflection of this self from other people. Obviously, the differences between these two personality types leads to differences in the process of language learning and acquisition as observed in the classroom to a great extent. However, it is equally conceivable that the role of E/I can be, and has been misinterpreted in language classes. Brown

(1972, 87) points out that it is a common belief among teachers, especially in the western society, that introversion is an undesirable behavior. On the contrary, the outgoing, amiable, talkative personalities tend to be held up as axiomatically desirable. The quiet, reserved personalities are treated as "problems" and language teachers seek ways of encouraging extraversion. The syndrome is further complicated by the tendency in modern language teaching to emphasize speaking in the classroom with all too little emphasis on aural comprehension. So unfortunately, these stereotypes have influenced teachers' perceptions of the students. Educational psychologists tend to agree that a child's introversion and extraversion may be "... a grossly misleading index of social adjustment" (Ausubel, 1968, p. 12); in fact, they have warned against prejudging students on the basis of perceived extraversion. The misinterpretations on this basis are such views as the the proficiency of a more introverted person is qualitatively lower than his extraverted counterpart.

Studies in the field of EFL have not found any clear answers to whether extraversion or introversion helps or hinders the process of language acquisition and learning. The Toronto study (Naiman et al, 1978) found no significant effect for extraversion in characterizing the good language learner. Busch (1982) in the most comprehensive study to date on extraversion, explored the relationship between introversion and extraversion and English proficiency in adult Japanese learners in Japan. She hypothesized that extraverted students would be more proficient than introverts but her hypothesis

was not supported. In fact, introverts were significantly better than extraverts in their pronunciation. This latter result tends to blow apart the stereotype of the extraverted language learner who is presumably a frequent and willing participant in class activities.

The controversy over the efficiency of extraverts is evident in other studies such as that of Mehryar, et al (1975) who used self-rated academic success. The study suggested that in the American culture, extraversion is more conducive to success in higher education. This sounds reasonable since extraversion seems more normative and desirable in the United States than Britain. Irfani (1978) repeated the study with Iranian and Turkish students and again found out that the extraverts claiming greater academic success. But this was not borne out by their grade-point averages; this showed no difference between extraverts and introverts. However, there is an evidence, in contradiction with that of Busch (1982), that extraverts perform better in verbal fluency tasks (Di Scipio, 1971; Tapasak, et al, 1978); and this might be expected to generalize to public speaking ability and can be related to the sociable nature of extraverts. Busch's study, however, is just one study, and it was done in one culture with one group of learners. Perhaps in the light of an appropriate definition of extraversion, it would be conceivable that extraversion may be a factor in the development of general oral communicative competence, which requires face to face interaction, but not in other language skills like listening, reading and writing.

Regarding the importance of the reading skill and in order to

recognize the sources of differences, as well as deficiencies, in reading ability and comprehension of university students specially those majoring in the English language, the present study sought to discover:

- 1) Whether E/1 personality factor has any significant role in EFL reading comprehension.
 - 2) Whether sex has any role in the EFL reading comprehension.
 - 3) Whether there is an interaction effect of these two factors in relation to reading comprehension.
 - 4) And can age be considered as a determining factor in this context.
- Accordingly, four null hypotheses were stated.

Hypotheses

To systematically investigate the proposed questions, the following hypotheses were stated in the null form:

- 1) Extraversion - Introversion personality factor has no role in EFL reading comprehension. In other words, there is no significant difference in the performance of extravert and introvert students on a reading comprehension task.
- 2) Sex has no significant role in EFL reading comprehension.
- 3) The combination of Extraversion - Introversion factor and

sex has no determining role in EFL reading comprehension.

4) Age does not play any role in this context.

Subjects

The subjects comprising the population of this study were 180 students studying English with the age range of 18 to 36. These subjects were selected from a population of 578 students of Tehran, Azzahra, Allameh-Tabatabayee, and Azad universities on the basis of their scores on the Test Of English as a Foreign Language (TOEFL, 1992). The subjects selected were all at the intermediate level of the English language proficiency according to their scores.

Aslo, on the basis of the resulty of the personality test, they were randomly assigned to two groups characterized as introverts and extroverts; each group with 90 subjects. The distribution of males and females was equal in each group (45).

The subjects were assigned a code number in order to ensure anonymity and to assure them that their personality questionnaires were not analyzed and corrected with their names on them. They were only required to mention their age and sex on the sheets.

Method

Three sets of tests were administered respectively to the subjects:

1. "The Test Of English as a Foreign Language (TOEFL 92)" was administered to the population of 578 students for the purpose of measuring the students' level of English proficiency and subsequently, matching them on the same level of proficiency. Thus, it was decided to select only intermediate students to avoid any effect of proficiency on the performance of the subjects on the reading comprehension (here referred to as RC) test. It consisted of 150 multiple choice items in three parts" Listening Comprehension (50 items), Grammar and Structure (40 items), and Vocabulary / Reading Comprehension (60 items). The intermediate students were selected to the basis of their scores ranging from 50-100.

2. The Eysenck Personality Questionnaire (EPQ) (H.J. Eysenck, and S.B.G. Eysenck, 1975) was administered to all the intermediate subjects (315) to make a distinction between extravert and introvert students. It consisted of 90 yes/no questions in Persian. The translation and the estimation of the reliability (.84) and validity of the inventory has been done by the Institute Of Psychology Of Iran Medical University.

Table 1

*ANOVA For Gains in reading comprehension related to
extraversion - introversion and sex*

<i>Source of Variation</i>	<i>sS</i>	<i>d.f.</i>	<i>MS</i>	<i>F Value</i>
Personality Factor (A)	4877.32	1	4877.32	43.74 *
Sex (B)	1390.34	1	1390.34	12.47 *
A * B	602.92	1	602.92	3.58
* P < .05 F - Critical = 3.89				

A close study of Table 1 reveals that the F-value observed for Factor A exceeds the critical value ($f = 43.74 > 3.89$). In this way, we can safely claim that the personality factor of E/I has a determining role in RC and as a result, reject the first null hypothesis which stated that "no significant difference exists between the performance of extraverts and introverts on an RC task.

The second null hypothesis claimed that "sex has no role in the EFL RC". Again, the results presented in Table 1 show that the F-ratio for sex, 12.47, is higher than the F-critical of 3.89. Thus, it can be claimed that males and females in the two groups of E/I have not made similar gains in their RC performance. Accordingly, the second null hypothesis was rejected.

For the interaction effect, the data analysis shows no interaction effect in this context ($F \llcorner A \times B \gg 3.58 < 3.89$). The interpretation can be that now it is possible to qualify our claims about the main effects on RC.

The relevant statistics for the Scheffé test are presented in Table 2.

3. Simultaneously, for measuring the reading ability of the subjects, the Nelson Standard Test of Reading (1977) (level C) was administered which consisted of 70 m/c questions; 29 vocabulary items, and 41 reading comprehension questions.

According to the results of EPQ, 180 male and female students were randomly assigned to two main groups of extravert and introvert each with 90 subjects and equal distribution of males and females (45). Thus, four groups were formed:

1. Male introverts
2. Female introverts
3. Male extraverts
4. Female extraverts

Data Analysis

The factorial design of the study was a 2×2 (E/1) \times (male/female) design, and since the main focus was to investigate the effect of E/1 and sex on the reading ability, the statistical technique of two-way ANOVA (Hatch & Farhady, 1982) was applied to see the effect of E/1 (factor A) on RC; the role of sex (factor B) in RC ability, and the existence of any interaction effect of these two independent variables on RC.

The role of the moderator variable, age, was estimated

through Pearson Product Moment Correlation between age and reading scores.

Also, since the results of data analysis showed high F-ratios for factors A and B, a post hoc comparison of means was done through a Scheffe test to test the differences in order to see exactly where the differences were.

Results

The results of the Analysis of Variance are reported in Table 1. It was decided to try to reject the hypotheses at .05 level of significance.

Table 2

Scheffe Test for Differences in reading scores for 4 groups of extraverts and introverts each with two sex levels

<i>Group</i>	<i>MI</i> <i>x = 46.1</i>	<i>ME</i> <i>x = 31.9</i>	<i>FI</i> <i>x = 40.6</i>	<i>FE</i> <i>x = 28.6</i>
1		6.79 **	2.6	8.3 **
2			4.16 **	1.59
3				5.74 **
P < .05 t'critical = 3.41				

A close study of Table 2 shows that the difference between group 1 and 2 (male E and I) is significant ($6.79 > 3.41$). Also, the difference between groups 3 and 4 (female E and I) is significant ($5.74 > 3.41$). Thus, as claimed before in the ANOVA table, there is a difference between the performance of extraverts and introverts.

A difference is also apparent between groups 2 and 3 (male E and female I) ($4.16 > 3.41$); and groups 1 and 4 (male I and female E - $8.3 > 3.41$). These findings are indicative of the difference between the groups with different personality factors and different sex levels which were proved and expected according to previous statistics. However, the results have not shown any difference between groups 1 and 3 (male and female I - $2.6 < 3.41$). This fact can be better interpreted if we plot the means of the groups in the following figure.

Figure 1

The comparison of means according to the scheffe test results.

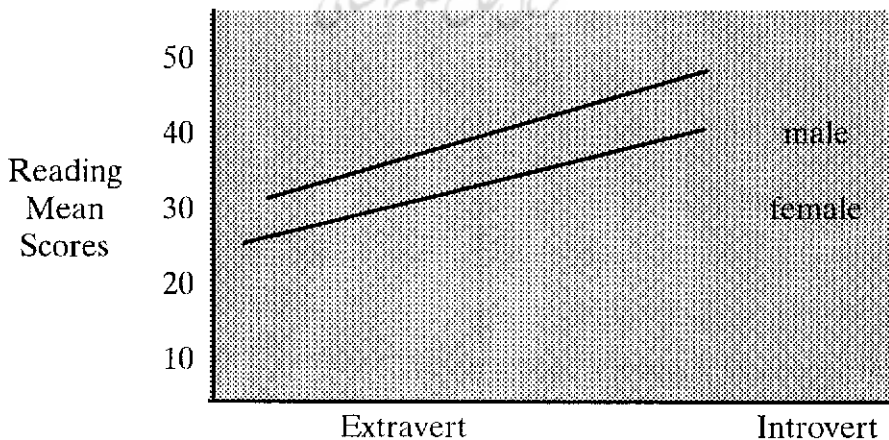


Figure 1 shows that extraverts and introverts have performed differently; that is, the introverts, both males and females, in comparison to extraverts, have made better gains in their reading scores. Also, in both groups, male subjects have made greater gains than females. However, there is no significant difference between the performance of male and female introverts and between the performance of male and female extraverts.

For the statistical investigation of the last null hypothesis about the non-existence of any relation between age and RC scores, the results of the Pearson Product Moment Correlation showed the correlation coefficient of .11 which did not reach the desired magnitude of correlation ranging from -1 to 0 to + 1. Thus, it can be conjectured that we cannot claim the older or younger the students are, the higher or lower scores they may obtain in RC.

Summary and Conclusion

In an attempt to investigate one of the sources of individual differences in relation to reading skill, it was found out that extraversion - introversion personality factor and sex have a determining role in the EFL reading comprehension. Significant differences were observed among the male and female extraverted and introverted EFL students in their RC performance. However, no interaction effect was shown in this context which means that the difference observed have been due to the main effects. And no correlation was observed between the age of the students and their

reading scores.

The findings of the present study reveal important facts about the contribution of affective factors in the process of foreign language learning and reading skill specifically, since in the EFL field, no research work on the relation between E/I and reading skill has been reported.

Clearly, these results along with previous findings in both fields of psychology and EFL, bear several pedagogical implications and suggestions for teaching the reading skill and other language skills. One can be that the facilitating or intervening effects of certain methods to invoke extraversion or introversion need to be carefully considered. Several studies have revealed valuable findings such as that of Leith (1973) and Shodbolt (1978). They claimed that extraverts would benefit from informal, unstructured methods while introverts do better with more traditional, structured approaches. Trown (1975) pointed out that more anxious students need deductive, teacher - centered, and supportive strategies, but more stable personalities benefit that extraverts perform better in group situations, while introvert learners better work on their own.

Another implication can be based on the psychological studies (M.W. Eysenck, 1975) which reveal that introverts tend to make fewer errors due to their reflective nature but extraverts because of their impulsivity are found to make more errors since they gamble on the basis of their hunches in comparison to reflective introverts who weigh all the considerations in a problem. The implication for the teacher can be that they should not judge

mistakes too harshly especially with a learner of extraverted type. On the other hand, Cameron and Myers (1966) found out that Introverts because of their cautiousness and anxiety are engaged in more re-checking and consequently, they need more time to process information; thus, introverted learners require more patience from the teacher in class activities.

And finally, the teachers' awareness of the sensitivity of E/I to positive reinforcement would obviously have effective consequences in language classes. This is based on Gray's findings (1972) that introverts have a more sensitive punishment system and extraverts have a more sensitive reward system.

One important point to be mentioned is the factor of "culture" in this context. As Brown (1972) states, the crosscultural norms of verbal and nonverbal interaction vary widely in different societies. It means that what is considered as introversion in one culture (like America) may appear in Japanese culture as respect and politeness. Thus, the role of culture differentiation in relation to language learning must be taken into consideration. This can be one of the reasons for the lack of any clear decision about whether extraversion or introversion helps or hinders the process of language learning and related skills.



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