

The Effect of Awareness-Raising Training on Iranian Intermediate EFL Learners' Reading Comprehension with a Focus on Reflective and Impulsive Learning Styles

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ABSTRACT

The present article aimed at investigating the effect of awareness-raising training on Iranian EFL learners' reading comprehension with a focus on reflective and impulsive learning styles. To do so, a group of 150 intermediate EFL learners in Iranian context were given a piloted version of language proficiency test of PET. 100 male and female learners whose scores fell 1SD below and above the mean were selected and divided into two equal groups shaping the experimental and control groups for the purpose of the study. Following the test of general proficiency the learners also received a valid version of questionnaire of impulsivity/reflectivity (developed by Riding and Cheema, 1991) based on which they were divided into impulsive and reflective groups. Both groups received a piloted reading pretest prior to the treatment phase as well. The experimental group received awareness-raising training techniques (Nakatani, 2005) during the treatment phase while the learners in the control group received conventional reading comprehension training. Following one semester of training and treatment the learners received the piloted version of the researcher-made reading comprehension posttest. The data gathered were put into statistical analysis and reported. A two-way ANOVA was run to investigate the effect of the treatment and personality traits on the performance of the subjects on the reading test and based on the results it was concluded that awareness raising training had a significant effect on the performance of the subjects on the reading test. The findings also asserted that the types of personality traits had a significant but moderate effect on the performance of the subjects on the reading test: The reflective subjects showed a higher mean on the reading test than the impulsive subjects. The findings of the research could be employed by EFL teachers, educational researchers, and English learners in an attempt to develop a more learner-centered method of second language reading comprehension.

Keywords: Awareness-Raising Training; EFL Learners; Reading Comprehension; Reflective Learning Styles; Impulsive Learning Styles

INTRODUCTION

Reading skill has been vastly researched by SLA and ELT researchers. It also has been attractive enough to initiate specific studies on various psychological concepts related to language learning such as perception, recall, recognition, concept mapping, and the like. In the study of a foreign language (English), reading has often been the center of debate among scholars. Theories about reading techniques have created an awareness of the influence reading has on other skills and translating (Sheng, 2000). Also, reading has been probably recognized as the most important skill for second language learners in academic contexts (Carrell, 1998).

Additionally, Carrell (1998) believes that reading is an important means by which not only new information is learned but also by which new language skills can be acquired. Also, in

both first and second language reading, reading is the primary source of new information about all kind of topics (Ellis, 2008).

In a good number of countries, foreign languages are learned by numbers of students who will never have the chance of communicating with native speakers, but they have access to the literature and reviews, or academic and technical journals that are written in the language they are learning. Many need these publications to assist them with further study or in their work; also others will enjoy reading in their leisure time to keep themselves in touch with the wider world (Rivers, 1981).

Reflectivity/impulsivity has been defined by Kagan (1966) primarily as a conceptual tempo, or decision time variable, representing the time the subject takes to consider alternative solutions before committing to one of them in a situation with high response uncertainty. Messer (1976) believed that reflectivity/impulsivity is the extent to which a person reflects on a solution to a problem for which several alternatives are possible. For empirical purposes, classification of subjects has utilized a dual criterion (response time and errors). As Kagan (1966), Kagan, Pearson, and Welch (1966) explained, the impulsive reach decision and report them very quickly with little concern for accuracy; others of equal intelligence are more concerned with accuracy and consequently take more time to reach a decision. In other words, impulsive people tend to jump at the first response whereas reflective people think about their answers. Reflective people make fewer mistakes and are probably more analytical. The reflective learner spends extra time analyzing the structure of the problem and the details presented. This usually leads to a lower error rate. Reflective learners perform better when learning calls for inductive reasoning (Fazilatfar, 2010).

STATEMENT OF THE PROBLEM

Though reading comprehension is the most frequently researched skill in the Iranian EFL context, the problem of reading comprehension remains an everlasting one for the Iranian students (Jalilifar, 2010). This is a fact that students cannot learn the materials unless they are able to comprehend them and find out about the content presented.

Reading comprehension in general and recalling the information presented in a specific academic text, in particular have been among the discussions ever attracted the researchers in the Iranian context. With the emergence of task-based learning and teaching, the importance of “awareness-raising” and its effect on recalling in reading attracted a lot of researchers (Anderson, 1991; Chamot, 2005; Riazi, 2007; Woodrow, 2005). Reading comprehension is a skill that all learners need at any level. In other words, EFL students need great amount of comprehensible input, and reading materials are usually the most accessible source (Afflerbach, et.al, 2008). Yet, in language teaching programs in the Iranian context, little attention is paid to the reading comprehension skill and the learners’ styles (impulsivity and reflectivity) in general and the importance of recalling process in reading comprehension, in particular. The relationship between “awareness-raising” and “recalling the information” also has been less researched by the Iranian scholars. The present study was an attempt to cover the mentioned areas.

PURPOSE OF THE STUDY

As second language reading skill is considered significant among Iranian learners and in a lot of cases it is the most useful skill for the second/foreign language learners to receive information and knowledge (Amiri & Maftoon, 2010), the present research firstly was an attempt to compare the effect of awareness-raising on the development of reading comprehension ability among Iranian EFL learners in the intermediate level. More

specifically, the study aimed at checking if awareness-raising can have any significant impact on the EFL learners' reading comprehension ability. Secondly, the study aims at discovering the relationship between reading ability affected by awareness-raising and the personality styles of impulsivity and reflectivity among the participants of the study.

RESEARCH QUESTIONS

Concerning the problem stated and putting an attempt to fulfill the purpose of this study the following questions were raised:

RQ1: Does awareness-raising have any significant effect on Iranian EFL learners' reading comprehension ability?

RQ2: If the answer to the research question one is yes, which of the impulsive or reflective subjects benefit more?

RESEARCH HYPOTHESES

In order to investigate the above-mentioned research questions, the following null hypotheses were formulated:

H₀₁: Awareness-raising does not have any significant effect on Iranian EFL learners' reading comprehension ability.

H₀₂: Awareness-raising does not have the same effect on impulsive and reflective subjects.

SIGNIFICANCE OF THE STUDY

Various concepts focused on in the present study (awareness-raising, reflectivity/impulsivity, and reading skill) had been discussed in the literature distinctly, but their probable effects on one another or their relationship together was a new area of research. The study also takes significance on the ground that it paves the way for the EFL teachers in the Iranian context to employ awareness-raising strategies and techniques in their classes to create a more advantageous situation and atmosphere in the classroom. Materials developers also can include activities and tasks focusing on the role of awareness-raising in the reading materials designed for the EFL classes in the Iranian context. English teachers might use the findings of the present study to train their students better and help them gain more fruitful results in the EFL reading comprehension classes.

LITERATURE REVIEW

Reflective and Impulsive Learning Styles

According to Kagan (1966), the reflectivity/impulsivity (R/I) notion is defined as a conceptual tempo, or decision time variable that represents the time the subject takes to consider alternative solutions before committing to one of them in a situation with high response uncertainty. Fazilatfar (2010) states that:

Impulsive students are fast but inaccurate. They use strategies that involve quick and uncritical acceptance of their initial impressions. Overly impulsive students can be prone to making many errors, and they do not take the time to correct them. On the other hand, reflective students are slow and accurate. They prefer strategies that involve systematic investigation of their initial impressions. If their initial impressions are wrong, they take the time to make corrections. That is why their work shows fewer errors. (p. 19)

Fontana (1995) believes that reflective children tend to make fewer errors than impulsive ones particularly on challenging and difficult tasks, since they show a strong desire to be right

first time, and seem able to tolerate the ambiguity, say, of a long silence in front of the class while they think out the right answer before responding. Impulsive children on the other hand, adopt a "shotgun" approach, firing off answers in the hope that one will be right and that in any case errors will provide appropriate feedback from the teacher to help them to get nearer to the solution next time.

Reflective /Impulsive Learning Styles and Language Learning

Ackerman's (1996) PPKI theory (intelligence as processes, personality, knowledge, and interests) tries to draw a conceptual framework for understanding the relation between non-cognitive and cognitive individual differences. The theory claims that personality traits play an important role in the development of knowledge in that they direct an individual's choice and level of persistence to engage in intellectually stimulating activities and settings.

Indeed, the learning styles of an individual will help determine to some extent the strategies employed in language processing (Cohen, 1998; Fan, 2003). Rossi-Le (1989) found that how a learner uses learning strategies is related to his/her learning style. Ehrman and Oxford (1989) worked with adult language learners and found that learning style has a strong influence on the way learners use strategies and how they advance in their language learning. They claim that a greater understanding of learning styles would enable trainers to better deal with different learners to enhance learning performance.

Jamieson (1992) believes that the fast-accurate learners would be better language learners than those both reflective and impulsive who are lacking speed and accuracy respectively. The researcher carried out a study on adult ESL (English as a second language) learners reporting that "fast-accurate" learners, or good guessers, were better language learners as measured by the standard TOEFL test.

Thus, it can be inferred from the PPKI theory that individual differences in personality may influence academic performance. Other studies have also shown that "non-intellectual" factors such as personality traits and learning styles are significantly involved in academic performance (Busato, Prins, Elshout, & Hamaker, 2000; Chamorro-Premuzic & Furnham, 2003).

Reflective /Impulsive Learning Styles and Awareness

One of the major objectives in foreign language learning settings is to raise awareness about students' personal differences and their potential effects on the learning process and subsequently, on learning outcomes. Further, because of the numerous learner variables that appear to impinge on the process of language learning (Blair, 1982), the emphasis on the individual differences among learners is indeed pertinent in modern language teaching and its associated learning environments.

The success of second language learning is due not only to cognitive factors but also to affective, motivational, personality, and demographic factors of the learners (Brown, 2000; Carrel, Prince, & Astica, 1996), among which personality is of great importance (Carrell et al, 1996). Ackerman and Heggstad (1997) have suggested that individual difference variables such as personality, intelligence, and vocational interests can be used to explain not only variance in academic performance, but also the processes by which traits influence examination outcomes.

In conclusion, personality traits never occur in any two individuals in exactly the same way (Brown, 2007); therefore, an awareness of these personality differences by both student and teacher is essential for the most efficient use of reading materials and methodologies presented in the classroom. Accordingly, Sadeghi, Kasim, Tan, and Abdullah (2012) state

that "Language planners beside language teachers need to touch on the learners' peculiarities, i.e. learning styles, personality, etc, to meet the various needs of the learners" (p. 116).

A great deal of research in L1 and L2 fields has shown that learning will be facilitated by making students aware of the range of strategies from which they can choose during language use. Subsequently, the most effective way to enhance learner awareness in this regard is to instruct them how to appropriately apply language-learning strategies in the target language context, and hence the rationale for more research into this field (Carrell, 1985; Pearson & Fielding, 1991).

Raising students' awareness regarding their learning styles and strategies might make them not only more prepared for learning but also more analytic about their learning styles and the strategies they use. Reid (1995) states that developing an understanding of learning environments and styles "will enable students to take control of their learning and to maximize their potential for learning" (p. xiv).

Previous Research

According to Dewaele (2005), research is lacking on the effect of psychological variables on the process of language acquisition. He noted that there is a relatively strong skepticism among applied linguists towards psychological variables. Nevertheless, Rezaei, Boroghani, and Rahimi (2013) note that some studies in recent years have shown an increasing interest in investigating the influence of psychological variables on behavior and learning. One aspect of cognitive style which is specifically related to behavior in problem-solving situations is conceptual tempo or the reflectivity/impulsivity dimension (Rezaei et al., 2013).

It has been found that children who are conceptually reflective tend to make fewer errors in reading than do conceptually impulsive children (Kagan, 1965; Messer, 1976). However, impulsive persons are usually faster readers than the reflective ones, and eventually master the "psycholinguistic guessing game" (Goodman, 1970) of reading in a way that their impulsive style of reading may not necessarily deter comprehension.

Doron (1973) sought to examine the relationship between R/I and reading proficiency in students of English as a second language. Kagan's Matching Familiar Figures test was used to measure R/I in a sample of ESL student Doron, then, administered reading tests of comprehension and speed to the same subjects to determine the correlation between R/I and reading. She discovered that reflective students were slower and more accurate than impulsive students. The researcher suggested that this fact should be taken into account in the teaching of reading.

Pirouznia's study (1994) provides continuing evidence for the positive relationship between reflectivity and EFL reading comprehension. In her study, reflective students were perfect; error detection and the mean differences between reflective and impulsive students across grade levels were significant.

Rezaei et al, (2013) attempted to review and explore the importance of reflective/impulsive cognitive style on the effectiveness of awareness raising activities. They came to the conclusion that learners with different cognitive styles (being reflective/impulsive) react differently to the awareness giving activities. They suggested that this trait should be attached importance and accounted for as an effective factor.

Thus far, few studies have been conducted on the impacts of reflective and impulsive learning styles on second language acquisition (Vodopija-Krstanoviæ, 2003). On the other hand, the significant role assigned to awareness-raising activities has not been thoroughly explored with regard to the reading ability. Therefore, the purpose of the present study is to

fill this research gap to examine the effect of awareness-raising training on EFL learners' reading comprehension with a focus on reflective and impulsive learning styles.

METHOD

The present section deals with explaining participants of the study, instruments used for collecting the data, procedures, data analysis, and the design of the study.

Participants

A group of 150 learners (both male and female) studying New Interchange series at the intermediate level in Navid Language Institute in Bandar Abbas was given a piloted version of language proficiency test of PET. One hundred (100) learners whose scores were 1SD below and above the mean were selected and divided into two equal groups shaping the experimental and control groups for the purpose of the study. Following the test of general proficiency the learners received a valid version of questionnaire of impulsivity/reflectivity (developed by Riding and Cheema, 1991) based on which they were divided into impulsive and reflective groups. In each of the two experimental and control groups 50 participants were placed. In the experimental group 21 subjects were impulsive and 29 others were reflective, while in the control group 23 subjects were impulsive and 27 ones were reflective.

Instrumentation

To collect the desired data, the following instruments were employed:

A Preliminary English Test (PET) as a language proficiency test was given to the participants to homogenize the prospective students for the study. Though the test was a standardized one, a pilot study was also run to ensure the reliability of the test prior to the main administration.

A researcher-made reading comprehension pretest which was piloted and validated through item analysis and modification procedures. The test included six passages and thirty items. The test was developed, piloted in a group of 20 students with similar characteristics to those of the main participants of the study, and modified. An item analysis was also run to see which items require modification. Content validity of the test was also examined through the professional view of the experts; two university professors. This showed if the learners enjoy homogeneity in their reading comprehension ability before the treatment.

Another researcher-made reading comprehension test was used as the posttest. This test considered the intermediate level materials presented in the course book the learners were dealing with throughout the semester. This test also included 6 passages and for each passage 5 items were developed. This means that the whole test was comprised of 30 items. The test was developed, piloted in a group of 20 students with similar characteristics to those of the main participants of the study, and modified. An item analysis was also run to see which items required modification. Content validity of the test was also examined through the professional view of the experts; two university professors.

A valid version of impulsivity/ reflectivity style questionnaire developed by Riding and Cheema (1991), which is the most frequently cited questionnaire in the literature pertained to impulsivity and reflectivity in the SLA domain, was used in the study. The questionnaire is labeled as part ten of the *Learning Style Survey* developed by Riding and Cheema (1991) which "is able to diagnose the cognitive styles" (p.193). This section of the questionnaire includes six items three of which are representing impulsivity and the other three, reflectivity. Based on the authors, the questionnaire could be used as a whole test to diagnose the learning styles in general or be disintegrated to its specific eleven parts each of which diagnosing a specific cognitive style.

Procedure

A group of 150 learners studying New Interchange series at the intermediate level in Navid Language Institute in Bandar Abbas were given a version of a piloted version of language proficiency test of Pet. 100 learners (both male and female) whose scores were 1SD below and above the mean were selected to be divided into two equal groups shaping the experimental and control groups for the purpose of the study. To facilitate the process of training the students were positioned in the groups of 20 to 29 as subgroups of the study. Both groups received a piloted reading pretest prior to the treatment phase. Following the test of general proficiency the learners received a valid version of questionnaire of impulsivity/reflectivity (developed by Riding and Cheema, 1991) based on which they would be divided into impulsive and reflective groups. The experimental group received awareness-raising training techniques (Nakatani, 2005) during the treatment phase while the learners in the control group received conventional reading comprehension training.

The learners in the experimental group received strategy training and explicit strategy instruction was introduced to help the learners become aware of their own learning processes. In order to develop their metacognitive skills, specific reading communication strategies to enhance skills for managing textual interaction actively were selected and described on a textual communication strategy sheet, which was delivered to students at the beginning of the course. The sheet listed examples of achievement strategies "Achievement that the students could use in each lesson. From these lists, the students could locate strategies that they believed useful for interaction in specific tasks. The students also were encouraged to use a strategy diary to make plans, monitor, and evaluate their performance. The strategy training consisted of a five-phase instructional sequence: review, presentation, rehearsal, performance, and evaluation.

Following one semester of training and treatment (10 weeks, each week 2 sessions of 90 minutes), the learners received the piloted version of the researcher-made reading comprehension posttest. The data gathered were put into statistical analysis (SPSS version 21) and reported.

Design

The present study was implemented on the basis of a quasi-experimental design which was formulated as follows:

A proficiency test (PET) was used for homogeneous subject selection. Both the control and experimental groups received the questionnaire of reflective and impulsive learning styles. The control and experimental groups received a pretest of reading comprehension while the experimental group received specific treatment in awareness-raising and the control group was exposed to conventional methods of reading comprehension. It is worth mentioning that in the present research awareness-raising training was considered as the independent variable, while reading comprehension was the dependent variable and reflective and impulsive learning styles were labeled as control variables.

DATA ANALYSIS

Testing Assumptions

The present data were analyzed through the parametric tests of independent t-test and two-way ANOVA which are based on four main assumptions of interval data, independence of subjects, normality and homogeneity of variances. The first two assumptions do not have a statistical test. The researcher confirms that the data are measured on an interval scale and the subjects performed on the tests independently. The normality assumption was met. As

displayed in Table 1 the ratios of skewness and kurtosis over their respective standard errors were within the ranges of ± 1.96 .

The assumption of homogeneity of variances will be discussed when reporting the results of the repeated measures ANOVA and independent t-test.

Table 1. Testing Normality Assumption

Group		Skewness				Kurtosis		
		<i>N</i>	<i>Statistic</i>	<i>Std. Error</i>	<i>Ratio</i>	<i>Statistic</i>	<i>Std. Error</i>	<i>Ratio</i>
Experimental	PET	50	-.714	.337	-1.53	-.435	.662	-0.66
	Pre-test	50	-.733	.337	-1.58	-.973	.662	-1.47
	Post-test	50	-.376	.337	-1.12	-.487	.662	-0.74
	Valid N (list wise)	50						
Control	PET	50	-.753	.337	-1.64	-.331	.662	-0.50
	Pre-test	50	-.326	.337	-0.97	-1.074	.662	-1.62
	Post-test	50	-.057	.337	-0.17	-.749	.662	-1.13
	Valid N (list wise)	50						

Construct Validity

A factor analysis was run to probe the construct validity of the PET, pretest and posttest of reading comprehension. The SPSS extracted two factors which accounted for 92.17 percent of the total variance.

Table 2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Total</i>	<i>% of Variance</i>	<i>Cumulative %</i>
1	1.747	58.228	58.228	1.747	58.228	58.228
2	1.018	33.946	92.174	1.018	33.946	92.174
3	.235	7.826	100.000			

Table 3 displays the factor loadings of the tests under the extracted factors.

Table 3. Rotated Component Matrix

	Component	
	1	2
Pre-test	.938	
Post-test	.919	
PET		.994

PET

The PET test of general language proficiency was administered to 150 students. Based on the mean of 39.25 and standard deviation of 6.45 (Table 4), 100 subjects were selected for the main study.

Table 4. Descriptive Statistics; PET

	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Variance</i>	<i>KR-21</i>
PET	150	39.25	6.454	41.654	.81
Valid N (listwise)	150				

An independent t-test was run to compare the experimental and control groups' mean scores on the PET test in order to prove that both groups enjoyed the same level of general language proficiency prior to the administration of the treatment. As displayed in Table 5 the experimental ($M = 39.98$, $SD = 3.89$) and control ($M = 40.04$, $SD = 3.86$) groups showed almost the same means on the PET test.

Table 5. Descriptive Statistics PET by Groups

<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
Experimental	50	39.98	3.894	.551
Control	50	40.04	3.860	.546

The results of the independent t-test ($t(98) = .077$, $P > .05$, $R = .008$, representing a weak effect size) (Table 6) indicated that there was not any significant difference between the experimental and control groups' mean scores on the PET test. Thus it can be concluded that they enjoyed the same level of general language proficiency prior to the administration of the treatment.

Table 6. Independent t-test PET by Groups

<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>							
<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>Df</i>	<i>Sig. (2- tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>		
							<i>Lower</i>	<i>Upper</i>	
Equal Variances Assumed	.006	.941	.077	98	.938	.060	.775	-1.479	1.599
Equal Variances Assumed			.077	97.992	.938	.060	.775	-1.479	1.599

It should be noted that the assumption of homogeneity of variances was met (Levene's $F = .006$, $P > .05$). That is why the first row of Table 6, i.e. "Equal variances assumed" was reported.

Pretest of Reading Comprehension

An independent t-test was run to compare the experimental and control groups' mean scores on the pretest of reading in order to prove that both groups enjoyed the same level of reading ability prior to the administration of the treatment. As displayed in Table 7 the experimental ($M = 21.36$, $SD = 2.24$) and control ($M = 21.16$, $SD = 2.43$) groups showed almost the same means on the pretest of reading.

Table 7. Descriptive Statistics Pretest of Reading by Groups

<i>Group</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
Experimental	50	17.43	2.02	.214
Control	50	18.12	2.11	.294

The results of the independent t-test ($t(98) = .42$, $P > .05$, $R = .043$, representing a weak effect size) (Table 8) indicated that there was not any significant difference between the experimental and control groups' mean scores on the pretest of reading. Thus it can be concluded that they enjoyed the same level of reading ability prior to the administration of the treatment.

Table 8. Independent t-test Pretest of Reading by Groups

<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>							
<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>Df</i>	<i>Sig. (2- tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>		
							<i>Lower</i>	<i>Upper</i>	
Equal Variances Assumed	.481	.490	.427	98	.671	.200	.469	-.730	1.130
Equal Variances Assumed			.427	97.373	.671	.200	.469	-.730	1.130

It should be noted that the assumption of homogeneity of variances was met (Levene's $F = .48$, $P > .05$). That is why the first row of Table 8, i.e. "Equal variances assumed" was reported.

RESEARCH QUESTIONS

This study aimed at investigating the following two research questions;

1. Does awareness-raising have any significant effect on Iranian EFL learners' reading comprehension ability?
2. If the answer to the research question one is yes, which of the impulsive or reflective subjects benefit more?

The Personality Trait Questionnaire; impulsive vs. reflective was employed to identify the personality traits of the participants in this study. A two-way ANOVA was run to investigate the effect of the treatment as well as impulsive and reflective subjects' performance on the reading test. Based on the results displayed in Table 9 it was concluded that the treatment (awareness raising) had a significant effect on the performance of the subjects on the reading test ($F(1, 96) = 31.89$, $P < .05$, Partial $\eta^2 = .24$ representing a large effect size). Thus the first null-hypothesis **was rejected**.

Table 9. Tests of Between-Subjects Effects

<i>Source</i>	<i>Type III Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>	<i>Partial Eta Squared</i>
Group	184.960	1	184.960	31.894	.000	.249
R/I-Type	38.440	1	38.440	6.629	.012	.065
Group * R/I-Type	67.240	1	67.240	11.595	.001	.108
Error	556.720	96	5.799			
Total	58064.000	100				

As displayed in Table 10 the experimental group ($M = 25.56$, $SE = .34$) outperformed the control group ($M = 22.28$, $SE = .31$) on the reading test.

Table 10. Descriptive Statistics; Posttest of Reading by Groups

<i>Group</i>	<i>Mean</i>	<i>Std. Error</i>	<i>95% Confidence Interval</i>	
			<i>Lower Bound</i>	<i>Upper Bound</i>
Experimental	25.560	.341	24.604	25.956
Control	22.280	.314	21.884	23.236

Based on the results displayed in Table 9 above, it was concluded that the awareness raising techniques had a significant but moderate effect on the performance of impulsive and reflective subjects on the reading test ($F(1, 96) = 6.62$, $P < .05$, $\text{Partial } \eta^2 = .065$, representing a moderate effect size). Thus the second null-hypothesis as “*awareness-raising does not have the same effect on impulsive and reflective subjects in terms of their performance on the reading comprehension test*” was supported.

As displayed in Table 11 the reflective subjects ($M = 24.54$, $SE = .34$) showed a higher mean on the reading test than the impulsive subjects ($M = 23.30$, $SE = .31$).

Table 11. Descriptive Statistics; Posttest of Reading by Impulsivity or Reflectivity

<i>Group</i>	<i>Mean</i>	<i>Std. Error</i>	<i>95% Confidence Interval</i>	
			<i>Lower Bound</i>	<i>Upper Bound</i>
Reflective	24.540	.341	23.864	25.216
Impulsive	23.300	.314	22.624	23.976

Based on the results displayed in Table 9 above, which represents ‘Tests of Between-Subjects Effects’ it was concluded that there was a more significant interaction between experimental and reflective subjects’ performance on the reading test compared to that of the impulsive group ($F(1, 96) = 11.59$, $P < .05$, $\text{Partial } \eta^2 = .10$, representing a moderate to large effect size). As displayed in Table 12, the reflective (experimental) subjects showed a higher mean than the impulsive students while they showed almost the same means for the control group.

Table 12. Descriptive Statistics; Posttest of Reading interaction between Impulsivity, Reflectivity, and Treatment

<i>Group</i>	<i>P-Type</i>	<i>Mean</i>	<i>Std. Error</i>	<i>95% Confidence Interval</i>	
				<i>Lower Bound</i>	<i>Upper Bound</i>
Experimental	Reflective	26.720	.482	25.764	27.676
	Impulsive	23.840	.482	22.884	24.796
Control	Reflective	22.360	.482	21.404	23.316
	Impulsive	22.760	.482	21.804	23.716

Based on the results displayed in Table 13 it was concluded that the assumption of homogeneity of variances was met (Levene's $F = 2.13$, $P > .05$).

Table 13. Levene's Test of Equality of Error Variances

<i>F</i>	<i>df1</i>	<i>df2</i>	<i>Sig.</i>
2.131	3	96	.101

DISCUSSION

The result of data analysis revealed that awareness-raising had a significant effect on Iranian EFL learners' reading comprehension ability. The results also showed that reflective subjects performed better than the impulsive ones in the reading test. The present findings are in line with the previous findings in the literature on the personality trait and SL/FL reading comprehension: Ellis (2008) in his study concerning the effect of awareness-raising on the second language development discusses that this technique has proved well in the ESL and EFL settings. Fan (2003) also confirms that reflective learners are more tolerant in the reading comprehension performance when they are compared with the impulsive ones. Fazilatfar (2010) who studied EFL learners' reading strategies using task-based strategy assessment proved that reflective learners make use of more useful strategies than the impulsive ones. In line with the previous studies, Jalilifar (2010) asserted the high ability of reflective EFL learners in both speaking and reading skills. McNamara and Scott (2006) also found that helping the learners through awareness-raising will help learners develop their understanding of the SL or FL they are developing. Rezaei, et al (2013) also found that both reflectivity and impulsivity are important individual factors and are affected by awareness raising activities. Riazi and Riasati (2007), in their study of EFL learners' style came to know that reflective students perform more logically in performing different skills when compared to their impulsive counterparts.

According to the recent trends in second /foreign language teaching, there has been an increasing interest in "learner-based" approaches to second /foreign language teaching in which learners are seen to be the center of teaching activities (Ellis, 2008). Thus, teachers are no longer regarded as the (only) sources of knowledge and learners as the only receivers of knowledge; rather, teachers are considered as problem-imposers and learners as problem-solvers (Dewaele, 2005). It seems that in the L2 classrooms awareness-raising can enable the learners with different personality traits almost similarly to use their competence for textual and social interactions. To develop their SL/ FL reading comprehension, L2 learners are

supposed to learn to use various strategies to solve the communicative problems imposed by the teachers and to achieve their intended goals.

CONCLUSION

The present study aimed at investigating the effect of awareness-raising training on Iranian intermediate EFL learners' reading comprehension with a focus on reflective and impulsive learning styles. Following the thorough review of the related literature and the experimental study conducted, the researchers found that awareness-raising had a significant effect on the EFL learners' reading comprehension ability. The results also showed that compared to their impulsive counterparts, reflective subjects showed more significant interaction with the reading test, proving that reflectivity is a personality trait which is more affected by awareness-raising techniques while impulsivity is less affected. The findings could be employed by ELT teachers in the Iranian context in an attempt to help their learners gain higher mastery levels in FL reading comprehension.

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