Exploring Iranian EFL Learners' Cognitive Styles and Their Listening Comprehension

Lida Habibpour[1], Leila Dobakhti[2*]

[1]M.A. in TEFL, University of Tabriz, Tabriz, Iran, *habibpourlida@gmail.com*
[2*]Associate Professor in TEFL, Tabriz Islamic Art University, Tabriz, Iran,
l.dobakhti@tabriziau.ac.ir

Article Info	ABSTRACT
Article type: **Research Article** **Received:** **11/01/2020** **Accepted:** **15/05/2020**	Research on cognitive styles in the area of listening comprehension is very important and needs to be explored. The present study aimed to investigate the relationship between Iranian EFL learners' cognitive styles and their listening comprehension. This study sought to explore the extent to which these styles can be correlated with the L2 learners' performances on listening comprehension tests. To this end, a descriptive quantitative study was utilized to investigate the possible relationship between the aforementioned factors. Some 70 upper-intermediate EFL learners from three language institutes in Iran were asked to complete a questionnaire and then take part in a listening comprehension test based on IELTS format after a two-week interval. The questionnaire was drawn from Learning Styles Survey designed by Cohen, Oxford, and Chi (2002). It included ten sections which were used to determine learners' cognitive styles and their demographic information. The obtained data were analyzed using Pearson product-moment coefficient. The findings indicated that there was a statistically significant correlation between Analytic cognitive style and listening comprehension performances of the participants. It was also found that there was a statistically negative correlation between Global cognitive style of the learners and their listening comprehension. Other cognitive styles including Particular, Synthesizer, Field Dependent, Deductive, Inductive, Impulsive, Field Independent, and Reflective had barely any statistically significant relationship with listening comprehension. Finally, pedagogical implications for EFL teachers and learners, limitations and suggestions for further study are presented and discussed.

1. Introduction

For decades, the majority of linguists and language researchers have focused on teaching and using of different methods. In recent decades, learning has attracted a growing interest. Although it is believed that education is necessary for learning, it is a continuous process for everyone and there are various ways to learn. Teaching is giving lessons, but just in a more formal approach, and learning is the end result. From some of the researchers' point of view who have focused on teaching, learning is passive and all learners need to process the gained information in the same way, while there are various learning styles that learners feel more comfortable with. Knowing learners' styles of learning is important because according to evidence in literature they are influential in language learning process. Knowing learning styles will help to develop techniques and strategies to compensate for potential weaknesses and take advantage of strengths (Cassidy, 2004).

What is achieved by a learner in a language classroom depends on the process that takes place in his or her mind. Each and every learner has a specific way of learning in which he or she can acquire, structure and process information. Different degrees of success might be the result of these psychological differences (Oxford, 1990). Up to this time quite a large number of researchers have conducted studies on how different learning characteristics of the learners induce different learning processes and how each learner approaches a problem in a specific way. Generally, a learning style is the way in which learners process their learning. According to Brown (2000, p. 114), "learning styles serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment". There are other different definitions for learning styles. For instance, Reid (1995) describes it as an individual's habitual, natural and desired way of receiving, processing and keeping new data.

As it is known, language contains four skills (reading, writing, listening and speaking), all of which should be acquired by the learner. According to Oxford (1990), some mistakenly believed that productive skills are of more importance and receptive skills can be simply acquired by exposure and they do not need any specific instruction, but research has indeed indicated that adults spend half of their communication time on listening (40-50%), and less time reading (11-16%), speaking (25-30%), and writing (9%) (Rivers, 1984; Oxford, 1993)

Taking into account all the studies and experiences, the relationship between different learning styles and listening comprehension is the least examined area which needs to be studied. The current study was an attempt to explore the relationship between cognitive learning styles and listening comprehension process.

2. Literature Review

2.1. Theoretical Background

During the past decades, research has amazingly grown and there has been an interesting attention to learning styles which are believed to play important roles in learners' academic successes. Besides, the listening skill has an essential role in language learning processes as interpersonal communication is concerned. According to Ehrman et al. (2003), the listeners choose learning styles when they attempt to solve problems consciously. Although some scholars, such as Feyten (1991) and Rost (1994), had confidence in the superiority of listening over other language skills, it is either ignored or not paid sufficient attention that it deserves. Thus, the major concern of the current study was to shed some light on the relationship between Iranian EFL learners' cognitive styles and their listening comprehension proficiency.

Cognitive learning styles include global/particular, field independent/dependent, synthesizer/analytic, deductive/inductive, and reflective/impulsive dimensions. They are described by Cohen, Oxford, and Chi (2002, p. 9) as follows:

a. Global/particular: Global learners prefer to get the essence or key ideas and are comfortable interconnecting even if they don't know all the vocabulary items or concepts. Particular learners, on the other hand, concentrate more on details and remember certain information about a topic well.

b. Synthesizer/analytic: Synthesizer learners are able to summarize materials well, guess meanings, predict outcomes, and notice similarities quickly, but analytics prefer to pull ideas apart and do well on contrast tasks and logical analyses, also they concentrate on grammar rules.

c. Deductive/inductive: When a person is a more deductive learner, he or she starts with the general and goes to specific, applies generalities to experience, and starts with rules rather than with certain examples. However, when a learner is inductive, he or she goes from specific to general and begins with examples rather than theories or rules.

d. Field independent/dependent: Learners who are more field independent prefer to isolate or extract data from within a given context, even in the occurrence of interferences. In contrast, the learners who are more field dependent in preference want to handle information in a more global way.

e. Impulsive/reflective: An impulsive learner tends to react swiftly in performing or speaking, without thinking the condition through. The impulsive learners think after action, while the reflective learners think before action. Reflective learners think things through before doing anything.

Today a teacher-centered inclination has been replenished by a learning-centered approach. More attention is concentrated on the roles and responsibilities and also individual differences of learners such as learning styles (Banisaeid, 2015, p.30). According to Naserieh (2009, p. 45), "Witkin (1962) was the person who began the research into learning styles with the proposal on the account that individuals may take either an analytic predisposition or a more global approach to the processing of information." Since then learners have been observed from numerous viewpoints and accordingly a large number of style dimensions have been proposed and made the field a "real quagmire" (Dornyei, 2005, p.120)

Learning process would be difficult for the learner if a teacher instructs only according to his/her own style. Knowledge about learning styles would enable the teacher to help learners identify their personal learning styles. In this way, the learners would be able to manage their own learning processes. Although people have their own preferred learning styles, it is useful to be aware of other styles and the ways to strengthen weaker styles. Using various learning styles will help strengthen learning experiences.

According to Montgomery and Groat (2006, p. 1), we need to incorporate learning styles in our teaching because of the following reasons:

1. Learning and teaching should be a dialogue. It emphasizes "the interactive, cooperative, relational aspects of teaching and learning" (Tiberius, 1986, p.148). So a classroom is not a place for simply providing a scripted information, but it may also incorporate a range of 'active learning' practices that truly involve learners in the collective dialogue.

2. Responding to more different students. Students are dissimilar in terms of ethnicity, gender, nationality, age, cultural background, etc. This variety can touch the classroom setting. Despite these diversities it is important not to categorize learners based on expected learning styles since a vast variety of individual disparities is obvious within any demographic group.

3. Communicating the message. Instructors are anxious to convey knowledge completely, but most of the materials get conveyed through taken-for-granted instructional means. When we intend to

deliver our message across, we have to compose 'the materials' in a multi-faceted manner across the scope of learners' learning styles.

4. Making teaching mostly gratifying. Teachers may assume that the way learners learn best can work for all of them. But given the multiplicity of learners' body that is not the case. Teaching according to the teacher's own learning style would be less rewarding. So by making an attempt to contemplate learners' learning styles, teaching would be more rewarding.

5. Ensuring the future of our disciplines. David Kolb (1981, p. 234) stated, "Over time … selection and socialization pressures combine to produce an increasingly impermeable and homogeneous disciplinary culture and correspondingly specialized student orientations to learning".

After the proposal of Witkin (1962) on the account that learners might take either an analytic inclination or a more global slant to the handling of information, many researchers began to look at learners from numerous points of view (Dornyei, 2005). Models for learning styles abound, displaying diverse or sometimes overlapping dimensions. The present research is based on the Reid's (1995) model of learning styles. In this model learning style is organized into three main categories: cognitive, personality, and sensory learning styles.

2.2. Empirical Studies

Boyles (1984), in a research on 30 Chines teachers and 60 learners, identified some factors that were perceived to be more influential on EFL listening comprehension. These factors consisted of speaker factors (e.g., the language ability of the speaker, the quality of the speech signal, and the prestige and personality of the speaker), oral text factors (such as syntax and lexis complexity, the amount of organization and cohesion manifested in the text), and listener factors (e.g., memory, intelligence, motivation, gender, and background knowledge).

Chiang (1990) studied the influence of speech modification, listening proficiency and prior knowledge on the lecture learning of learners of English as a foreign language. It was revealed that awareness of the content schemata improved the comprehension of the EFL listeners.

O'Mally and Chamot (1990) indicated the effectiveness of the strategy instruction in enhancing learning, by offering a cognitive, metacognitive, and socio-affective strategy instruction to a group of intermediate ESL learners. The results suggested that the treatment group outperformed the control group in each of the daily tests.

Hasan (2000), in a quantitative study on 81 participants, identified some problems affecting listening comprehension of the learners. The reported problems were difficult input (e.g., vocabulary, grammar, and length of text), difficult task, difficult speaker (his/her accent, speed, pronunciation, etc.), and listeners' lack of interest.

Liu (2008) investigated the interrelationship between students' listening strategy practice across listening capability and learning style. The subjects of this study comprised 101 university students: 43 males and 58 females from three universities in Taipei, studying as non-English majors. They had studied English at school and only approximately 14% of the participants had stayed or studied English for less than a year. Two questionnaires were used to determine their listening strategy use (O'Malley et al., 1958; Vandergift, 1997) and learning style (Willing, 1988; Nunan, 1996). Each of them were then assigned to advanced, upper intermediate, and lower intermediate levels according to their performances on the listening test. Using a one-way between groups analysis of variance (ANOVA), the results showed that there was a statistically meaningful difference between the strategy use and the achievement level and also the results indicated that listening strategy use was related to learning styles.

Razmjoo and Mirzaei (2009) explored the relationship between proportions of reflectivity/impulsivity via cognitive styles and language proficiency by Iranian EFL learners. Some 120 undergraduate students, majoring at English as a Foreign Language at Islamic Azad University of Bandar Abbas, were selected randomly to participate in this study. Using Kagan's Matching Familiar Figures Test, they were divided into two reflective and impulsive groups. Then, the standard Test of English as a Foreign Language (TOEFL) was used in order to assess the level of the participants' language proficiency. The results indicated a slight negative correlation between impulsivity and language proficiency, but it was not sound significant.

Meanwhile, Ahmed (2012) studied the effectiveness of using diverse learning styles on boosting EFL Saudi students' writing skills. Some fifty female students from Yanbu University College participated in this study. They were allocated into two experimental and control groups randomly. The experimental group was divided into heterogeneous groups according to their different kinds of learning styles. A pretest and posttest was given to both the experimental and the control groups. The control group was taught normally, disregarding the learners' learning styles, but the experimental group was exposed to a teaching method based on the learners' learning styles. The results gained from the pretest indicated that both groups were approximately at the same level of writing ability. The results of the posttest marked a clear improvement in writing skill of the experimental group.

Al-Hajaya (2012) investigated the effect of cognitive learning style-based reading course on the achievement of Jordanian freshmen English students. The participants of the study were 104 freshmen English students registered for reading skills in Tafila Technical University in Jordan. Based on Felder and Solomon (2006), the participants' learning styles were determined and they were divided into two analytic and global groups. To measure the subjects' achievement, one reading test was run at the beginning and one at the final phase of the treatment. Then, there were four groups of participants to be treated: two analytic groups and two global groups. One of the groups was taught disregarding their learning styles and the other one was taught according to their learning styles. The results revealed that 57% of the Jordanian freshmen English majors were analytic and 37% were global and 8% were undecided. Also it demonstrated that there was no statistically meaningful difference between analytic and global learners' achievement on the reading posttest but there was a significant difference between the teaching strategy and cognitive learning styles on the reading attainment. Kaley (as cited in Al-Hajaya, 2012) found out that most of the poor readers (approximately 85%) were global but it did not mean that global learners could not be good readers. She found out that 50% of good readers were global.

Bazargani and Larsari (2013) attempted to find out if there was a positive correlation between impulsive or reflective cognitive styles and gender on the test takers' performances on a multiple choice test. The participants of the study included some 82 undergraduate and graduate students from diverse fields of study who sat for the placement test for TOEFL preparation programs organized at Tehran University. They were divided into two groups in terms of their gender and then using a questionnaire developed by Eysenck again they were divided into two groups in terms of reflectivity and impulsivity. Then, a TOEFL test was used to measure the participants' performances on a multiple-choice test. The results of the study indicated that there was no significant relationship between gender and the test takers' performance on multiple-choice tests. But in terms of reflectivity and impulsivity it was proved that the reflective participants outperformed the impulsive participants. So there was a positive correlation between reflectivity and performance on multiple-choice tests.

Alkubaidi (2014) studied the relation between writing tasks, learners' writing strategy use and learning style preference. According to the gained results, there was no link between the subjects' writing strategies and learning style preference, nor their practice of writing strategies and their writing skill.

A research was done to investigate the underlying correlation between field-independence/dependence cognitive style and vocabulary acquisition strategies among Iranian EFL learners by Dowlatabadi and Mehraganfar (2014). The aim of the research was to see if there was any significant correlation between field-dependence/independence cognitive style and the application of lexis learning strategies by Iranian EFL learners. In other words, they wanted to know if cognitive styles (FD/FI) could be the predictor of the kind of learning strategy. Some ninety undergraduate English translation students (both female and male) participated in this research. All of the participants were Persian native speakers and their age ranged from 20 to 24 years old. The Group Embedded Figure Test (GEFT) test was run, which was developed by Witkin et al. to evaluate the participants' dimension of the cognitive styles of field-dependence/independence. Then, in order to gather data about the vocabulary learning strategy utilized by the subjects, a questionnaire of vocabulary learning strategies was administered. The findings of the study revealed that there was a relationship between cognitive style and learning strategies. It also showed the significant role of considering the cognitive styles (FD or FI) in training design process and the development of the efficiency of learners' learning. The study pointed out that most of the Field Independent participants made use of cognitive and metacognitive strategies while social strategy was the most frequent strategy for Field Dependent group.

A study was conducted by Amiry and Mall-Amiri (2015) to investigate the link between field independence, reflectivity/impulsivity, and reading comprehension capability of Iranian EFL learners. The subjects were 125 EFL undergraduate university students at Islamic Azad University Central Tehran Branch. The results of the analyzed data revealed that there was a statistically meaningful link between field independence and reading comprehension, and there was also a statistically meaningful link between reflectivity and reading comprehension. At the same time, it was proved that both field independence and reflectivity could meaningfully predict the reading comprehension capability of the learners.

Farahany (2015) studied the relationship between input enhancement and analytic/global learning styles and the acquisition of English articles. The main goal of the study was to see if visual input enhancement and analytic/global learning styles might impact adult Iranian EFL learners' acquisition of the English article system. Some forty students from Arak University majoring in English Literature and English Translation participated in this study. They were allocated into two equal groups of control and experimental. By the use of Learning Styles Preference Indicator (LSPI) (Pitts, 2009), the participants' learning styles were examined. After a pretest and treatment, a posttest was held. According to the gained results,

there was no significant relationship between visual enhancement and learning styles.

Several studies have distinctly been carried out on learning styles and listening skills. Some studies have focused on one or two components of cognitive styles in relation to the learners' performances on various skill tests and different test styles. There is a need for more research to be done to investigate other factors affecting this skill. Therefore, the present study was conducted for the aim of investigating the relationship between cognitive learning styles and listening comprehension process.

As listening exerts a vital role in the improvement of speaking skill and meaningful mental signs in the target language, it merits to obtain more consideration from researchers (Liu, 2008). More studies need to be done to explore the relationship between learning styles and listening comprehension. So, in this research this relationship is explored to see how learners with different learning styles perform on a listening comprehension test. In so doing, the following research questions and hypotheses are examined:

1. Is there any significant relationship between global or particular learning styles of L2 learners and their performances on listening comprehension test?

Null hypothesis (H0): There is no significant relationship between global or particular learning styles of L2 learners and their performances on listening comprehension test.

2. Is there any significant relationship between synthesizing or analytic learning styles of L2 learners and their performances on listening comprehension test?

Null hypothesis (H0): There is no significant relationship between synthesizing or analytic learning styles of L2 learners and their performances on listening comprehension test.

3. Is there any significant relationship between deductive or inductive learning styles of L2 learners and their performances on listening comprehension test?

Null hypothesis (H0): There is no significant relationship between deductive or inductive learning styles of L2 learners and their performances on listening comprehension test.

4. Is there any significant relationship between field independent or dependent learning styles of L2 learners and their performances on listening comprehension test?

Null hypothesis (H0): There is no significant relationship between field independent or dependent learning styles of L2 learners and their performances on listening comprehension test.

5. Is there any significant relationship between impulsive or reflective learning styles of L2 learners and their performances on listening comprehension test?

Null hypothesis (H0): There is no significant relationship between impulsive or reflective learning styles of L2 learners and their performances on listening comprehension test.

3. Method

3.1. Design

A descriptive quantitative study was adopted, in order to investigate the relationship between Iranian EFL learners' cognitive learning styles and their performances on listening test. The cognitive learning styles of the learners obtained through the questionnaire is the independent variable and their scores on listening proficiency test is the dependent variable. The reason for the use of correlation is that it can be used in different ways, for instance, to test a relationship between or among variables in order to make predictions. If the gained outcome shows a strong relationship, prediction can occur.

3.2. Participants

In order to deal with the requirements of this study, a sample of 70 EFL upper-intermediate learners from three language institutes were requested to fill out Learning Style Survey questionnaire prepared by Cohen, Oxford, and Chi (2002) and then take part in a listening comprehension test. For the homogeneity of their listening proficiency level, they were chosen according to their level. It is worth reminding that five of them were absent at the test session. The learners were both male and female with their age range from 14 to 24, and their mother tongue was Azerbaijani Turkish and Persian. Their names were not revealed for confidentiality reasons. According to the information that we obtained from the registration office of the institutes, they were mostly high school students or high school graduates and they were learning English for at least four years.

3.3. Instruments

In general, two instruments were utilized in this research. The first one was taken from Learning Style Survey questionnaire prepared by Cohen, Oxford, and Chi (2002). The second instrument was a standardized listening proficiency test, taken from *Tactics for Listening* books. The *Developing*

level was chosen, because it was appropriate for learners at intermediate and upper-intermediate levels.

3.4. Procedures

After an extended study on various questionnaires surveying different learning styles of the learners, The Learning Style Survey was selected. It was because of its integrity and incorporation of all of the categories proposed by many scholars. When the questionnaire was chosen, the intended categories connected to cognitive learning styles were derived and translated by the researchers and then were reviewed by one of the university professors for its validity. The prepared questionnaire was piloted with 13 learners from Esteghlal institute in Tabriz, Iran. Then, it was attempted to rephrase and modify the sentences which were confusing for the learners.

The listening comprehension test in IELTS format was derived from *Tactics for Listening Test* book and was asked to be checked by one of the university professors. The questionnaires were put to use in one session and after a two-week interval the participants were asked to take the listening test.

To check up on the reliability of the grading of the learners' listening comprehension test, the researchers graded the papers twice with a week interval. The papers were asked to be reexamined by a teacher from an institute. To analyze the collected data by descriptive statistics, they were coded and entered into the SPSS software version 20. In order to see if the differences between the scores are statistically correlated or not, a correlational analysis, namely Pearson product-moment coefficient, was run. The Kuder-Richardson (KR-21) was used for the reliability of the questions of the listening test. The calculated result was 0.812 (higher than 0.7), which revealed the listening test as reliable.

The results gained from the Learning Style Survey questionnaires and the listening comprehension test were reviewed and the outliers were excluded from the data. The rest were compared in order to check if there was a meaningful relationship between the intended cognitive learning styles and the listening comprehension proficiency of the learners.

3.5. Data analysis

In order to satisfy the requirements of the study, the learners were asked to fill in the prepared questionnaire and after a two-week interval a listening comprehension test in IELTS format was given to them. The data gathered from the survey and the test were analyzed quantitatively using correlation test Pearson product-moment coefficient.

4. Results and Discussion

4.1. Results

4.1.1. Responding to Research Question 1

The first research hypothesis examined if there was a significant relationship between global or particular learning styles of the L2 learners and their performances on listening comprehension test.

Table 1 indicates the achieved results based on Pearson product-moment coefficient, which illustrates that the correlation between *global* and *particular* cognitive learning styles is -0.347. Hence, there is a negative correlation between them.

The correlation calculated between Global cognitive learning style and listening test score is -0.269. It reveals that this component has negative correlation with the listening test scores. The significance value is 0.030 (less than 0.05). Thus, with 95 percent of confidence, this correlation is significant and the null hypothesis for Global style is rejected.

The correlation between Particular cognitive learning style and listening test score is equal to 0.045, but the significance value is 0.724 (higher than 0.05). Therefore, with 95 percent of confidence, there is no significant correlation between Particular learning style and listening test scores. So the null hypothesis for Particular style is confirmed.

4.1.2. Responding to Research Question 2

The second research question examined the relationship between synthesizer and analytic cognitive learning styles of L2 learners and their performances on listening comprehension test.

As shown in Table 2, employing the test of Pearson product-moment coefficient, the correlation between *synthesizer* and *analytic* cognitive learning style is 0.120. This states that a positive correlation between them can be seen.

The calculated correlation between Synthesizer learning style and the scores of listening test is 0.122. Accordingly, they have a positive relation with each other. The significance value for this correlation is found to be 0.333 (higher than 0.05), hence, with 95 percent of confidence, this correlation is not significant and the null hypothesis for this style is confirmed.

The correlation and significance value between Analytic learning style and listening test scores are 0.267 and 0.026 (less than 0.05) respectively. Consequently, with 95 percent of confidence, there is a significant relation between them. Thus, the null hypothesis for Analytic style is confirmed.

Table 1

Correlation Between Global/Particular Learning Styles and Listening Test Scores

Cognitive style			Global	Particular	Score
Global		Correlation Coefficient	1.000	-.347**	-.269*
		Sig. (2-tailed)	.	.005	.030
		N	65	65	65
Particular		Correlation Coefficient	-.347**	1.000	.045
		Sig. (2-tailed)	.005	.	.724
		N	65	65	65
Listening test score		Correlation Coefficient	-.269*	.045	1.000
		Sig. (2-tailed)	.030	.724	.
		N	65	65	65

** Correlation is significant at 0.01 level (2-tailed)

* Correlation is significant at 0.05 level (2-tailed)

Table 2

Correlation Between Synthesizer/Analytic Learning Styles and Listening Test Scores

Cognitive style		Synthesizer	Analytic	Score
Synthesizer	Correlation Coefficient	1.000	.120	.122
	Sig. (2-tailed)	.	.341	.333
	N	65	65	65
Analytic	Correlation Coefficient	.120	1.000	.276*
	Sig. (2-tailed)	.341	.	.026
	N	65	65	65
Listening test score	Correlation Coefficient	.122	.276*	1.000
	Sig. (2-tailed)	.333	.026	.
	N	65	65	65

* Correlation is significant at 0.05 level (2-tailed)

4.1.3. Responding to Research Question 3

The third research question investigated if there was a significant relationship between deductive and inductive cognitive learning styles of L2 learners and their performances on listening comprehension test.

The correlation computed between *deductive* and *inductive* learning styles is -0.175, as shown in Table 3. This indicates that they have a negative correlation.

The correlation between deductive learning style and listening test scores is 0.052, which shows a positive relation. Also, the significance value is 0.679 (higher than 0.05), so, with 95 percent of confidence, the correlation is not significant and the null hypothesis for deductive style is confirmed.

The correlation between inductive cognitive learning style and the scores of listening test, with 95 percent of confidence, is not significant for the reason that the calculated correlation and the significance value are 0.128 and 0.308 (higher than 0.05) respectively. Then, the null hypothesis for inductive style is not rejected.

Table 3

Correlation Between Deductive/Inductive Learning Styles and Listening Test Scores

Cognitive style		Deductive	Inductive	Score
Deductive	Correlation Coefficient	1.000	-.175	.052
	Sig. (2-tailed)	.	.163	.679
	N	65	65	65
Inductive	Correlation Coefficient	-.175	1.000	.128
	Sig. (2-tailed)	.163	.	.308
	N	65	65	65
Listening test score	Correlation Coefficient	.052	.128	1.000
	Sig. (2-tailed)	.679	.308	.
	N	65	65	65

4.1.4. Responding to Research Question 4

Research hypothesis 4 examines if there is a significant relationship between L2 learners' performances on listening test and their field independent and field dependent cognitive learning styles.

Table 4 shows the results gained from Pearson product-moment coefficient test conducted between field independent and dependent. It is equal to -0.142. This points out that they have a negative relation. It also indicates that, with 95 percent of confidence, the correlation between field independent and listening test scores is not significant, because the computed correlation and significance value are -0.101 and 0.424 (higher than 0.05) respectively. Accordingly, the null hypothesis about field independent is rejected.

The correlation of Field dependent and listening test scores is -0.032, but the significance value is 0.809 (higher than 0.05). Consequently, with 95 percent of confidence, this correlation is not significant and the null hypothesis for this style is confirmed.

Table 4

Correlation Between Field Independent/Dependent Learning Styles and Listening Test Scores

Cognitive style			Field independent	Field dependent	Score
	Field independent	Correlation Coefficient	1.000	-.142	-.101
		Sig. (2-tailed)	.	.261	.424
		N	65	65	65
	Field dependent	Correlation Coefficient	-.142	1.000	-.031
		Sig. (2-tailed)	.261	.	.809
		N	65	65	65
	Listening test score	Correlation Coefficient	-.101	-.031	1.000
		Sig. (2-tailed)	.424	.809	.
		N	65	65	65

4.1.5. Responding to Research Question 5

Research question 5 asks if there is a significant correlation between impulsive and reflective cognitive learning styles of the L2 learners and their listening test scores.

Impulsive and reflective learning styles have the correlation of 0.044, which can be observed in Table 5. It states that the relation between them is positive, but very low.

After that, the correlation between Impulsive learning style and listening test scores is shown to be 0.186, according to which the relation is positive, but very low. The amount of significance value confirms that the correlation is not significant, and the null hypothesis for this style is confirmed.

On the other hand, the correlation between reflective learning style and the scores of the listening test was found to be -0.121. Since the significance value is 0.337 (higher than 0.05), with 95 percent of confidence, this correlation is not significant.

Table 5

Correlation Between Impulsive/Reflective Learning Styles and Listening Test Scores

Cognitive style			Impulsive	Reflective	score
	Impulsive	Correlation Coefficient	1.000	.044	.186
		Sig. (2-tailed)	.	.728	.139
		N	65	65	65
	Reflective	Correlation Coefficient	.044	1.000	-.121
		Sig. (2-tailed)	.728	.	.337
		N	65	65	65
	Listening test score	Correlation Coefficient	.186	-.121	1.000
		Sig. (2-tailed)	.139	.337	.
		N	65	65	65

4.2. Discussion

The general goal of this study was to examine if there is a significant relationship between cognitive learning styles of the learners and their performances on a listening comprehension test.

The answer to the first research question, the relationship between Global/Particular cognitive learning styles and listening comprehension, is that there seems to be a negative correlation between Global learning style and the participants' listening comprehension test scores. This indicates that more Global learners appear to be poor listeners. This finding is nearly close to Kaley's claim (as cited in Al-Hajaya, 2012), who found that most of the poor readers (approximately 85%) of English texts are Global. Besides, it was observed that there was not a statistically significant relationship between Particular learning style and the learners' listening comprehension.

The correlation conducted between Synthesizer/Analytic learning styles and listening comprehension test scores indicated that there was a statistically significant relationship between Analytic learning style and listening comprehension of the participants. With some conflicting results, Al-Hajaya (2012), who attempted to examine the effect of cognitive learning style-based reading activity on the attainment of Jordanian English majors, didn't find a statistically significant relation between Analytic learning style and the learners' reading comprehension.

The third conclusion drawn from the findings is that the correlations of Deductive and Inductive learning styles with listening comprehension are positive but statistically significant.

The fourth research question probed that if there was a relationship between Field Independent/Dependent learning styles and the learners' listening comprehension. The outcomes of the correlational analyses disclosed a negative correlation between both Field Independent and Field Dependent learning styles and listening comprehension, but it was not found significant. Then, neither Field Independent nor Field Dependent cognitive styles affected the listening comprehension proficiency of the learners. Another study conducted by Amiry and Mall-Amiri (2015) indicated the existence of a statistically significant relationship between Field Independent learning style and reading comprehension of the learners.

The correlation between Impulsive learning style and listening comprehension was found to exist, but not significant, while Reflective style had a negative correlation with listening comprehension test scores, which was not profoundly significant. This finding is in disagreement with the results of Razmjoo and Mirzaei's (2009) findings in their study of the relationship between proportions of Reflectivity/Impulsivity as cognitive styles and language proficiency among Iranian EFL learners. Their results indicated a slight negative correlation between Impulsivity and language proficiency. Another research conducted by Bazargani and Larsari (2013) proved that Reflective participants outperformed Impulsive participants on multiple-choice tests. Also, according to Amiry and Mall-Amiri (2015), there was a statistically meaningful relationship between Reflectivity and reading comprehension of Iranian EFL learners, and at the same time it was proved that this cognitive style could predict the reading comprehension capability of the learners.

5. Conclusion

This study aimed to explore the relationship between learning styles and listening comprehension of the language learners. Like all other studies, the present study suffered from some inevitable shortcomings. One of the limitations of this study was the level of the participants. They were selected to be from upper-intermediate level and there is a probability of gaining different results if the study was conducted with participants from different levels of proficiency. A further limitation can be related to the time-based condition during which the participants had to fill out the questionnaire and the instruments used in the classrooms which may affect the participants' performances on listening test.

The results of the current study may present useful pedagogical insights for both language learners and teachers. As we know, there are factors other than language ability which affect learners' processes of learning and performance. One of these factors is said to be learners' cognitive style. The outcomes of this research can help teachers understand the interaction between learners' cognitive styles and their performances on listening comprehension test. It can be suggested that language teachers had better be aware of different cognitive styles and their impact on the learners' learning processes and performances on various tests. Also, it can be beneficial for language instructors at institutes to make use of numerous accessible learning style questionnaires to become conscious of the learners' styles and consider them in their teaching and assessment methods.

As it was concluded from the gathered data in this study, more Analytic learners appear to be better listeners, while more Global learners seem to be weaker listeners. Consequently, teachers can develop those learning activities and strategies that promote analytic style in the learners in order to assist them to improve their performances on listening comprehension tests. However, other styles may not impact learners' performances on listening comprehension test, they might be influential in the learning process or other skills. Thus, familiarity with them can be advantageous for teachers and in some cases for learners too.

Scarcity of empirical studies and existence of lots of gaps in this field offers further researches that can be conducted. As mentioned in the section of limitations, the same research can be done with participants from different levels of proficiency. Furthermore, there is a need to investigate the effects of cognitive styles on other skills, such as speaking, reading, and writing. Additionally it would be really enlightening to explore the cognitive styles separately and investigate their impact on learners' performances on different tasks. Moreover, an experimental study can be valuable in this area, which compares an intact group with a group in which learners are taught according to their cognitive styles.

References

Ahmed, O. N. (2012). The effect of different learning styles on developing writing skills of EFL Saudi learners. *British Journal of Arts and Social Science, 5*(2), 220-233.

Al-Hajaya, N. (2012). The effect of cognitive learning style-based reading program on the achievement of Jordanian freshmen English majors. *Canadian Center of Science and Education, 5*(3), 235-246.

Alkubaidi, M. A. (2014). The relationship between Saudi English major university students' writing performance and their learning style and strategy use. *English Language Teaching, 7*(4), 83-95.

Amiry, K. K. & Mall-Amiri, B. (2015). The relationship between field independence, reflectivity/impulsivity and reading comprehension ability of Iranian EFL learners. *International Journal of Language Learning and Applied Linguistics World, 9*(2), 186-199.

Badakhshan, S. (2012). The relationship between emotional intelligence and listening comprehension of Iranian intermediate EFL learners. *The Iranian EFL Journal, 8*(6), 127-144.

Banisaeid, M. & Hung, J. (2015). Exploring Iranian EFL learners' perceptual learning styles preferences, language learning strategy uses, and self-regulated learning strategies. *International Journal on Studies in English Language and Literature, 3*(3), 30-40.

Bazargani, D. T. & Larsari, V. N. (2013). Impulsivity/reflectivity, gender, and performance on multiple choice items. *International Journal of Language Learning and Applied Linguistics World, 4*(2), 194-208.

Boyles, J. (1984). Factors affecting listening comprehension. *ELT journal, 38*(1), 34-38.

Brown, H. D. (2000). *Principles of language learning & teaching* (4th ed.). New York: Pearson Education.

Cassidy, S. (2004). Learning Styles: An overview of theories, models, and measures. *Educational Psychology 24*(4), 419-444.

Chen, Y. (2007). Learning to learn: The impact of strategy training. *ELT Journal 60*(1), 21-29.

Chiang, C. (1990). *Effects of speech modification, prior knowledge, and listening proficiency on the lecture listening comprehension of Chinese EFL (English as a foreign language) students.* Unpublished doctoral dissertation. The Pennsylvania State University, University Park.

Cohen, A. D., Oxford, R. L., & Chi, J. C. (2002). *Learning style survey: Assessing your own learning styles*. Center for Advanced Research on Language Acquisition.

Dornyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum.

Dowlatabadi, H. & Mehraganfar, M. (2014). The causal correlation between field-dependence/independence cognitive style and vocabulary learning strategies among Iranian EFL learners. *International Journal of Latest Research in Science and Technology, 3*(4), 97-103.

Ehrman, M. E., Leaver, B. L., & Oxford, R. L. (2003). A brief overview of individual differences in second language learning. *System, 31*,313-330.

Erfan, F. (2016). *The relationship between Emotional Intelligence and listening proficiency.* Unpublished thesis of Master of Arts, Tabriz University.

Flowerdew, J., & Miller, L. (2005). *Second language listening: Theory and practice*. CUP.

Hasan, A. S. (2000). Learners' perceptions of listening comprehension problems. *Language Culture and Curriculum, 13*(2), 137-153.

Hopper, C. H. (2006). *Practicing college-learning strategies*. Houghton Mifflin Harcourt.

Liu, H. (2008). A study of the interrelationship between listening strategy use, listening proficiency levels, and learning style. *ARECLS, 5*(4), 84-104.

Mendelsohn, D. (1994). *Learning to listen: A strategy-based approach for the second-language learner*. Dominie Press.

Mendelsohn, D. & J, Rubin (1995). *A guide for the teaching of second language listening* (Eds.). Dominie Press.

Naserieh, F. (2013). Perceptual learning style preferences among Iranian graduate students. *System, 41*(1), 122-133.

Nunan, D. (1996). What's my style? In Gardner, D. & Miller, L. (Eds.). *Tasks for independent language learning.* TESOL.

O'Mally, J. M. & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. CUP.

O'Malley, J. M., Chamot, A. U., Stewner-Manzanares, G., Kupper, L. & Russo, R. P. (1985). Learning strategies used by beginning and intermediate ESL students. *Language Learning, 35*(1), 21-46.

Oxford, R. (1990). *Language learning strategies: What every teacher should know*. Newbury House.

Putnam, R. T. & Borko, H. (1997). Teacher learning: Implications of new views of cognition. In Biddl, B. J., Good, T. L. & Goodson, I. F. (Eds.), *International handbook of teachers and teaching* (pp. 1223–96). Kluwer.

Razmjoo, S. A. & Mirzaei, R. (2009). On the relationship between the dimensions of reflectivity/impulsivity as cognitive style and language

proficiency among Iranian EFL university students. Unpublished Master dissertation. Islamic Azad University-Bandar Abbas Branch.

Reid, J. M. (1995). *Learning styles in the ESL/EFL classroom* (Ed.). Heinle & Heinle.

Rivers, W. (1984). What practitioners say about listening: Research implications for the classroom in R. A. Gilman & L. M. Moody. *Foreign Language Annals, 17*(4), 331-4.

Rost, M. (1990). *Listening in language learning*. Longman.

Rost, M. (2002). *Teaching and researching listening: Applied linguistics in action*. Longman.

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: OUP.

Taylor, K. L. & Dionne, J. (2000). Accessing problem solving strategy knowledge: The complementary use of concurrent verbal protocols and retrospective debriefing. *Journal of Educational Psychology, 92*(3), 413-425.

Tiberius, R. (1986). Metaphors underlying the improvement of teaching and learning. *British Journal of Educational Technology*, *17*(2), 144-156.

Ur, P. (1998). *Teaching listening comprehension*. CUP.

Vandergrift, L. (1997). The comprehension strategies of second language (French) learners: A descriptive study. *Foreign Language Annals, 30*(3), 387-409.

Willing, K. (1988). *Learning styles in adult migrant education.* Sydney: Macquarie University.