

Vol. 13, No. 3
pp. 453-478
July &
August 2022

Investigating the Learning Style Variation and Strategy Selection of Iranian Learners in Listening Skill

Mansoureh Sajjadi^{*1}  & Mohammad Sadegh Bagheri² 

Abstract

The aim of the present study is to investigate the effect of students' learning styles on their performance in various question types of the listening section of IELTS examination as well as their strategy selection. To this aim, 90 Iranian IELTS candidates from IELTS courses of an English language institute in Tehran, took part in the study as the sampling method was based on availability. The participants of the study comprised of 35 males and 55 females, and they mostly aged between 20 to 27 years old. The researcher first used Kolb's questionnaire to recognize the individual learning styles of candidates, which were accordingly categorized into four classes as activists, theorists, pragmatists, and reflectors. The results obtained from the one-way ANOVA showed that the dissimilarity of the style groups causes different performance in some question types of the listening test. In the note completion, multiple choice, and matching question types, the findings indicated a statistically significant difference. Therefore, it could generally be argued that in these three types of questions in the listening comprehension module of the IELTS examination, variation in different learning styles groups causes variation of performance in different question types. The results of the present study also reveal that the style preferences affect the individual differences in selecting the learning strategies.

Keywords: learning style, learning preference, learning strategies, educational culture

Received: 8 November 2020

Received in revised form: 3 April 2021

Accepted: 7 May 2021

¹ Corresponding Author: Department of English Language, Shiraz Branch, Islamic Azad University, Shiraz, Iran; *Email:* mansoureh.sajjadi@yahoo.com,

ORCID ID: <https://orcid.org/0000-0002-4284-4952>

² Department of English Language, Shiraz Branch, Islamic Azad University, Shiraz, Iran;

ORCID ID: <https://orcid.org/0000-0001-9771-113X>

1. Introduction

As a result of changes in the methodologies of language teaching and testing as well as moving towards creating learner-centered classrooms, a great deal of researchers paid much more attention to the identification of characteristics and traits of language learners. Among the different traits that may affect second/foreign language learning, the learners' learning styles and strategies have gained importance (Liu, 2020). In the past, the aim of education in general and language instruction in particular was limited to successful transfer of information and skills to learners. It was supposed that teachers knew the students' need for learning; it was also believed that with an adequate level of motivation all learners could learn. However, these beliefs were questioned in the 1970s and scholars began to theorize other hypotheses to describe language learning process. Some scholars claimed that learners may approach the learning process differently depending on their preferences and styles (Liu, 2020).

Researchers found out that learners participate actively in the process of language learning. In the light of this observation, interest in the concept of learners' differences and the impact of these differences on language learning process came into existence. Learning style, as stated by different scholars, is an important subcategory of learners' educational culture that is built out of the learners learning experience in an educational setting and can be an influential factor in all steps of knowledge internalization from the early steps of paying attention to something which must be learnt, to the developing steps of selecting strategies (Sajjadi & Bagheri, 2018). Some teachers believe that paying attention to students' differences and tuning up the techniques and methods of teaching accordingly will facilitate foreign language learning for their learners because they feel more involved in the educational setting (Polat, 2015). It is believed that if every student has different preferred ways for learning, different achievement levels will be possible (Polat, 2015). In the EFL contexts like Iran, still little or no attention has been paid to such concepts and individuals' differences and their impact on language learning process is still neglected (Sajjadi & Bagheri, 2018).

In our country many English institutes consider the proficiency level of students as a base for categorizing them in different classes and the score of a placement test is usually the only criterion for classifying learners. In such settings, the psychological factors like differences of learning styles are missed and the only factor for classifying learners is the level of their academic knowledge. Therefore,

teachers still experience dissimilarities in their classes on the one hand, and learners believe that the teaching methods and class environment are not suitable for them on the other hand. Moreover, in language learning, it has become imperative to have a thorough understanding of the learners' educational culture, their learning differences, styles, difficulties, and their preferences to specific types of activities to reach their targets successfully (Liu, 2020). In Iran, the integration of various learning styles into the language teaching/learning settings is still an unresolved problem and that is why a deeper investigation is required (Derakhshan & Shakki, 2018; Zargani, 2010). Accordingly, the importance of doing this study is that the affordances of the study may open new horizons in considering the above mentioned challenges. The present study was designed to overcome challenges of individual preferences and personal differences in learning and testing the listening skill and the study specifically tries to minimize such language learning barriers in Iran educational contexts. So, in the present study, the influence of learning style differences in test performance of learners in listening is investigated to fill this gap and enrich the existing literature in this regard.

Based on the issues mentioned above, this research aimed to evaluate the students' learning style variation and the influence of such dissimilarities in test performance and strategy selection. The study specifically determines whether variation, due to differences in the learners' learning styles, can produce a meaningful difference in the learners' performance in various questions of listening examination. It also endeavored to test out if there is a meaningful difference in the strategy selection of learners with various learning styles. Therefore, the following questions were raised:

Q1: What is the most common learning style in the Iranian educational culture?

Q2: Which learning style is more effective in language learning in the Iranian educational culture?

Q3: Do Iranian learners' learning style preferences have a meaningful impact on their performance in different questions of the listening test?

Q4: Do the learners' learning style preferences have a meaningful impact on the strategies selected by the Iranian learners?

2. Literature Review

2.1. Theoretical Framework

During the last few decades, the concepts of learning preferences and strategy selection have moderately been introduced into the educational contexts. As the theories of psychology shifted from behaviorism to cognitivism, the educational process changed their focus from considering learners as mere receivers, to learners as active processors in the course of constructing knowledge (Brown, 2007). Previously, the purpose of language education was limited to successful transfer of concepts and skills to the learners (Polat, 2015). It was argued that the language instructors knew the students' need for learning; it was, accordingly, believed that the only condition of learning for all the language learners is providing supplementary levels of motivation, and that all language learners are able to learn within the same process (Liu, 2020).

However, such claims were questioned in the 1970s due to the presence of learner-centered theories and researchers began to investigate other hypotheses concerning language learning process (Bilgin, 2003). It was claimed that some of the learners respond to the process of learning in different ways motivated by their personal preferences and styles, and that for many learners the mode and method of instruction do make a difference (Fathi & Shirazi, 2020).

In terms of listening comprehension for many students, this skill is a difficult one to improve because students have to concentrate very much during which to get the meaning and if they don't, they might feel frustrated. Listening comprehension also needs a quiet situation without any noise because when there are a lot of noises; comprehension diminishes (Putri, 2019). Sometimes students have a limited vocabulary and the speaker may choose words that students do not know. Students may encounter an unknown word which makes them stop and think about the meaning of that word, and thus, they miss the next part of the speech. Within the same line, Liu (2020) explained that there are three listening problems that students usually face in listening comprehension: 1) speech speed; 2) limited knowledge of vocabulary and the structure of sentences; 3) limited knowledge of the topic in question. Liu (2020) concluded that learning style awareness helps learners to comprehend listening easily and overcome the above mentioned problems. According to Putri (2019), teachers should consider students' learning styles for their successful learning. When teachers are aware of the importance of learning styles, they can provide a good learning map to their

students for their learning. So, many problems of learning language skills are solved easily (Putri, 2019).

The idea of learners' dissimilarities brings about the idea of learning styles and preferences (Cassidy, 2004). Learning style refers to how a learner learns. Moreover, the learning styles may be affected by educational culture (Peterson, 2009). Although the term learning styles is explained in different ways, basically, all explanations emphasize that the learning style includes beliefs, convictions, preferences, and behaviors that people use to a certain extent to facilitate their learning process. Kolb's learning style theory is one of the best-known and widely used learning style theories and this study follows this theoretical framework. Kolb (1984) first expressed his theory of learning styles in 1984. He claimed that individual learning styles are built based on genetics, life experiences, and the needs of the surrounding environment.

Kolb (1984) introduces The Experiential Learning Cycle model of learning and explains that influential learning is the result of a person progresses through a four-stage cycle. The first stage is having a concrete experience. The second stage is observation of and reflection on that experience which leads to the third stage that is the formation of abstract concepts and generalizations. The last stage is testing a hypothesis in subsequent situations, which leads to new experiences. Kolb's model views learning as an integrated process with each stage being mutually supportive of and feeding into the next. Kolb's learning style theory sets out four distinct learning styles, which are based on a four-stage learning cycle (The Experiential Learning Cycle). Based on this theory, the psychological preferences, rooted in individual variations, cause specific strategies that individuals choose in learning. In this study, accordingly, the students' styles are divided into four groups: reflectors, theorists, pragmatists, and activists, and the dissimilarities of test performance and strategy selection of these groups are considered.

Kolb (1984) divided learners into four groups and describe different characteristics for the members of these groups which influence effective learning. It is stated that learners who are organized as activists are eager to accept new experiences. Reflectors collect information, both directly from observing the environment, and indirectly from the others, and they prefer to analyze data completely before reaching a conclusion (Putri, 2019). Theorists accept and change observations into complicated and logical theories. Pragmatists enthusiastically test

ideas, theories, foundations, and techniques to determine the amount of their practicality. Kolb (1985) claims that learning styles are flexibly fixed learning desires. This means that the learners' styles are a combination of all these groups, but in each person, the effect of one of these learning methods is more dominant than the others, and this also affects the learning differences among different people.

Learning style, however, is not only influenced by educational culture in terms of the ethnicity, educational setting, and nationality, but also is affected by the way knowledge is internalized by the learners (Liu, 2020). For example, people in North America or East Asia generally have a visual learning style, while Arabs often have an auditory learning style. Another interesting point is that even gender can be effective in shaping the learning style of the learners. Males' learning is mainly visual and random, while females are more auditory; this is why girls are more inclined to learn by attending classes (Liu, 2008).

As reviewed by Polat (2015), the disagreement between a learner's learning style and the educational style can be the cause of inability to learn. According to Polat (2015), many students are successful in ESL/EFL learning not taking the methodology of instruction into account, mainly because they have special characteristics and strategies.

Therefore, there are a plethora of researchers who have changed their perspectives from analyzing the methods of instruction to investigating the learning styles and strategies (Dornyei, 2005). They aim to identify the main factors affecting the learners' pace of language acquisition and their language proficiency (Myer, 2000).

One key hot topic among the researchers is that the learning style and learning strategy are often seen as interrelated, and that they are the significant elements of successful learning (Goldani & Farsiyan, 2018). These findings have persuaded a number of EFL teachers and students to appraise paying attention to learning styles and learning strategies (Messic, 2001). This study in turn follows such affordances and confirms that learners have disparity of styles in their learning which produce dissimilarities in the process of internalization of knowledge (Peterson, 2009). As stated by Matthew (2005), in order to have a kind of influential instruction, instructors must be aware of how students manage their learning in general, and how they prefer to develop their knowledge in particular. Matthew (2005) considered dissimilarities of learners as factors that contribute to somebody's

success or failure in language learning. He manifested that teachers' paying attention to the learners' variation is needed for accommodating the diversity in the classroom. In particular, the values, preconceptions and ideas about how learning must or must not be done, what is correct or desirable in learning, what is expected from the learning experience are all categorized in the scope of styles of learning (Roshan & Seyyedrezayee, 2015). Studies on this subject concluded that there are personal preferences and individual differences among learners.

2.2. Empirical Studies

To investigate factors that account for success in learning languages, researchers centered many studies on individual differences and personal preferences. In the following, some of these studies are considered according to their subject matters. Matthews (2005) conclusively showed that in their academic performance, learners with different learning styles act differently and some styles might be more effective than some others for certain tasks. A similar study to this one, Khodadady and Zeynali (2012) suggested that a positive relation exists between listening ability of IELTS candidates and the learners' field-dependency. The results of the stated study identified that field-dependency has a significant correlation with matching and multiple choice items in comparison with field-independency. This study compares influential effects of four styles of learning in test performance and strategy selection of learners. In Iran, researchers like Khodadady and Zeynali (2012) mainly concluded that different learning styles had one-to-one relationship with the test takers' performance. Many research studies have reported a consistent correlation between learning style and educational success (Polat, 2015). In such studies, some correlations have been found with the skills as well. Roshan and Seyyedrezaei (2015) investigated whether there was a meaningful relationship between the cognitive styles and the listening strategies used by the Iranian EFL learners participating in IELTS courses. The findings of the study showed that no statistically significant difference was observed in the relationship between the participants' selection of the cognitive, metacognitive, and socio-affective listening strategies, and various learning style. Investigating the learning style categories among the Iranian EFL learners, Rahmatian and Mehrabi (2010) found that the most common type of learning style was through speaking and the least common

one was through listening (For the Iranian learning styles of Arabic as a foreign language, see Akhtari, 2010).

A positive correlation has been demonstrated by Peterson (2009) between the learning style variations and the selecting strategies, the mentioned that different cognitive style groups paid special attention to different types of strategies for successful learning.

Within the same line, one can also refer to Hand's study (2000), in which it is claimed that when learners know about their learning style, they can recognize new areas of their abilities and have a better understanding for other learners' differences. Hand (2000) also stated that this awareness is productive for learners and teachers equally.

Wulandari (2019) have investigated the learning styles used in the listening comprehension at the university setting using a questionnaire adapted from Joy Reid. The findings suggest that there are generally three types of learning styles employed, namely, auditory, visual, and kinesthetic. Another recent study was that of Supriyadi (2019) investigating the cognitive style and listening comprehension, the result of which indicated that those within the integrative model outperformed those in the experiential model of learning (for other similar studies see Humaidah, 2021; Adnan et al.,2020; Primuriski et al.,2020). Blanton (2018) considered the effect of cognitive styles on reading comprehension tests. She found out that cognitive style had greater impacts on students' performance on a standardized test of reading comprehension than did ethnicity or gender. Types of the tasks used in the tests had a profound effect on the performance of the field-dependent students. She concluded that field-dependent students performed better when the reading tests were multiple-choice than the other kinds of tests and in fact this type of reading test provided more accurate estimation of their reading comprehension skills and decreased differences in test performance between field-dependent and independent students.

Based on the results of Blanton (2018), cognitive styles had the strongest effect on test performance when test takers were most proficient. The results also revealed that success with more holistic or more analytic reading tasks correlated with FD/I cognitive style. In fact, scores on holistic tasks correlated positively with FD style and negatively with FI styles. By contrast, scores on analytic tasks correlated positively with FI style and negatively with FD style. The findings of Blanton (2018) are in harmony with the findings of the present study.

However, in the literature, few endeavors have been done to investigate exclusively the role of learning styles variation in teaching and assessing language skills. Moreover, there is limited literature related to studies that have demonstrated any relationship between learning style dissimilarities and success in language test performance. In addition, the existing literature mostly has not investigated how the cognitive as well as the metacognitive styles might affect the learners' performance.

3. Methodology

3.1. Participants

The population from which the participants were selected for this study included Iranian EFL learners who were all native speakers of Persian with the experience of passing 360 hours of English courses (five advanced levels of CAE, CPE, IELTS pre-courses, and IELTS courses). To conduct the study, 90 Iranian IELTS candidates from an English Language Institute in Tehran, took part in the study as the sampling method was based on availability. Moreover, the sample consisted of both male and female learners, and they mostly aged between 20 to 27 years old. The participants of the study comprised of 35 males and 55 females and all were university students or graduated from BA and MA programs in different majors. The reason of selecting students from IELTS courses is that IELTS examination has a variety of question types and learners' disparity of performance in answering different questions of the test and their master plans in terms of strategies to get better scores could have immediate practical outcome. Participants' purpose was mostly taking the IELTS exam as a valid and reliable base for their language proficiency to pursue their educational and academic success to facilitate their English communication for immigration, university education, and occupational purposes in future life.

3.2. Instruments

To investigate the research questions posed in the present study, two questionnaires were used. The first questionnaire was Kolb's (1984) learning style questionnaire which consists of 80 items to gather data about the learning style of participants. This questionnaire was first constructed by Kolb (1984) and it was later shortened for a real educational setting (Honey & Mumford, 2006). The second questionnaire

was the adopted version of the language strategy selection inventory constructed by Cohen and Chi (2010). This questionnaire has 40 bilingual statements which are developed to provide information about the learners' strategy selection in learning the four major English language skills. In addition, the sample IELTS examination from Cambridge IELTS series (2009) was employed. The listening module of the test had four sections and several question types were used. Prior to commencing the study, in order to measure the students' knowledge of English, EPT (English Proficiency Test) had been given to learners. The results revealed a normal curve. The descriptive statistics are provided in the following sections.

3.3. Procedures for Data Collection and Data Analysis

This study is descriptive in nature. Before gathering the data, the researchers explained the purpose and the procedures of the study. First, participants were requested to complete both the learning style questionnaire and the language learning strategy inventory. The frequency of the learners' individual preferences in terms of their learning style is identified by providing information to the statements of the learning style questionnaire. Having collected the data, candidates were asked to take the test, i.e. the listening part of IELTS sample test. The test takers listened to the recording for one time and then they were to answer the questions while listening. The whole test took 40 minutes but they were given 10 extra minutes to transfer their answers to the answer sheets. Fourteen different question types were involved; each passage had three to four of these question types. These question types can be divided into five main categories as follows:

1. Matching tasks (sentence halves, opinions to sources, headings to paragraphs, Facts to paragraphs, causes and effects, features/facts)
2. Task completions (fill in the gaps, summary completion, sentence completion, note completion, labeling a diagram, flow-chart, table, and chart completion)
3. True/False/Not Given; Yes/No/Not Given
4. Multiple Choices
5. Short Answers

According to the information provided from the learning style questionnaire, learners were categorized into four groups of activists, reflectors, theorists, and pragmatists. According to the information provided from the strategy selection

inventory, the most frequent strategies of the Iranian EFL learners for each learning style group were determined. The frequency and percentage of the individual strategy selection based on the learning style is investigated in this study to examine which learning style group uses the learning strategies more frequently in the language acquisition process. Weighted sum for each strategy was investigated, so a numerical weight or priority could be derived for each frequency.

To compare the performance of style groups in different listening items, and to determine the most successful learning style, one-way analysis of variance was employed.

4. Results

4.1. The Descriptive Statistics for the First Research Question

The first research question of the present study was: What is the common learning style preference in the Iranian educational culture? In order to precisely answer this question, the frequency and percentage were calculated according to the information obtained from the learning style questionnaire. Table 1 provides the descriptive statistics.

Table 1
Learning Style Frequency

Learning Style	Frequency	percentage
Activist	15	16.6
Reflector	40	44.4
Theorist	12	13.3
Total	90	100

As it can be inferred from the table above, the frequency for the reflector group is 40 and they have the highest frequency in Iranian educational culture; accordingly, this type of learning style is the most common type among the Iranian EFL learners.

4.2. The Statistics for the Second Question

To find an answer for the second question, the results of the IELTS examination was used and the analysis of variance was employed to make comparisons for the mean scores of the learning styles.

Table 2
Statistics for the Second Question

Learning Style	N	Mean	SD	Std mean
Activist	15	6.16	0.66	0.221
Reflector	40	5.42	0.45	0.198
Theorist	12	5.75	0.518	0.214
Pragmatist	23	5.30	0.421	0.194

As it is apparent from Table 2, the mean score for the activist group was 6.1 with the standard deviation of 0.66 which was the highest score among the four groups of learners. To see whether this mean score is meaningful or not, the analysis of variance was used.

4.3. The ANOVA Results for the Second Question

The second question of the study examined which learning style group is the most successful are in the Iranian educational context. To answer this question, the One-Way analysis of variance was used. Accordingly, compared with the other groups, the activist group's mean score was standing in a higher value. So, the activists were significantly the most successful students among the others.

Table 3
Results for the Second Question

	Sum of squares	Df	Mean square	F	Sig
Between groups	19.31	3	0.63	4.200	.015
Within groups	94.12	86	0.52		
Total	113.43	89			

The most striking result to emerge from this table is that the effect of learning style on test performance is significant, for the three conditions, $F(3, 86) = 4.200$, $P = .015$.

In other words, activists' mean score was above the mean scores of the others and this group meaningfully performed better than the other groups.

4.4. Scheffe Test for the Second Question

Due to different means of the IELTS band scores, members of different style groups vary in their proficiency level. To know precisely which groups are different from the others, the styles are compared two by two in the following table. The significant difference between the means is noted by a star mark. Moreover, to refute or confirm the null hypothesis the significance level is provided as well.

Table 4
Scheffe Test for the Second Research Question

Learning preference	Learning preference	Difference of mean	Significance
Activist	Reflector	0.74	0.041*
Activist	Theorists	0.41	0.12
Activist	Pragmatics	0.86	0.023*
Reflector	Theorists	-0.32	0.13
Reflector	Pragmatics	0.12	0.42
Theorists	Pragmatics	0.44	0.10

Table 4 shows the statistically significant differences among activists, reflectors, and activists and pragmatics. The mean difference is significant at the .05 level. As it is clear from the table, the difference between theorists and reflectors is not positive. It turns out that although theorist had a better mean score, this difference was trivial and it is not meaningful at the .05 level.

4.5. Basic Statistics for the Third Question

Table 5 illustrates the basic statistics for different learning style groups' performance on the listening items. You can compare the mean scores of different styles for each question type separately in Tables 6-10.

Table 5
Statistics of Listening Questions Scores

Listening Tasks	Styles	N	Mean	Std. Deviation	Std. Error of Mean
Note Completion	P	23	4.5	.419	.11
	A	15	6.5	.554	.12
	R	40	7.8	.612	.24
	T	12	5.8	.632	.13
Form Completion	P	23	5.2	.514	.11
	A	15	5.6	.534	.22
	R	40	5.5	.664	.31
	T	12	5.2	.456	.12
Multiple Choice	P	23	4.9	.354	.22
	A	15	6.0	.701	.19
	R	40	5.3	.632	.20
	T	12	6.1	.587	.19
Sentence Completion	P	23	5.6	.451	.23
	A	15	5.3	.641	.21
	R	40	5.07	.411	.32
	T	12	4.7	.454	.19
Matching	P	23	4.2	.512	.21
	A	15	5.1	.456	.22
	R	40	4.9	.494	.24
	T	12	5.8	.541	.12

The results for comparing the performance of the four groups in different question types of the listening test showed that the theorist group had a higher mean score in the multiple choice, and matching items, while the mean score of the reflectors was higher in note completion ones. Also, the activist style slightly outperformed the others in the form completion questions, and pragmatics performed the sentence completion items better.

Table 6
Mean Difference of the Note Completion Question Type in Four Groups

	Squares	Df	Mean square	F	Sig
Between groups	138.483	3	46.161	9.405	.000
Within groups	228.089	86	2.652		
Total	366.572	89			

As it is apparent from Table 6, there was a significant effect of learning style disparity on answering note completion question type of the test for the three conditions [$F(3, 86) = 9.405, P = .000$].

Table 7
Mean Difference of the Form Completion Task in Four Groups

	Squares	Df	Mean square	F	Sig
Between groups	1.902	3	.634	1.200	.315
Within groups	45.422	86	.528		
Total	47.324	89			

As it is clear from Table 7, an analysis of variance showed that the effect of learning style variation on the form completion questions was not significant, $F(3,86) = 1.200, P = .315$.

Table 8
Mean Difference of the Multiple Choice Tasks in Four Groups

	Squares	Df	Mean square	F	Sig
Between groups	53.564	3	7.855	15.655	.000
Within groups	98.085	86	1.141		
Total	151.649	89			

As Table 8 indicates, there was a significant effect of learning style difference on the multiple choice tasks at the $p=.05$ level for the three conditions [$F(3, 86) = 15.655, p = 0.000$].

Table 9*Mean Difference of the Sentence Completion Task in Four Groups*

	Squares	Df	Mean square	F	Sig
Between groups	3.002	3	1.001	1.519	.215
Within groups	56.657	86	.659		
Total	59.658	89			

As it is clearly observable from Table 9, there was not a significant effect of learning style disparity on the sentence completion questions at the $p<.05$ level for the three conditions [$F(3, 86) = 1.519, p = .215$]. So, it is concluded that in this type of question, the learning style is not a main component of variation of performance.

Table 10*Matching Question Types in Four Groups*

	Squares	Df	Mean square	F	Sig
Between groups	10.005	3	3.335	5.504	.002
Within groups	52.106	86	.606		
Total	62.111	89			

As it is inferred from Table 10, there was a significant effect of learning style disparity on different performance in the matching questions at the $p<.05$ level for the three conditions [$F(3, 86) = 5.504, p = .002$].

4.6 The Basic Statistics for the Fourth Question

The fourth question of the study considers whether the learners' learning style preference has a meaningful impact on the strategies selected by the Iranian learners. To calculate the frequency of learning strategies which were selected by individual learners, an interpretation mean score was employed.

Table 11
Rating of Frequency for Strategy Selection

Frequency of Use	Response	Mean Score
High	All the time true	4.5 – 5.0
	Most of the time true	3.5 - 4.4
Moderate	Sometimes true	2.5 - 3.4
	Usually not true	1.5 - 2.4
Low	Never true	1.0 – 1.4

As the table shows, according to the range of mean scores, learners’ responses were categorized into high, moderate, and low classes.

4.7 Level of Strategy Selection Based on Learning Style Dissimilarity

The percentage and frequency of the individual strategy selection, according to the learning style, is calculated in this study to show which learning style group uses the strategies more frequently in language learning process.

Table 12
Styles and Strategy Selection

Skill		P	A	R	T
	Mean	3.43	3.5	3.49	3.37
Listening	Frequency	Moderate	High	Moderate	Moderate
	Rank	2	3	2	3

It has been demonstrated in Table 12 that the activist group is the high frequency users of listening strategies. As it is clear, with the mean score of 3.5, the activist group has the most frequent use of strategies.

4.8 The Most Frequent Strategy Selection of Successful Learners

As it was already stated, the activist learners were the most successful in gathering the highest scores and in selecting strategies. This part investigates the most frequent strategies that these participants have selected in answering the listening items.

Table 13
Statistics for Activists' selection of Listening Strategies

Num	Items	Rating Frequency					% most frequent	of Weighted Sum
		Never (1)	Seldom (2)	Sometimes (3)	Often (4)	Always (5)		
1	Listen for keywords that seem to carry the core of the meaning	0	0	4	6	5	33.3%	61
2	Listen for words and sentences stress to see what native speakers emphasize	0	0	4	5	6	40%	62
3	Pay attention to rise and falling of speech	0	3	3	3	5	33.3%	53
4	Practice listening skim	2	3	3	4	3	20%	48
5	Try to understand without translating	0	1	3	6	5	33.3%	57
6	Focus on the context	0	0	4	5	6	40%	62
7	Listen to specific details	0	1	3	4	7	46.6%	62
8	Make guesses	0	2	3	4	6	40%	59
9	Draw on general background knowledge	3	2	2	3	5	33.3%	50
10	Pay attention to specific aspects of speakers pronunciation	0	2	2	4	7	46.6%	61
11	Pay attention to repetition, pauses,	0	0	2	4	9	60%	67
12	Use speakers tone of voice as a clue to the meaning	0	2	3	4	6	40%	59

As indicated in Table 13, item11 (paying attention to repetition and pauses) with the weighted sum of 67 and 60% of frequency is the most frequent strategy used by the activists while doing the listening test. After that, the strategies of listening to specific details with the frequency of 46.6%, and paying attention to specific aspects of the speakers' pronunciation, with the same amount frequency are the two favorite strategies of activists.

5. Discussion

The present study aimed to find out to what extent different learning styles can affect different test performances and selections of the strategies in the listening test. Accordingly, the first question determined the dominant learning style in the Iranian educational culture. The results of the descriptive statistics showed that 44.4 percent of the Iranian EFL learners were categorized as reflectors. Therefore, Iranian learners in the study mainly paid attention to observation, and the analysis of issues, and they are inclined to think precisely before practically taking actions or making conclusions, which in turn are considered as special characteristics of reflectors. The study in this regard confirms the claims of Wulandari (2019) who concluded that learners have various learning behavior and styles which are motivated by their educational culture and personal experiences.

The second hypothesis indicated that there is no successful learning style preference in the Iranian educational culture. In order to reject the hypothesis, the results of the One-Way ANOVA demonstrated that there is a meaningful difference between the mean score of the groups, and the analysis of the mean scores of the four learning style groups revealed that the activists had a better performance. Therefore, the second hypothesis was rejected and the study in turn supports the affordances of Fathi and Shirazi (2020) who mentioned that learners respond to the process of learning in different ways according to their learning styles and preferences.

The third hypothesis stated no meaningful difference in the learning style preferences of the learners, and their performance in different question types of the listening test. According to the results of the ANOVA, there was a meaningful difference in the means for some of the tasks. In note completion, multiple choice, and matching question types, we encountered a meaningful difference. In fact, the comparison of performances for the four groups in the listening test apparently stated

that the theorist group's mean scores were higher for the multiple choice and matching tasks, while the mean score of reflectors was higher in the note completion task. Also, the activists style slightly outperformed the others in the form completion task, and the pragmatics performed the sentence completion questions better. Consequently, the third hypothesis was rejected and in this regard the study also confirms the ideas of Blanton (2018) who concluded that types of the tasks used in the tests had a profound effect on test performance of learners with different learning styles and learners with different preferences act differently in testing process and some styles might be more effective than some others for certain tasks.

The last hypothesis of the present study mentioned that there is not any meaningful difference between the style differences and strategies selected by the Iranian learners. However, the activist group is the high frequency user of the listening strategies. Paying attention to repetition and pauses was the most frequent strategy with the weighted sum of 67, used by activists while performing the listening test. So, the fourth hypothesis was rejected to confirm the idea of Primuriski (2020) who concluded that learning style is a main component of variation of performance in strategy selection.

It is notable that the affordances of the study are consistent with findings of Matthews (2005) suggesting that teachers' attention to the learners' variation specially in terms of the learning style and strategy selection for designing language skill courses and accommodating the diversity in the classroom. The findings of the present study seem to be consistent with Supriyadi (2019) indicating that personality types seem to have a relationship with the learners' traits, learning styles, and success in higher education, particularly in programs such as the undergraduate and postgraduate.

The findings of the study further support Peterson (2009) who concluded that there is a one-to-one relation, between the learning style variation and strategies selection. He also claimed that different cognitive style groups paid special attention to different types of strategies for successful learning.

In harmony with the results of Khodadady and Zeynali (2012) the present study also suggested that learners and teachers must be aware of the dominant learning style preferences and strategy selections, and balance the educational settings accordingly; otherwise, their endeavor in learning and teaching languages would be limited by the negative effects of the style or wrong selections of strategies (also Primuriski et al., 2020). Abdul Nasir (2009) shows that considering learning preferences and the

building blocks of such preferences is important because it helps us to create an environment for students to feel safe and free in order to be more involved in the educational settings and take responsibility for their learning. Accordingly, they become more capable to tolerate the difficulties of language learning process. This study produced results which corroborated the findings of the previous studies.

However, the study did not confirm the results of Roshan and Seyyedrezayee (2015) that claimed no statistically meaningful difference in the relationship between the selection of cognitive, metacognitive, and socio-affective listening strategies and various learning styles.

As mentioned in the literature review, coordination and agreement between the style of a learner and the educational situation or task that the person is faced with is an important factor for their success. Disagreement between a learner's learning style and educational setting can be the cause of inability to learn; therefore, considering the learning process and different styles and methods can facilitate the progress of learning (Brown, 2007). The study also confirmed such views and proved that the variation of learning styles causes variation of performance in different question types and strategy selection in the listening examination.

6. Conclusion

It has been an enigma that what factors might contribute to somebody's success in language learning. It is believed that some styles or strategies might hold the key to opening this Pandora box (Neto, 2009). As concluded in this study, the learning components of proficiency might necessitate some special styles and strategies. If such styles and strategies are figured out, they can be implemented in our curriculum and training to produce better language learners (Sajjadi & Bagheri, 2018). Moreover, as it is mentioned in the literature review when learners are aware of their learning style, they can benefit from the strong points of their style and find solutions to control the negative effects of their style in learning a language. This study, in turn, confirms the existing literature in this regard and demonstrates that some special styles can act more successfully than the others in learning language skills and taking language skills tests. Therefore, teachers need to examine learning variations in their learners based on the characteristics of their learning styles. This understanding can enlighten the teachers about the learners' distinctive features in the classroom, and accordingly, teachers can lessen or bold the effect of any cultural or personal

preferences to control the inconsistency of language classes (Liu, 2020). According to what the present study revealed, some practical implications can be mentioned.

First, the findings may help language learners know the influence of their learning style and learning strategy selections on their performance in the language skill classes and examinations. Another important implication is that EFL learners can be trained to use the best strategies and control the influence of the learning style differences in order to take maximum advantage from them. Moreover, the findings are beneficial to administrators of English language courses to respect different preferences of learners in order to make the educational setting more suitable to anyone who sits in. The last but not the least, teachers and educators must bear this point in mind that learning style variation and its influence on performances and strategy selections is just a matter of individual difference. As Felder and Spurlin (2005) claimed, the knowledge of learning style can help learners take responsibilities for their learning. On the top of that, learners realize that they are merely different from their classmates, not better or worse than them.

There are a number of limitations to this study that need to be considered in the future research, the most important of which lies in the characteristic of the sample. Only learners from one institute were selected to participate in this study. So, the availability was the base for sampling, and randomization was not included in the selection and sampling processes.

In this study, a questionnaire was used to identify different learning styles. It is recommended that in future studies, researchers use an interview along with the questionnaires to more accurately observe and determine the learning styles of the learners. As it was mentioned in the literature review, even gender can be effective in shaping the learning style of the learners. In this study, no comparison was made between males' and females' styles and their strategy selection, thus, further studies can focus on such comparisons to enrich the existing literature.

References

- Abdul Nasir, S. J. (2009). The learning styles of early adult students from different cultural backgrounds in Malaysia. *Distance Education Journal*, 11(7), 132-170.
- Adnan, A., Marlina, L., & Shawfani, A. (2020). College students' learning style in basic listening course at English department. *ICLA*, 1(1), 132–149.
- Akhtari, T. (2010). The learning styles of Iranians in acquiring Arabic as a foreign language. *Language Related Research*, 17(4), 1–9.
- Bilgin, I. (2003). A comparative research on learning styles and the success of students. *Theory and Practice*, 3(2), 381–400.
- Blanton, E. (2018). A comparative research on learning styles and the success of students. *Theory and Practice*, 3(6), 221_240.
- Brown, H. D. (2007). *Principles of language learning and teaching*. Longman.
- Cassidy, S. (2004). Learning styles: An overview of theories, models, and measures. *Educational Psychology*, 24(4), 419–444.
- Cohen, S., & Chi, M. (2010). *Development of geocentric spatial language and cognition: An eco-cultural Perspective*. Cambridge University Press.
- Derakhshan, A., & Shakki, F. (2018). An investigation into the relationship between Iranian EFL high-and low-proficient learners and their learning styles. *Sage Open*, 8(4), 2158244018809408.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum Associates.
- Fathi, J., & Shirazizadeh, M. (2020). The effect of a second language reading strategy instruction on Iranian EFL learners reading comprehension. *Language Related Research*, 11(4), 267–295.
- Felder, R., & Spurlin, J. (2005). Applications, reliability and validity of the index of learning styles. *International Journal on Engineering Education*, 21(1), 103–112.
- Grossman, D. (2011). A study of cognitive styles and strategy use by successful and unsuccessful adult learners in Switzerland. *Educational psychology*, 17(2), 276–312.

- Goldani, G., & Farsiyan, M. (2018). Impact of student-centered learning on shyness in foreign language classroom. *Language Related Research*, 9(4), 167-203.
- Hand, K. (2000). Style is a tool for students, too. *Educational Leadership*, 48(2), 131-149.
- Honey, P., & Mumford, A. (2006). *The manuals of learning styles*. Peter Honey Press.
- Humaidah, M. Z. (2021). Comparative study of learning styles between high and low achievers in English listening skill. *Jurnal of Penelitian*, 16(5), 1-11.
- Khodadady, E., & Zeynali, S. (2012). Field-dependent/independent cognitive style and performance on the IELTS listening comprehension. *International Journal of Linguistics*, 4(3), 622-635.
- Kolb, D. A. (1984). Experiential learning theory and the learning style inventory: A reply to freedom and stump. *Academy of Management Review*, 6(2), 289-296.
- Kolb, D. A. (1985). *Learning style inventory and technical manual*. McBer Company.
- Liu, H. (2008). A study of the interrelationship between listening strategy use, listening proficiency levels, and learning style. *Aresels Journal*, 5, 84-104.
- Liu, H. (2020). Listening strategy use and learning style. *Rarecls*, 2(5)84-104.
- Matthews, D. (2005). An investigation of learning styles. *International Journal of Linguistics*, 3(4), 620-655.
- Messick, S. (2001). The nature of cognitive styles: problems and promise in educational practice. *Educational Psychologist*, 3(1), 99-135.
- Myers, B. (2000). *Manual: The Myers-Briggs type indicator*. Educational Testing Services.
- Neto, J. (2009). Cognitive style: An empirical research with undergraduate accounting students. *Brazilian Business Review*, 6(1), 78-99.
- Peterson, E. (2009). *Herding cats: in search of definitions of cognitive styles and learning styles*. Plenum Press.
- Polat, H. (2015). The effect of learning styles of accounting education students on their performance: a field study. *Social and Behavioral Sciences*, 17(4), 1841-1848.

- Primuriski, J., Adnan, A., & Narius, D. (2020). The analysis of students' learning style preferred by basic listening classes of English Department at Universitas Negeri Padang. *Journal of English Language Teaching*, 9(3), 531–537.
- Putri, E. (2019). The relationship between learning style and listening comprehension achievement. *Bulgarian Journal of Science and Education Policy*, 7(2), 322–333.
- Rahmatian, R., & Mehrabi, M. (2010). Investigating different learning styles among Iranian EFL learners. *Language Related Research*, 1(4), 93–107.
- Roshan, E., & Seyedrezayee, M. (2015). Investigating Iranian test-takers' cognitive and metacognitive strategy use: IELTS reading section in focus. *Middle-East Journal of Scientific Research*, 13(7), 956–962.
- Sajjadi, M., & Bagheri, M. (2018). Investigating educational culture in terms of learning style and strategy use of Iranian EFL learners in reading skill. *International Journal of Foreign Language Teaching and Research*, 8(4), 67–83
- Supriyadi, A., Mayuni, I., & Lustyantje, N. (2019). The effects of learning model and cognitive style on students' English listening skill. *International Online Journal of Education and Teaching*, 6(3), 545–561.
- Wulandari, I., Harahap, A., & Hati, G. (2019). The analysis of students' listening learning style: a study of the 5th semester students at English education study program of universitas Benkulu. *Journal of English Education and Teaching*, 3(1), 42–52.
- Zargani, G. (2010). Identification of learning style strategies which enable college students with differing personality temperament to cope with learning blocks. *International Education Journal*, 2(1), 35–69.

About the Authors

Mansoureh Sajjadi is a PhD candidate at Islamic Azad University, Shiraz Branch, Shiraz, Iran. She has published articles and participated in some conferences nationally and internationally. Presently, she is a faculty member at Islamic Azad University, Abadeh branch, Abadeh, Iran.

Mohammad Sadegh Bagheri is Presently a faculty member at Islamic Azad University, Shiraz branch, Shiraz, Iran.