Exploring into Spin-Off Approaches, Personality Types and Cognitive Styles: A Case on Iranian EFL Elementary Learners' Reading Comprehension Skill

Abdolreza Pazhakh*

English Language Department, Faculty of Humanities, Dezful Branch, Islamic Azad University, Dezful, Iran
Pazhakh@gmail.com

Soroor Atabakhsh

English Language Department, Faculty of Humanities, Dezful Branch, Islamic Azad University, Dezful, Iran
soroorata@gmail.com

Abstract

This study explored the interaction of socio-psychological parameters with spin-off approaches to teaching EFL reading comprehension at elementary level. While such parameters covered cognitive style as well as personality type features, the spin-off approaches included theme-based, task-based, community language learnings, natural approach, and content-based instruction. The sample was comprised of 54 female students - studying at Jassas high school, in Dezful, Iran. A Quick Oxford Placement Test was used to homogenize the elementary participants. As for the cognitive style, Group Embedded Figures Test (Witkin et al., 1971) was employed to distinguish between field independent vs field independent and Barrat Impulsiveness Scale (Patton et al., 1995) was also utilized to divide participants into impulsive, and reflective groups. Next, the Preliminary English Test for schools (reading part) was given to the subjects as pretest and posttest. The results indicated that field independent group outperformed field dependent group, and reflective group outperformed impulsive group with regard the spin-off approach to teaching reading. This implies the current findings can contribute to both assessment and teaching theories.

Keywords: Cognitive Styles; Personality Types; Reading Comprehension Skill; Spin-Off Approaches

* Corresponding Author

1. Introduction

Reading comprehension for foreign language readers particularly at elementary level seems to be a complex phenomenon worth studying. Regarding individual differences, it is not unusual that people employ various ways to learn things. As learning a new language is a primary concern of humans these days, many scholars have concentrated on miscellaneous learning styles, highlighted the role of learners as well as their individual differences in using reading strategies, particularly with the advent of the cutting-edge technological developments and by emerging new teaching methods (Brown, 2014, p. 113). The more compatible the cognitive styles teacher and learner used, the more flexible the teaching method(s) can be recognized (Pithers, 2002). Different types of styles are categorized as field dependence/independence, synthetic/analytical, impulsive/reflective, left-brain/right-brain dominance, ambiguity tolerance/intolerance, and so forth (Brown, 2014).

EFL younger emergent readers normally encounter the obstacle of comprehending certain materials bearing cultural patterns, metaphorical concepts bringing us to the important issue of sociolinguistic influences (Guccione, 2011). In the pedagogical sphere, scholars - facing unprecedented challenges in teaching reading comprehension at elementary proficiency levels - lend themselves to focusing their attention towards new opportunities to improve the outcome of teaching for higher turnovers. Innovation can play a key role in tackling such a challenge. In the scholarly literature, innovation does not merely mean discovering a new phenomenon but it embraces a wide range of approaches to conceptualizing. It may refer to reworking of an old idea or the transferring and embedding of existing ideas in to a new setting. The focus of this study is to delve into interactive effects of pedagogical innovations and socio-psychological parameters on improving teaching reading skill at elementary level. Following such independent research-based teacher-scholars, spin-off approach is a trend in which, new technological knowledge is converted into an application in class. Dissemination of such class-based spin-off findings among interested stakeholders can make a significant difference in the field García et al. (2020).

As for psychological factors, field independence is an ability to perceive a particular and relevant item in a field of distracting items, while field dependence is a tendency to be dependent on the total field in order that the parts embedded in the field are not distracting (Brown, 2014). As for the role the reflectivity-impulsivity aspects play in different domains of behavior, learning, and personality, Kogan (1971) found them considerable. Of course, researchers like Brown (2014) holds that reflective persons take all the considerations into account in finding a solution to a problem, but impulsive ones make a number of different gambles based on "hunches" to the problem (Eving, 1977).

1.2 Statement of the Problem

Teachers' ignoring the role of cognitive styles in the way learners perceive, interact, and respond to their learning environment and their incognizance of the wholesome results accruing from cognitive styles biasness seem to be crucial. Lack of attention to the examinees' traits such as personality types and cognitive styles in designing test forms have resulted in problems in measurement theory in general and in reading test performance in particular (Bassey et al., 2013). Although the key role such variables play in learners' performance during reading comprehension skill, little attention is paid to the association between field dependence/ field independence and impulsivity/ reflectivity on improving Iranian EFL elementary learners' performances on reading comprehension skill which remains the Cinderella part of the pedagogy.

1.3 Objectives and Significance of the Study

Although a unique collection of variables affecting the manner individuals analyze and perceive the information of the reading text, the role of learning styles cannot be neglected. According to field dependence/independence variable, some learners have a tendency to experience events globally, while others have a tendency to articulate figures discretely from their backgrounds and to readily distinguish objects from embedding contexts (Messick, 1976). As for impulsivity/reflectivity variable, some learners are faster readers and have more errors (Goodenough, 1976), others are slower readers and have fewer errors (Kagan, 1965). The findings of this research hope to shed more light on whether learners having varied cognitive styles perform differently on reading comprehension skill or not.

1.4 Research Questions

RQ1. Is there any significant correspondence between field dependence/independence and Iranian EFL elementary learners' performances on reading comprehension skill?

RQ2. Is there any significant correspondence between impulsivity/reflectivity and Iranian EFL?

RQ3.Does spin-off approach to language teaching bring about any significant difference between Iranian elementary EFL learners' personality types - field dependence / independence- in terms of their performances on reading comprehension skill?

RQ4.Does spin-off approach to language teaching bring about any significant difference between Iranian elementary EFL learners' cognitive styles -

impulsivity/ reflectivity - in terms of their performances on reading comprehension skill?

RQ_5. Does spin-off approach to language teaching bring about any significant difference between Iranian EFL elementary learners' personality type (field dependence/ independence) and cognitive style (impulsivity/ reflectivity) - in terms of their performances on reading comprehension skill?

1.5 Research Hypotheses

Based on the above-mentioned research questions, the current study dealt with the following null research hypotheses:

$H0_1$: There is no significant correspondence between field dependence/independence in terms of Iranian EFL learners' performances on reading comprehension skill.

$H0_2$: There is no significant correspondence between impulsivity/reflectivity in terms of Iranian EFL learners' performances on reading comprehension skill.

$H0_3$: The spin-off approach to language teaching does not bring about any significant difference between Iranian elementary EFL learners' personality type - field dependence / independence - in terms of their performances on reading comprehension skill.

$H0_4$: The spin-off approach to language teaching does not bring about any significant difference between Iranian elementary EFL learners' cognitive style - impulsivity/ reflectivity - in terms of their performances on reading comprehension skill.

$H0_5$: The spin-off approach to language teaching does not bring about any significant difference between Iranian EFL elementary learners' personality type (field dependence/ independence) and cognitive style (impulsivity/ reflectivity)- in terms of their performance on reading comprehension skill.

2. Review of literature

2.1 Overview

This section covers both the theoretical and empirical backgrounds of the variables considered in this study, concerning field dependence/independence and impulsivity/reflectivity on different skills.

2.2 Theoretical Background

2.2.1 Field Dependence/ Independence

According to findings of the study conducted by Yitong (2020), field-independent students are better at independent learning, while field-dependent students are better at cooperative learning. Witkin (1978), the tendency to rely primarily on internal referents in a self-consistent way we designate a field independent cognitive style; the tendency to give greater credit to external referents is a field dependent cognitive style (p. 16). Furthermore, field dependence-independence refers to "the degree to which a learner's perception of information is affected by the surrounding perceptual or contextual field" (Jonassen & Grabowski, 1993, p. 87).

Cognitive restructuring ability is an important distinction between field dependent and field independent individuals. Cognitive restructuring deals with, "1) providing structure for an ambiguous stimulus complex, 2) breaking up an organized field into its basic elements, and 3) providing a different organization to a field than that which is suggested by the inherent structure of the stimulus complex" (Riding & Cheema, 1991, p. 198). The cognitive restructuring ability of a field independent individual is arisen from the ability to use internal referents (Witkin et al., 1962). Field dependent individuals tend to have more interpersonal skills and more difficulty in cognitive restructuring; On the other hand, field independent individuals tend to have lesser

Brown (2014) hypothesized that field independent learners may gain benefits in classroom learning due to the formal nature of classroom exercises. In fact, the advantage of a field independent learner in classroom learning may be concerned with a difference between the formal linguistic achievement orientation of classrooms and exams on the one hand, and real competence, on the other hand. However, Brown (2014) stated that field dependent learners derive benefits in naturalistic second language acquisition involved natural communication.

2.2.2 Impulsivity/ Reflectivity

Kagan et al. (1966) proposed the reflection-impulsivity aspect of cognitive style during an examination of categorizing strategies of children. They found that impulsive individuals perform hastily, and novel ideas make them exciting; whereas, reflective individuals think profoundly and consider various aspects of issues (Kagan, 1965). He adds that impulsive individuals decide quickly with little attention to accuracy, but reflective ones decide precisely and pay more attention to accuracy. Impulsive learners have more errors than reflective ones particularly on difficult tasks, adjust a shotgun approach, and respond promptly;

however, reflective learners tend to behave properly and appear to be ambiguity tolerant (Fontana, 1995).

2.2.3 Reading Comprehension

While Harris and Hodges (1995) noted that reading comprehension is a type of thinking intentionally when the meaning is made through interactions between reader and text, Alyousef (2006) mentioned that reading can be viewed as kind of interaction between a reader and a text which causes reading fluency. As for readers processing the text, bottom-up processing sees reading as a completely passive, whereas top-down processing regards reading as an active process in which the meaning of the text is extracted by the reader (Wallace, 2001). However, top-down processing stresses the general meaning of the text and use the reader's personal experiences and schemata (Ediger, 2001). As for the problems EFL learners encounter, Nuttall (2000) expressed that nominalizations, complex noun groups, participial phrases, coordinating conjunctions, and prepositional phrases are likely to be the reason for many difficulties in comprehending the texts since these items make the written texts complex to understand by learners. Another problem is that even the good readers often have difficulty in connecting their background knowledge to the texts (Goodman, 1979, as cited in Kasim & Raisha, 2017).

2.3 Empirical Background

2.3.1 Reports on Field Dependence/ Independence

Hansen and Stansfield (1981) investigated the relationship of field dependence / independence to foreign language achievement on 300 students who had registered in a Spanish program. The findings demonstrated that field independence cognitive style have an important role in second language learning. In addition, there was a positive association between field independent learners and their cloze test performance.

Ahmadi and Yamini (2013) explored the correspondence between field dependence-independence cognitive style and students' English proficiency in formal classroom settings. They found significant relationships between field dependence-independence and metacognitive, memory, social and cognitive strategies; however, they came to no significant relationships between field dependence-independence and affective and compensatory strategies.

Esfahanian (2011) examined the difference between field dependent and field independent EFL learners regarding their abilities to translate literary texts. One hundred undergraduate English translation students participated in the study. The findings revealed that there was no significant difference between

field dependent and field independent students concerning their translation ability.

Khodadady and Zeynali (2012) sought to find the correspondence between field dependence-independence and IELTS listening comprehension. Two hundred EFL learners took part in the study. Regarding the findings, it could be concluded that field independent learners displayed better performance than field dependent learners on the IELTS listening comprehension test. Moreover, in comparison to field dependency, field independency correlated more positively with learners' performance on IELTS listening comprehension test.

Motahari and Norouzi (2015) examined the difference between field dependent and field independent EFL learners concerning their translation quality. The findings indicated that field independent students displayed better performance than field dependent students concerning their translation quality. Besides, Hashemian et al. (2015) investigated the association between field dependence-independence and L2 reading performance. Sixty-four undergraduates and postgraduates EFL learners took part in the study. The researcher employed Oxford Placement Test (OPT), Group Embedded Figures Test (GEFT), and Task-based Reading Test (TBRT) for data collection in the study. The findings indicated that there existed a relationship between field dependence-independence and reading performance. Furthermore, field independent learners outperformed field dependent learners on Task-based Reading Test (TBRT).

Keshmandi et al. (2015) investigated the correspondence between field dependence-independence cognitive style and translation achievement. One hundred BA senior students majoring in English translation participated in the study. The findings showed that there was a significant relationship between students' field dependence-independence and their translation achievement. Moreover, field independent students had better performance than field dependent students in their translation task.

Shabanifard (2016) studied the impact of field dependence and field independence cognitive styles on narrative writing. The participants majored in English language and literature for their bachelor's degree. The findings of the study revealed that there was a significant difference between field dependent learners and field independent learners in narrative writings. In addition, field independent learners displayed better performance than field dependent learners in narrative writings.

2.3.2 Reports on Impulsivity and Reflectivity

Zeinali Nezhad (1999) investigated the role reflectivity/impulsivity play in Iranian EFL learners' listening skill, they found that there was not a significant association between reflectivity/impulsivity and EFL learners' listening skill. However, Keshavarz and Cheraghi (2015) conducted the opposite, reflective students outperformed on the total Nelson English Language Test compared to the impulsive ones. Bazargani and Larsari (2013) examined the impact of impulsivity/reflectivity on 82 undergraduate and graduate students' performance on an MC test. The results revealed that reflective students outperformed impulsive students on the multiple-choice test. However, Morovat (2014) examined the impact of reflectivity/impulsivity on IELTS candidates' band scores in the speaking module on 52 IELTS candidates from two institutes in Shiraz. The results showed no significant relationship between the reflectivity/ impulsivity and IELTS candidates' band scores, and there was no significant difference between reflectivity/impulsivity in achieving a higher band score.

Rahimi (2017) conducted a study to examine whether reflectivity/impulsivity affect EFL learners' focus of attention during collaborative dialogue. The participants were twenty-eight Iranian EFL elementary learners. Data analysis showed that no significant differences were found to exist between reflective and impulsive learners in the study.

Beiranvand and Mall-Amiri (2018) studied the impact of listening strategies on reflective and impulsive visually impaired EFL learners' (VILs) listening comprehension. Their sample consisted of 58 males and females VILs between the ages of 12 and 18 in Khorram Abad, Iran. The results showed that reflective learners displayed better performance than impulsive learners on the posttest of listening comprehension.

Eskandari (2018) sought to find the effect of reflectivity/impulsivity on vocabulary cloze tests. The participants were ninety Iranian intermediate EFL learners from three universities in Zahedan. The researcher used a Quick Placement Test, an Eysenck's Personality Questionnaire, and four vocabulary close tests for data collection in the study. The findings indicated that reflective learners displayed better performance than impulsive learners on vocabulary cloze tests.

2.4 Concluding Remarks

Some studies reported controversial reports on the key role of cognitive style and personality types in terms of field dependence, field independence, reflectivity, and impulsivity and foreign language learning. The intricacy of the findings fuzziness motivated the researcher to scrutinize and delve into the issue in order to crystalize not only the trade-off between Iranian EFL elementary

learners' personality type in terms of field-dependency and field-independency on the one hand and their cognitive style in terms of the impulsivity and reflectivity on the other hand, but also to explore the differential effects of spin-off approach to teaching reading among the Iranian elementary EFL learners with the above-stated categories.

3. Method

Overview 3.1

The current section deals with the methodology applied to conduct the study. The design of the investigation is introduced and a brief description of the participant learners is presented. Moreover, the instruments employed to collect the necessary data, the procedures, and the data analysis are explained.

3.2 Research Design

Since there was no control group, a quasi-experimental design was employed in this study. The independent variables were personality type (field dependence/independence) and cognitive style (impulsivity/ reflectivity) and spin-off method. The dependent variable was reading comprehension skill.

3.3 Participants

The participants in this study were 54 female high-school tenth grade elementary students at Jassas School, in Dezful, Khuzestan, Iran. Their ages ranged between 15 to 16. After administering a Quick Oxford Placement Test as a proficiency test, elementary level students were chosen as the study sample. These participants were assigned to four experimental groups (two classrooms) based on their responses to the Barrat impulsiveness scale developed by Patton et al. (1995) and the Group Embedded Figures Test designed by Witkin et al. (1971). There were 13 field dependent and 15 field independent learners in one classroom; moreover, there were 14 impulsive and 12 reflective learners in another classroom.

3.4 Instruments and Material

3.4.1 Quick Oxford Placement Test

The Quick Placement Test of Oxford University Press and University of Cambridge was employed with the aim of homogenizing the students. The test includes 60 multiple-choice items and lasts 30 minutes. It was used to measure and determine language proficiency level of the students.

3.4.2 Group Embedded Figures Test (GEFT)

Group Embedded Figures Test (Witkin et al., 1971) was used to divide the participants into field dependent and field independent groups. The GEFT includes three parts. The first part is just a process of trial and error, but the second and third parts each includes nine figures, done in a time limit of 5 minutes for each section. The learners are required to recognize a simple geometric shape in a complex figure. The test score is in a range of 0-18. The students whose scores on GEFT were higher than the median (8.5) were considered field independent, and the students whose scores were below the median were field dependent. The reliability of the GEFT was reported to be 0.82.

3.4.3 Barrat Impulsiveness Scale

The Barrat impulsiveness scale (Patton et al., 1995) was employed to divide the participants into impulsive and reflective group. The questionnaire includes 30 items in which the students are required to read each statement and select the number indicating an adverb (rarely/never, occasionally, often, almost always/always). The students whose scores were more than the median (49) were classified as impulsive, and those whose scores were less than the median were reflective. The entire alpha reliability of the Persian version of Barrat impulsiveness scale was reported was reported to be 0.83 (Ekhtiari et al., 2008).

3.4.4 Pretest and Posttest

Before and after the treatment, all participants were given the Preliminary English Test for schools (reading part). The Preliminary English Test (PET) for schools is a standardized test provided by Cambridge Assessment English which is consisted of 35 questions, lasting 45 minutes.

3.4.5 The main source of reading

The material taught to participants was called English for Schools vision 1 developed by minister of education in Iran. The text-book has been provided for high-school tenth grade students in the national education system in Iran.

3.5 Procedures

First, the Quick Oxford Placement Test was administered to the students to assure that they were homogenous respecting their entering English proficiency. Having been homogenized, they were divided into four experimental groups in terms of their performances on the GEFT and Barrat impulsiveness scale. The four experimental groups were called field dependent, field independent,

impulsive, and reflective sub-groups. The Preliminary English Test for schools (reading part) was administered as a pretest to estimate the initial reading comprehension knowledge of participants. Afterwards, the groups started receiving 16 instructional sessions under spin-off approaches to teaching reading as their treatments. Indeed, they all were exposed to various techniques used in theme-based learning (TBL) and task-based learning (TBL), natural approach, community language learning (CLL), content-based teaching (CBT). During this period, the instructor asked participants in the study to use their own prior knowledge, make predictions about the text and new words, use reading techniques such as skimming and scanning, identify the main idea, and summarize the reading passages. Based on the texts the students read, the instructor asked the students to answer reading comprehension questions. After this training time period, the same reading comprehension test with some modifications was presented to the students as a posttest in order to assess their development as an outcome of instruction. Indeed, in this sense supposition was that language would function not only as an immediate topic per se but also as a vehicle for learning a given subject matter in an appropriate way within different contexts and pedagogical needs. This model can be described in terms of a continuum ranging from total immersion in content on one extreme to partial immersion, to sheltered courses, to adjunct models, to theme-based courses, to frequent use of content for language practices.

3.6 Data Analysis

The data collected through administration of the Group Embedded Figure Test (GEFT), Barrat impulsiveness scale, pretest, and posttest were imported to Statistical Package for Social Sciences (SPSS). Kolmogorov Smirnov Test was used to account for the distribution normality of the scores as the research data, then Pearson Correlation Coefficient was utilized to realize that if there was any significant relationship between field dependence/independence and reading comprehension, and between impulsivity/reflectivity and reading comprehension. In addition, the Analysis of Covariance (ANCOVA) was employed to determine if there was any significant difference between field dependent and field independent groups and between impulsive and reflective groups regarding their performances on reading comprehension skill.

4. Results

4.1 Overview

The current study aimed to examine if learners with varied personality types and cognitive styles perform differently on reading comprehension skill. To do so, a variety of statistical tests were run on the data, using SPSS version 21. To save

space, the groups of different styles were called FD (field dependent), FI (field independent), RE (reflective) and IM (impulsive).

4.2 Descriptive Statistics

Table 1

Descriptive Statistics of Pretest, Posttest, and Group Embedded Figures Test of Field Dependent Group

Group	N	Pre- test		Post- test		Group Embedded Figures Test	
		Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
FD	13	8.46	1.39	10.07	1.55	6.46	1.26

Table 1 illustrates the mean score and standard deviation of the field dependent group in pretest (m=8.46, sd=1.39), posttest (m=10.07, sd=1.55), and Group Embedded Figures Test (m=6.46, sd=1.26). As it is apparent, the mean score of field dependent group increased in the posttest.

Table 2

Descriptive Statistics of Pretest, Posttest, and Group Embedded Figures Test of Field Independent Group

Group	N	Pre- test		Post- test		Group Embedded Figures Test	
		Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
FI	15	10.73	1.27	13.33	1.44	11.80	1.52

Table 2 displays the mean score and standard deviation of the field independent group in pretest and posttest and Group Embedded Figures Test were, 10.73, 1.27), and 13.33, and 1.44, 11.80, 1.52, respectively. Besides, the mean score of field independent group increased in the posttest.

Table 3

Descriptive Statistics of Pretest, Posttest, and Barrat Impulsiveness Scale of Impulsive Group

Group	N	Pre- test		Post- test		Barrat impulsiveness scale	
		Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
IM	14	6.42	1.7	8.92	1.73	64.21	5.69

Table 3 illustrates the mean score and standard deviation of the impulsive group in pretest (m=6.42, sd=1.7), posttest (m=8.92, sd=1.73), and Barrat's Impulsivity Scale (m=64.21, sd=5.69). Clearly, the mean score of the impulsive group increased in the posttest.

Table 4

Descriptive Statistics of Pretest, Posttest, and Barrat Reflective Scale of Reflrctive Group

Group	N	Pre- test		Post- test		Barrat reflective scale	
		Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
RE	12	10.75	0.86	14.00	1.53	46.50	5.67

Table 4 illustrates the mean score and standard deviation of the reflective group in (m=10.75, sd=0.86), posttest (m=14.00, sd=1.53), and Barrat's reflectivity scale (m=46.50, sd=5.67). As the data show, the mean score of the reflective group increased in the posttest.

Table 5

Kolmogorov-Smirnov Test for Field Dependent, Field Independent, Impulsive, and Reflective Groups

Variable		Test	One-Sample Kolmogorov-Smirnov Test	
			z	*Sig*
		Pre-test	*.695*	*.72*
	FD	*Post-test*	*.765*	*.60*
		Group Embedded Figures Test	*.733*	*.65*
		Pre-test	*.622*	*.83*
	FI	*Post-test*	*.558*	*.91*
		Group Embedded Figures Test	*.647*	*.79*
		Pre-test	*.828*	*.49*
	IM	*Post-test*	*.764*	*.60*
		Barrat impulsiveness scale	*.476*	*.97*
		Pre-test	*.892*	*.40*
	RE	*Post-test*	*.577*	*.89*
		Barrat impulsivieness scale	*.446*	*.98*

As Table 5 shows, since all significant values in Kolmogorov-Smirnov tests were more than .05, the scores of all tests were normally distributed.

4.3 Inferential Statistics

Table 6

Results of Paired Sample T-test on Quick Oxford Placement Test Scores

	N	Mean	Std. Deviation	Mean Differences	Df	t	Sig. (2-tailed)
FD/Fi	28	22.38	2.80				
				0.461	25	0.827	0.41
IM/RE	26	22.84	3.06				

The data in Table 6 showed no significant difference between two mean scores in terms personality type (field-dependent/field-independent) and cognitive style (impulsive/reflective). That is, the groups were homogeneous in terms of their general command of English. Moreover, the Pearson correlation was used on the data to estimate if there is any significant correlation between the two subcategories of personality type, Field-Dependent and Field-Independent groups. The results the Pearson correlation are shown in Table 7.

Table 7

 Correlation between Group Embedded Figures Test and Posttest of Field Dependent and Field Independent Groups

		Posttest of FD	*Posttest of FI*
	Pearson Correlation	.616*	.876**
Group Embedded Figures Test	**Sig. (2-tailed)**	.025	.001
	N	13	15

Table 7 displays a significant correlation between the scores of the Group Embedded Figures Test and posttest of field dependent and independent groups r=61 and 0.87 at p<.001. This implies a positive correlation between the two above-stated groups. As for the independent group, the correlation was greater than that of Group Embedded Figures Test and the posttest of field dependent group, inferring a stronger relationship between field independence and reading comprehension. Likewise, to explore if the two subcategories of cognitive stile - impulsivity versus reflectivity - were correlated, the relevant data were plugged into the Pearson formula and their results are presented in Table 8.

Table 8

Correlation between Barrat Impulsive vs reflectivity across post-test

		Posttest of IM	*Posttest of RE*
	Pearson Correlation	.602*	.927**
Barrat impulsiveness scale	**Sig. (2-tailed)**	.023	.001
	N	14	12

As Table 8 shows, the correlation coefficients between the scores of Barrat impulsive vs reflective groups were was 0.60 and 0.92, respectively. Although both correlation indices were significant, the correlation for reflective group was more significant on the post-test (P<.001), implying a positive correlation between reflectivity and reading comprehension was stronger.

Table 9

Paired Sample T-test for Field Dependent and Field Independent Groups

		N	Mean	Std. Deviation	Mean Differences	df	t	Sig. (2-tailed)
FD	Pre-test	13	8.46	1.39				
					-1.61	12	-5.57**	.001
	Post-test	13	10.07	1.55				
FI	Pre-test	15	10.73	1.27				
					-2.60	14	-6.70**	.001
	Post-test	15	13.33	1.44				

Table 9 displayed the results of a paired samples t-test across field-dependent and field independent groups in both pretest and posttest which were estimate separately (t= -5.57, t= -6.70), respectively. These indices revealed a significant difference between the mean scores of both personality types – field-dependent and field-independent groups across pre- and post-test (P<001).

Table 10

Paired Sample T-test for Impulsive and Reflective Groups

		N	Mean	Std. Deviation	Mean Differences	df	t	Sig. (2-tailed)
IM	Pre-test	14	6.42	1.74				
					-2.50	13	-9.94**	.001
	Post-test	14	8.92	1.73				
RE	Pre-test	12	10.75	0.86				
					-3.25	11	-6.78**	.001
	Post-test	12	14.00	1.53				

Table 10 depicted the results of a paired samples t-test across impulsive and reflective groups in both pretest and posttest which were estimate separately (t= -9.94, t= -6.78), respectively. These indices revealed a significant difference

between the mean scores of both cognitive styles- impulsive and reflective groups across pre- and post-test (P<001).

Table 11

Levene's Test of Equality of Error Variances

Test Variable	Levene's Test of Equality of Error Variances			
	F	df1	df2	Sig.
FD-FI	0.131	1	26	.72
IM-RE	3.58	1	24	.07

Table 11 displayed that the obtained F value was not significant at the level of .05. Hence, it can be inferred that variances were equal among all groups, allowing us to conduct ANCOVA analysis of pretest-posttest in which groups are compared at posttest, using pretest scores as the covariate to control for pre-existing differences on the dependent variable. The results of the ANCOVA analysis are presented in Table 12.

Table 12

ANCOVA Evaluation Results between Field Dependent and Field Independent Groups across Pre- and Post-tests

	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta^2	Observed Power
GROUP * PRE	91.223	2	13.242	8.097**	.009	.245	.781
Effect Pre-test	19.329	1	19.329	12.414**	.002	.332	.923
Between-Subjects Effects group	12.495	1	12.495	8.025**	.009	.243	.777
Error	38.927	25	1.557				
Total	132.107	27					

The data presented in Table 12 implied the significant effect of personality types (field-dependent and field-independent groups) on their reading comprehension performance taught via Spin-off approach to teaching reading

comprehension (P<.05). The results also demonstrated that with removing the effect of pretest, a significant difference was observed between groups (P< .05). Indeed, the field independent group outperformed the field dependent group. Therefore, the third null hypothesis was rejected.

Table 13

ANCOVA Evaluation Results between Impulsive and Reflective Groups across Pre- and Post-tests

	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta^2	Observed Power
GROUP * PRE	191.770	2	95.885	11.563**	.002	.335	.902
Effect Pre-test	22.643	1	22.643	14.850**	.001	.392	.958
Between-Subjects Effects group	8.576	1	8.576	5.624*	.026	.196	.622
Error	35.071	23	1.525				
Total	228.615	25					

The results showed that F=14.850 related to the effect of pretest was significant at the level of .05. The results also demonstrated that with removing the effect of pretest, a significant difference was observed between groups (F= 5.624, P< .05). That is, there was a significant difference between the means of impulsive (8.92) and reflective (14.00) groups in posttest. In other words, reflective group outperformed impulsive group. Thus, the fourth null hypothesis was rejected.

Table 14

Independent Samples T-test for the Performance of All Participants in terms of Personality Type and Cognitive Style in Posttest

	N	Mean	Std. Deviation	Mean Differences	df	t	Sig. (2-tailed)
personality type (FD/Fi)	28	11.82	2.11				
				0.552	52	0.767	0.44
cognitive style (IM/RE)	26	11.26	3.04				

The results of independent samples t-test in the posttest of all participants showed no significant difference between the performance of all participants in terms of personality type (field dependence/ independence) and cognitive style (impulsivity/ reflectivity) P>0.05. So the 5th null hypothesis was not rejected.

5. Discussion

Concerning the first research question on the correspondence between field dependence/independence and Iranian EFL elementary learners' performances on reading comprehension skill, the findings revealed a significant correspondence between field dependence/independence and Iranian EFL elementary learners' performances on reading comprehension. The results of the present study were in line with the studies of Hansen and Stansfield (1981), Yaghoubi (1993), Ahmadi and Yamini (2013), Khodadady and Zeynali (2012), Hashemian et al. (2015) who investigated the relationship of field dependence/ independence to foreign language achievement.

As for the second research question on whether there is any significant correspondence between impulsivity/reflectivity and Iranian EFL elementary learners' performances on reading comprehension skill, the findings displayed a significant correlation between subjects' impulsivity/reflectivity and their performances on reading comprehension. The current findings, however, contradicted with those of Zeinali Nezhad (1999), Ghapanchi and Dashti (2011), and Morovat (2014) investigating the association between reflectivity/impulsivity and intermediate EFL learners' listening skill as well as IELTS candidates' band scores in the speaking module.

As for the third research question on difference between field dependent and field independent learners' performances on reading comprehension skill, field independent group outperformed field dependent group. The current results were supportive of the findings of the study conducted by Yitong (2020). He concluded that field-independent students outperform at independent learning, whereas the field-dependent ones outstrip at cooperative learning. In effect, field-dependent and field-independent types have their own advantages and disadvantages, and they are good at different fields, so it cannot be said which type is absolutely excellent. Ahmadi and Yamini (2013), Khodadady and Zeynali (2012), Motahari and Norouzi (2015) who all found that field independent students displayed better performance than field dependent students concerning their translation quality, Hashemian et al. (2015), Keshmandi et al. (2015), and Shabanifard (2016) who all found that field independent learners outperformed those field-dependent learners in their post-tests' performances. Of course, Esfahanian (2011) revealed no significant difference between field dependent and field independent students concerning their translation ability.

As for the second research question on whether there is any potential differential effects of spin-off approach to language teaching on Iranian EFL elementary learners' performances on reading comprehension skill in terms of their types of cognitive style, the findings indicated that there was a significant difference between impulsive and reflective learners concerning their performances on reading comprehension skill, and reflective group outperformed impulsive group. The results of the current research were in congruence with the findings of Keshavarz and Cheraghi (2005), Bazargani and Larsari (2013), and Beiranvand and Mall-Amiri (2018) who found that reflective learners displayed better performance than impulsive learners on the posttest of listening comprehension, and Eskandari (2018) who found that reflective learners displayed better performance than impulsive learners on vocabulary cloze tests. On the contrary, these results were in contrast with the findings of Ghapanchi and Dashti (2011), Talebi (2012), Morovat (2014), and Rahimi (2017) who revealed no significant differences between reflective/impulsive learners and their focus of attention during collaborative dialogue.

Regarding the third research question about any potential difference between the performance of all participants in terms of personality type, and cognitive style, the current research findings indicated that the existing differences between them were not statistically significant.

6. Conclusion

The present study explored a new strategical model for improving Iranian EFL elementary learners' reading comprehension skill. Indeed, spin-off approach to language teaching seemed to be comprehensive enough to cover all aspects of reading particularly at elementary level. This multidimensional approach included theme-based learning, task-based learning, natural approach, community language learning, content-based instruction on the one hand, and their personality types - field dependence / independence – as well as their cognitive styles -impulsivity/reflectivity, on the other hand. The findings of the current research revealed a significant correspondence between Iranian EFL learners' personality types field-dependence / independence and their performances on reading comprehension. Another finding was a significant correspondence between the concerned participants' cognitive styles in terms of impulsivity/reflectivity and their performances on reading comprehension taught by spin-off approaches. Furthermore, a significant difference was observed between field dependent and field independent learners concerning their performances on reading comprehension skill, and field independent group outperformed field dependent group. As for the difference between impulsive and reflective learners concerning their performances on reading comprehension skill; it was also found that reflective group outperformed impulsive group under spin-off approaches. Finally, no differential contribution was observed among

participants' performances in terms of personality type (field dependence/ independence) and cognitive style (impulsivity/ reflectivity).

7. Pedagogical Implications of the Study

One of the pedagogical implications of the current research is that EFL teachers have to realize that there is no one tailored approach to teaching materials to students in such a way to fit all. In order to convert their classroom into a maximally efficient context for language learning, EFL teachers are recommended to take their learners' learning style into account. Furthermore, EFL learners should be aware of their students' learning style as it affects learners' manner of learning and learners' learning results. Finally, material designers are recommended to consider the significance of individual differences and current research findings to design appropriate materials.

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