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## **High-School Students' Dominant Learning Styles Preferences in Learning English: How are "Good Language Learners" Different from the Ordinary Ones?**

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### **Abstract**

Many researchers have investigated different aspects of learning styles. Nevertheless, few studies have considered interactions between the notions of learning styles and good language learners achievement. The present study aimed at exploring dominant learning style preferences by senior high-school students and comparing their preferences with those by good language learners. To this goal, the Index of Learning Style (ILS) was administered. A sample consisting of 1307 senior high-school Iranian students (711 males and 596 females) was randomly picked up from among a population of 3310 students, who could potentially participate in the study. In terms of the participants achievement scores, 343 top students were arbitrarily categorized as good language learners and the remaining 964 as the average language learners. The results of the (ILS) showed that most of the participants preferred **reflective**, **auding**, **visual**, and **sequential** learning styles. A two-way ANOVA test revealed that the difference between the participants mean scores was due to both their genders and Visual/Verbal and Sequential/Global preferences. Findings about the relationship between learning styles and the participants achievement scores indicated that except for the **understanding** dimension, there was no significant relationship between the other three dimensions and the participants achievement scores. Moreover, the Chi-square statistic indicated a significant difference between the learning style preferences by senior high-school good language learners and those preferred by the average ones.

**Keywords:** learning styles, good language learners, EFL high-school students, dominant learning style

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### **Introduction**

In the early 1970s, researchers started to look at what learners brought with them to the classroom, and the actions they took in order to make their learning effective. Although the idea of individualized "learning styles" originated in the 1970s, it has gained popularity in recent years (Sprengr, 2003) and has been the focus of a number of L2 studies (for example, Reid, 1987; Kolb, 1984; Peacock, 2001; Celce-Murcia, 2001; & Brown 2007). Therefore, it seems that the most important research effort and educational improvement, in recent years, is the shift from an emphasis on the language teaching methodology to language learners and variables that influence language learning.

On the other hand, the rise of research on individual differences has brought forth new perceptions of the nature of learner differences. Many researchers have attempted to define different aspects of individual differences in the learning process. These researchers have centered much on such fundamental questions as *What makes a "good language learner ? and Why do some students achieve proficiency more efficiently and easily than others?* One of the reasons is that there are considerable individual differences in language learning in terms of gender, age, social status, motivation, attitude, aptitude, and culture. What works for one learner might not work for another. There is the fact that students take in and comprehend information in different manners. Some prefer to learn individually, whereas others prefer to interact with their peers. Some enjoy listening to lectures, while others like to do more experiments. It is widely believed by numerous researchers (for example, Kolb, 1984; Reid, 1987; & Celce-Murcia, 2001) that the different ways of how a learner takes in and processes information are collectively referred to as learning styles or learning preferences.

### **Statement of the Problem**

There is little doubt that teaching English as a foreign language in our country has not been successful. Much of the problem may be attributed to both teachers and students' ignorance about their learning style preferences, while the notion of learning styles is one of the most influential factors in the process of learning a foreign language.

As Boström (2011) has emphasized, teaching according to learners preferences is a principal part of every teaching course. That is why the researchers in this study have attempted to investigate dominant learning style preferences employed by senior high-school Iranian students and have tried to compare ordinary language learners with the so-called good language learners with regard to the type of learning styles each group employ in the process of language learning.

### **Research Questions**

To investigate the problem identified, the researchers formulated the following research questions:

- Q1.** What are senior high-school Iranian students most dominant learning style preferences in learning English?
- Q2.** Is there any significant relationship between senior high-school Iranian students learning style preferences and their achievement in learning English?
- Q3.** Is there any significant difference between senior high-school males and females learning style preferences and their achievement in learning English?
- Q4.** Is there any significant difference between learning style preferences of senior high-school good language learners and the majority of the students?

### **Research Hypotheses**

- H01.** No dominant learning style preferences may be identified among senior high-school Iranian students.
- H02.** There is no significant relationship between senior high-school Iranian students learning style preferences and their achievement in learning English.
- H03.** There is no significant difference between senior high-school males and females learning style preferences and their achievement in learning English.
- H04.** There is no significant difference between learning style preferences of senior high-school good language learners and the

majority of the students.

### **Literature Review**

#### **The Notion of “Learning Styles”**

The notion of learning style is mainly based on the concept that individuals learn in different ways, and there is now an extensive bulk of research on the topic. In the earlier days of research on styles, the term *cognitive style* was used rather than *learning style* (Swanson, 1995). Kirby (1979) indicated that the term *learning style* came into use when researchers began looking for ways to combine course presentation and materials to match the needs of each learner.

There have been a number of definitions of learning styles. Brown (2007) defined style as a permanent propensity within an individual that is directly related to the individual's personality. It includes how they think about learning and how they experience learning process. Celce-Murcia (2001) believed that the way individuals perceive, interact with, and answer to their environment is a consistent tendency that indicates their styles. Wong and Nunan (2011) considered it as an individual's normal, habitual, and preferred way of absorbing, processing, and preserving new information and skills. Erton (2010) defined learning styles as individual's characteristics and preferred ways of gathering, interpreting, organizing, and thinking about information.

Reid (1995) defines learning styles as individual natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills. She also showed that all learners have individual characters regarding to learning processes. For example, some learners may respond to hands-on activities, others may favor visual presentations. It is clear that people learn differently and these differences are common in learning ESL/EFL settings. Reid (ibid.) also proposed two major hypotheses about learning styles: 1. All students have their own learning styles and learning strengths and weaknesses. 2. A mismatch between teaching and learning styles causes learning failure, frustration and demotivation.

Felder (1996) argues that some learners are visual and prefer to learn by charts, whereas others like to learn by spoken explanations, and are called auditory learners. In addition, some students like to learn in group, while others prefer to learn individually.

Oxford (2003) stated that Language learning styles and strategies are among the main factors that help determine how and how well our students learn a second or foreign language (p. 1). She also argued that learning styles are not dichotomous and they overlap each other to some extent. The common point of most of these definitions is that learning styles are individual preferences in a learning situation that are characterized by their relative consistency.

### **Learning style Models**

There is no consensus on the numbers or varieties of learning styles. That is why an enormous numbers of learning style models can be found in the literature on this subject. Some of the most popular models are introduced:

The first learning style model was proposed by Reid (1987). She proposed Perceptual learning style preference. According to her, Perceptual learning style preference refers to the perceptual channels through which students like to learn.

Fleming (2001) proposed the VARK model. He defined learning style as an individual's characteristics and preferred ways of gathering, organizing, and thinking about information. VARK (Visual, Aural, Read/Write, and Kinesthetic) is in the category of instructional preferences because it deals with perceptual modes. (p. 25).

This study is based on Felder and Silverman (1988) learning style model that is one of the most popular learning style models in the area of information processing, Richard Felder and Linda Silverman formulated this learning style model in 1988. The 1993 version is a four-dimension learning style model that assesses preferences on one category or the other in each of the following four dimensions: 1- Active/Reflective, 2- Sensing/Intuitive, 3- Visual/Verbal, and 4- Sequential/Global. Felder (1993) characterizes learners in terms of learning preferences as follows:

سensing /intuitive learners: sensors tend to be concrete and methodical, intuitors to be abstract and imaginative. Sensors like facts, data, and experimentations; intuitors are bored by detail and welcome complications.

Visual/verbal learners: visual learners prefer the information to be presented visually. Verbal learners prefer spoken or written explanations to visual presentations.

Active/reflective learners: active learners have a natural tendency toward active experimentation while reflective learners toward reflective observation.

Sequential/global learners: Sequential learners absorb information and acquire understanding of material in small-connected chunks. Global learners take in information in seemingly unconnected fragments and achieve understanding in large holistic leaps.

### **Research on learning styles**

Undoubtedly, Reid has conducted the first and most significant study on learning style preferences. She asked 1388 students to identify their perceptual learning style preferences using Perceptual Learning Style Preference Questionnaire (PLSPQ). The results of her study showed that ESL students strongly preferred kinesthetic and tactile learning styles. With regard to the effect of sex, males preferred visual and tactile learning more significantly than females.

Hyland (1993) replicated the study done by Reid (1987) on the learning style preferences of ESL learners in the United States. His study confirmed Reid's findings that Japanese learners appear to have no strong learning style preferences, a fact which might help explain the language learning difficulties experienced by many Japanese students.

Riazi and Riasati (2007) carried out a study in Shiraz EFL institutes. The study investigated the language learning style preferences of Iranian EFL learners, and the degree of teachers awareness of them. A 13-item language learning preference questionnaire adopted from Brindley (1984) was employed to elicit

information for the study. Results showed the learning preferences of students in different areas. Results also indicated that teachers are aware of their students learning preferences in some cases, but unaware in some others. Therefore, they concluded that there needed to be a closer cooperation between teachers and students in some instances.

In another study, Riazi and Mansoorian (2008) investigated the preferred learning styles of Iranian male and female EFL students using the translated version of Reid's Perceptual Learning Style Preference Questionnaire (1987) at some institutes in different cities. Findings of their study indicated that the auditory learning style, the visual learning style, the tactile learning style, and the kinesthetic learning style were the major styles among language learners.

Aliakbari and Soltani (n.d.) investigated the learning style preferences of Iranian EFL learners majoring in English with two different cultural backgrounds. The web-based version of (ILS) was administered on 260 EFL learners, 160 Kurdish and 100 Persian native speakers, who studied English at Ilam University and Ilam Azad University, Iran. Findings showed certain differences between learning style preferences of the participants. Kurdish students appeared to have more preference for Sensing, Sequential, and Reflective dimensions, whereas Persian students had more preference for Active, Intuitive, Visual, Verbal, and Global dimensions. The study also indicated that both groups represented different gender-bound variations in preference for the given dimensions.

### **The Notion of “Good Language Learner”**

In her inspiring article Rubin (1975, p. 42), suggested that if we knew more about what the successful learners did, we might be able to teach these strategies to poorer learners to enhance their success record. Rubin (ibid.) considered aptitude, motivation, and opportunity as essential characteristics of good language learners who either have or can develop these characteristics.

Generally, there is no consensus on a comprehensive definition for good language learner but on their specific characteristics. Wong and Nunan (2011) asserted that Rubin (1975) has taken the lead in

studying the good language learner through classroom observations and identified seven strategies favored by them.

Rubin (1975) listed a number of strategies typical of good language learners. According to her, the good language learner is a willing and accurate guesser, has a strong drive to communicate, is uninhibited, attends to form, practices by seeking out conversation, monitors his or her own speech and the speech of others, and attends to meaning (P. 45). In general, the good language learner is someone who actively involves him/herself in the language learning process, either right from the beginning or later; he also finds ways to overcome obstacles, whether linguistic, affective or environmental; he monitors his own performance; he studies, practices, and involves himself in communication.

Wong and Nunan (2011) claimed that Good language learners spent significantly more time practicing English out of class and enjoyed learning English significantly more than ordinary learners. They seem, Wong and Nunan argue, to be able to develop active learning strategies for themselves while poor learners need help. Good language learners see language as a tool for communication rather than as a subject on the curriculum to be mastered for the purposes of examination success. They enjoy learning English, and display a degree of autonomy in terms of the strategy choices they make and the amount of time they are prepared to practice their English outside of the classroom.

According to the Iranian educational system, the students' final achievement scores at the end of the educational year are regarded not only as the final determining factor for pass or fail decisions, but also as the major factor on the basis of which educators decide whether the learner could continue with studying the same high-school major or they need to make a shift to another lower major, which is regarded to be less demanding for those who have scored low marks in the final. Due to the fact that such scores are considered as the most important educational means, which might occasionally change the course of educational life of some pupils, we decided to base our study on that same criterion, arbitrarily grouping our participants into two major categories: Those who had scored around the average<sup>~</sup> that is, below 17 out of a maximum of 20<sup>~</sup> were categorized as the



ordinary group , and those who had scored higher than the average, including the top ones, as the good language learners group .

Thus, it is obvious that our categorization and definition of so-called good language learners might seem to be different from what Rubin or other scholars had in mind when they discussed such learners, who, according to them, should have certain characteristics other than scoring high marks in the exams.

## **Methodology**

### **Participants**

The researchers conducted the study with the participations of third grade high-school EFL students living and studying in Sabzevar and five towns around it, Khorasan Razavi, Iran. The sample of the study, containing 711 males and 596 females who wanted to accomplish their diploma degrees, came from three different majors: 374, 612 and 321 students of humanities, mathematics and experimental sciences, respectively, was randomly selected from among senior high-school students studying in Sabzevar, Davarzan, Sheshtamad, Jovein, Joghatai, Khoshaab and suburban villages. All of the students had to take part in the Final Achievement English Examination (FAEE) which is officially administered annually. In this study, senior high-school good language learner is defined in terms of their scores obtained in their (FAEE). Therefore, by good language learners we mean those students whose English scores (that is, their FAEE) has turned out to be 17 (out of 20) or above that. On such an arbitrary basis, the researchers identified 343 students as good language learners and the remaining 964 students were labeled as ordinary language learners .

### **Instruments**

1- The first instrument used in this study was Felder-Soloman s (1997) Index of Learning Style (ILS), and you can few examples of it in Appendix A. The ILS consists of four scales, each with 11 items: sensing-intuitive, visual-verbal, active-reflective, and sequential-global. Felder and Spurlin (2005) summarize the four scales as follows:

•*Sensing* (concrete, practical, oriented toward facts and procedures) or *intuitive* (conceptual, innovative, oriented toward theories and underlying meanings);

•*Visual* (prefer visual representations of presented material, such as pictures, diagrams, and flow charts) or *verbal* (prefer written and spoken explanations);

•*Active* (learn by trying things out, enjoy working in groups) or *reflective* (learn by thinking things through, prefer working alone or with one or two familiar partners);

•*Sequential* (linear thinking process, learn in incremental steps) or *global* (holistic thinking process, learn in large leaps).

The questionnaire has eleven constructive questions designed for each dimension. Each dimension is a continuum consisting of two ends which comprise two learning styles, one learning styles at either end (e.g., the processing or active-reflective dimension).



The rationale behind adopting this questionnaire was: first, the reported reliability and validity of the Index is satisfactory (for further information, see Felder & Spurlin, 2005; Van Zwanenberg, Wilkinson, & Anderson, 2000; Livesay, Dee, Numan, & Hites, 2002; & Zywno, 2003). Second, it is one of the most widely used learning style instruments for determining the learning style preferences.

2- The second instrument was the Final Achievement English Examination (FAEE). In Iran, all the students studied in their last year of high school have to take part in the Final Achievement English Examination (FAEE) to attain their diploma degree which is annually administrated among all third grade students of high school. This test is constructed and administrated officially by the Iranian ministry of education, officially assessed ,anonymously evaluated and mainly is based on assessing vocabulary and reading comprehension skills. Less attention is paid to other skills like speaking, listening, and

writing respectively.

3- The SPSS software program (version 19) was implemented to interpret the data.

### **Procedures**

To conduct the study, the participants were given the (ISL) questionnaire. The papers were collected and scored by the researchers. The results were kept until the participants attended to their final achievement English examination (FAEE) in Khordad 1393/June 2014. After that the participants took the final exam, and then the researchers obtained their scores from the officials in the General Office of Education and using the SPSS software correlated the achievement scores with those obtained from the administration of the (ILS) questionnaire on style preferences.

### **Data Collection and Analysis**

Having collected the required data, the researchers subjected the data to analysis by employing the SPSS software to find out about the degree of correlations between the participants final achievement scores and the scores they had obtained from the (ILS) questionnaire.

## **Results**

With respect to the proposed research questions and the related null hypotheses, the findings of the study have been presented in the following sections.

### **Results concerning the first research question**

The most dominant learning style preferences by the participants have been identified by obtaining frequency and valid percent for the four dimensions and shown in Table 1.

Table1

*Comparing Frequency and Valid Percent of Learning Style Preferences of the Third- Grade Senior High-School Iranian Students in Learning English in Different Cities in 1392-1393 School Year/ (2013-2014)*

Learning Styles	Processing				Perception				Input				Understanding			
	Active		Reflective		Sensing		Intuitive		Visual		Verbal		Sequential		Global	
Cities	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Sabzevar 697	290	41.6	407	58.4	501	71.9	196	28.1	512	73.5	185	26.5	406	58.2	291	41.8
Davarzan 57	31	54.4	26	45.6	41	71.9	16	28.1	41	71.9	16	28.1	34	59.6	23	40.4
Sheshtamad 118	57	48.3	61	51.7	94	79.7	24	20.3	88	74.6	30	25.4	71	60.2	47	39.8
Jovein 148	55	43.9	83	56.1	112	75.7	36	24.3	97	65.5	51	34.5	94	63.5	54	36.5
Joghatai 136	69	50.7	67	49.3	106	77.9	30	22.1	95	69.9	41	30.1	93	68.4	43	31.6
Khoshaab 151	74	49	77	51	116	76.8	35	23.2	104	68.9	47	31.1	96	63.6	55	36.4
Mean of the cities		47.98		52.01		75.65		24.35		70.71		29.28		62.25		37.75

\*\* shows dominant learning style preferences by students in different towns

1- In the processing or (Active/Reflective) dimension, the dominant learning style preference of 52% of the students in cities of Sabzevar, Sheshtamad, Jovein and Khoshaab is Reflective while about 48% is Active, and in cities of Davarzan and Joghatai 52.5% of students are Active while about 47.5% are Reflective.

2- In the Perception or (Sensing / Intuitive) dimension, most of the students (about 75 %) in all the cities are Sensing.

3- In the input or (Visual/ Verbal) dimension, most of the students (about 71 %) in all the cities are Visual.

4- In the Understanding or (Sequential / Global) dimension, most of the students (about 61 %) in all the cities are Sequential.

### Results related to the second research question

To investigate the second research question, the collected data extracted from (ILS) and (FAEE) was analyzed by the SPSS

software program to evaluate the Pearson correlation. The findings have been shown in Table 2.

Table2

*Pearson Correlation between Learning Style Preferences and Students' Scores*

Score	Active	Processing		Perception		Input		Understanding	
		Reflective	Sensin	Intuitive	Visual	Verbal	Sequentia	Global	
Pearson correlation	-.054		-.054	.054	.051	-.051		-.077**	.077**
Sig. (2 tailed)	.051		.053	.053	.064	.064		.005	.005
N	1307		1307		1307			1307	

\*\* . Correlation is significant at 0.01 level of significance (2-tailed).

As Table 2 shows, the most important point to consider is the amount of Sigs. obtained for the four dimensions that are .051, .053, .064, and .005 for the processing, perception, input and understanding dimensions, respectively. Since the amount of Sigs. of the first three dimensions are greater than .05 and the amount of Sig for the fourth dimension is smaller than .05, hence, there is no significant relationship between the first three learning style preferences (i.e. the processing, perception, input dimensions) and participants achievement scores, but there is a significant relationship between the fourth dimension (i.e., understanding dimension) and participants achievement scores in learning English.

### **Results related to the third research question**

To examine the third research question, a two-way ANOVA test was conducted to explore probable significant difference between senior high-school males and females learning style preferences and their achievement scores in learning English. The results for the third null hypothesis are as follows:

*Results concerning the processing dimension:*

Table 3

*Tests of Between-Subjects Effects**Dependent Variable: Scores*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2094.840 a	3	698.280	27.941	.000	.060
Intercept	194244.905	1	194244.905	7772.478	.000	.856
Act/Ref Preferences	62.552	1	62.552	2.503	.114	.002
Gender	1991.909	1	1991.909	79.704	.000	.058
Act/Ref Preferences* gender	37.443	1	37.443	1.498	.221	.001
Error	32563.759	1303	24.991			
Total	230111.000	1307				
Corrected Total	34658.598	1306				

a. R Squared = .060 (Adjusted R Squared = .058)

*Results concerning the perception dimension:*

Table 4

*Tests of Between-Subjects Effects**Dependent Variable: Scores*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2124.362 <sup>a</sup>	3	708.121	28.360	.000	.061
Intercept	153749.368	1	153749.368	6157.680	.000	.825
Sen/Int Preferences	136.833	1	136.833	5.480	.019	.004
Gender	1528.946	1	1528.946	61.234	.000	.045
Sen/Int Preferences* gender	.017	1	.017	.001	.979	.000
Error	32534.236	1303	24.969			
Total	230111.000	1307				
Corrected Total	34658.598	1306				

a. R Squared = .061 (Adjusted R Squared = .059)

*Results concerning the input dimension*

Table 5

*Tests of Between-Subjects Effects**Dependent Variable: Scores*

	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2167.098a	3	722.366	28.969	.000	.063
Intercept	156437.552	1	156437.552	6273.583	.000	.828
Vis/Ver Preferences	165.684	1	165.684	6.644	.010	.005
Gender	1534.097	1	1534.097	61.522	.000	.045
Vis/Ver Preferences* gender	18.856	1	18.856	.756	.385	.001
Error	32491.500	1303	24.936			
Total	230111.000	1307				
Corrected Total	34658.598	1306				

a. R Squared = .063 (Adjusted R Squared = .060)

*Results concerning the Understanding dimension*

Table 6

*Tests of Between-Subjects Effects (Dependent Variable: Scores)*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2241.510a	3	747.170	30.032	.000	.065
Intercept	190947.073	1	190947.073	7675.089	.000	.855
Seq/Glo Preferences	169.404	1	169.404	6.809	.009	.005
Gender	1730.280	1	1730.280	69.548	.000	.051
Seq/Glo Preferences * gender	68.055	1	68.055	2.735	.098	.002
Error	32417.088	1303	24.879			
Total	230111.000	1307				
Corrected Total	34658.598	1306				

a. R Squared = .065 (Adjusted R Squared = .063)

**Interaction effect.** As the Act/Ref Preferences \* gender line in Table 3, the Sen/Int Preferences \* gender line in Table 4, the Vis/Ver Preferences \* gender line in Table 5, and the Seq / Glo Preferences \* gender line in Table 6 show, the values of Sig. for the four dimensions are .221, .979, .385, and .098 respectively which are all greater than

.05. Therefore, the interaction effect is not significant for the four dimensions. This indicates that there is no significant difference in the influence of learning style Preferences of the four dimensions on participants' achievement scores in learning English based on gender.

**Main effect.** To determine whether there is a main effect for each learning style preferences, as the values of Sigs. next to each variables (i.e., Act/Ref and Sen/Int Preferences ) in Tables 3 and 4 show, there is not a significant main effect for Act/Ref Preferences (Sig. = .114) and for Sen/Int preferences (Sig.= .019) since it is greater than .05. But as the values of Sig. next to each variable (i.e. Vis/Ver and Seq/Glo preferences) in Tables 5 and 6 show, there is a significant main effect for Vis/Ver preferences (Sig. = .010), and for Seq/Glo preferences (Sig. = .009) since it is less than .05. Moreover, there is a significant main effect for gender in all four dimensions (Sigs. =.000). This means that in the processing and perception dimensions, the difference between participants' achievement scores is not owing to their learning styles preferences and is just due to their gender. That is, participants' achievement scores depend on just whether they are male or female. While the difference between participants' achievement scores in the Input and Understanding dimensions is owing to their both learning style preferences and gender.

**Effect size.** The effect size for (Act/Ref, Sen/Int, Vis/Ver, and Seq/Glo) Preferences and gender is provided in Tables 3 up to 6 in Partial Eta Squared column respectively. sigs are .002 for Act/Ref Preferences and .058 for gender, .004 is for Sen/Int Preferences and .045 is for gender, .005 is for Vis/Ver Preferences and .045 is for gender, .005 is for Seq/Glo Preferences and .051 is for gender. Considering Cohen's (1988) criterion, although these effects reach statistical significance, the actual differences in the mean values are very small.



### Results related to the fourth research question

A chi square test for independence indicated a significant association between the four learning style preferences and language statuses that have been shown in Table 4.7.

Table 7  
*Chi Square Test for the Four Dimensions*

		processing	Perception	Input	Understanding
language statuses	Pearson chi square	5.944	10.984	3.603	6.546
	Sig. (2-tailed)	.015	.001	.049	.011

The amounts of values of Sig for the four dimensions are .015, .001, .049 and .011 for the Processing, Perception, Input and Understanding dimensions respectively. In all of them, the amounts of Sig are smaller than (.05). Consequently, there is a significant difference between the dominant learning style preferences of Good language learners and those of the majority of students. To find out what percentage of each language statuses locate in which dichotomous learning styles, look at Table 8 below.

Table 8  
*Percentage of Participants in Language Statuses (Good Language learners Vs. Ordinary Language learners)*

Learning Styles	Processing		Perception				Input				Understanding					
	Active		Reflective		Sensing		Intuitive		Visual		Verbal		Sequential		Global	
language statuses	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Good Language learners N=343 , 26.2 %	134	39.1	209	60.9	230	67.3	112	32.7	260	75.8	83	24.2	188	54.8	155	45.2
Ordinary language learners N=964 , 73.8 %	452	46.9	512	53.1	739	76.7	225	23.3	677	70.2	287	29.8	606	62.9	358	37.1
Total=1307	586		721		970		337		937		370		794		513	

**Processing dimension.** As it can be seen in the Processing dimension, 60.9% of Good language learners are Reflective, while just 53.1% of Ordinary language learners are Reflective. Indeed, the proportion of Good language learners who are Reflective is more in comparison to the proportion of Ordinary language learners who are Reflective.

**Perception dimension.** In the Perception dimension, 67.3% of Good language learners are Sensing, while 76.7% of Ordinary Language learners are Sensing. Indeed, the proportion of Good language learners who are Sensing is less in comparison to the

proportion of Ordinary language learners who are Intuitive.

***Input dimension.*** In the Input dimension, 75.8% of Good language learners are Visual while 70.2% of Ordinary language learners are Visual. Indeed, the proportion of Good language learners who are Visual is more in comparison to the proportion of Ordinary language learners who are Visual.

***Understanding dimension.*** In the Understanding dimension, 54.8% of Good language learners are Sequential while 62.9% of Ordinary language learners are Sequential. Indeed, the proportion of Good language learners who are Sequential is less in comparison to the proportion of Ordinary language learners who are Sequential.

## Discussion

### Interpretation of the first null hypothesis

With respect to the descriptive statistics, the findings explicitly show that dominant learning style preferences exist among the participants in the four dimensions. As it was previously mentioned, Iranian students appeared to be, Reflective, Sensing, Visual, and Sequential. That is, as they are reflective, they prefer to think about the material first and answer with reflective observation; they benefit from reviewing what has been read and thinking of possible questions and applications and writing summaries. As they are sensing, they tend to be concrete, methodological; and like facts, data, and experimentation. As they are visual, they prefer the information to be presented visually; they like finding and drawing diagrams and charts, these students usually enjoy reading and prefer to see the words that they are learning. They also like to learn by looking at pictures and flashcards. They benefit from pictures, photos, videos, CDs. Finally, as they are sequential, they absorb information and acquire understanding of material in small-connected chunks and gain understanding in linear, logical steps. They also benefit from asking the instructor or consulting references and relating new topics to things already known to strengthen global thinking skills

### **Interpretation of the second null hypothesis**

The amounts of Sig. values are .051, .053, .064, and .005 for the Processing, Perception, Input, and Understanding dimensions respectively. Since the amount of Sig. values of the first three dimensions are greater than .05 and the amount of Sig. for the Understanding dimension is smaller than .05. Therefore, except for the understanding dimension, there is no significant relationship between the processing, perception and input dimensions and participants achievement scores in learning English.

### **Interpretation of the third null hypothesis**

The results of a two-way ANOVA test indicated that there is not statistically a significant interaction effect between the four learning style dimensions and gender; accordingly, learning styles do not have any impact on participants achievement scores whether they are male or female.

Referring to the main effect, there was not statistically a significant main effect for the Act/Ref and Sen/Int preferences. However, there was statistically a significant main effect for Vis/Ver and Seq/Glo preferences. Consequently, the difference between the mean score of participants is due to both their gender and also Vis/Ver and Seq/Glo learning style preferences.

The effect size for the four dimensions was very small.

### **Interpretation of the fourth null hypothesis**

Results of the chi square test indicated a significant difference between the learning style preferences of Good language learners and Ordinary language learners . As the outcomes in Table 8 revealed, the percent of Good Language learners who are Intuitive and Global is more in comparison to the percent of Ordinary Language learners who are Intuitive and Global .This is while, the percent of Ordinary language learners who are Sensing and Sequential (their analogous learning styles) is more in comparison to

the percent of Good Language learners who are Sensing and Sequential. Accordingly, the main difference is that the number of Good Language learners who prefer Intuitive and Global learning styles is more than the number of Ordinary Language learners who prefer Sensing and sequential learning styles.

### **Implications of the Study**

The findings of this study suggest a number of implications for the teaching environment in general, educators, text book developers, teachers, and students. As most good language learners prefer intuitive and global learning styles than sensing or sequential ones, teachers ought to be heedful enough to such a fact and attempt to promote such learning styles in their students, so that learners can achieve better results in their studying English and, finally, could attain autonomy to find their own ways in learning the language. To put it another way, teachers ought to regulate their attempts in pedagogical environments in a way so that learners subconscious knowledge of learning style preferences could be gradually transferred to their conscious sphere by explicitly being more exposed to the concept practically and raising their awareness about the crucial role that such learning strategies can play in learning English as a foreign language.

Moreover, teachers are expected to pay more attention to other significant variables such as gender differences among their students with respect to the type of learning style preferences. Teachers are also supposed to promote their students attitudes toward the English language; such a measure would certainly increase the number of those who gradually enter the category of so-called good language learners ; and, conversely, will decrease the number of those learners who are categorized under rubrics such as poor or average language learners.

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## Appendix A

### Index of learning styles<sup>1</sup>

#### DIRECTIONS:

Enter your answers to every question on the ILS scoring sheet. Please choose only one answer for each question. If both a and b seem to apply to you, choose the one that applies more frequently.

1. I understand something better after
  - a) try it out.
  - b) think it through.
2. I would rather be considered
  - a) realistic.
  - b) innovative.
3. When I think about what I did yesterday, I am most likely to get
  - a) a picture.
  - b) words.
4. I tend to
  - a) understand details of a subject but may be fuzzy about its overall structure.
  - b) understand tire overall structure but may be fuzzy about details.
5. When I am learning something new, it helps me to
  - a) talk about it.
  - b) think about it.
6. If I were a teacher, I would rather teach a course
  - a) that deals with facts and real life situations.
  - b) that deals with ideas and theories.

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## Appendix B

### نسخه فارسی شاخص سبکهای یادگیری

#### شاخص سبکهای یادگیری:

این پرسشنامه به منظور سنجش سبک یادگیری شما می‌باشد. اطلاعات جمع‌آوری شده به منظور فعالیتهای پژوهشی مورد استفاده قرار می‌گیرد. در سوالات زیر تنها یکی از دو گزینه را انتخاب کنید اگر هر دو گزینه شامل حال شما می‌شود گزینه‌ای که بیشتر درباره شما صدق می‌کند را انتخاب کنید. با تشکر از همکاری شما.

\*\*\*\*\*

\*\*\*\*\*

۱) من چیزی را بهتر درک می‌کنم که

الف) آن را آزمایش کنم.  ب) درباره آن عمیقاً فکر کنم.

۲) من ترجیح می‌دهم که به عنوان یک فرد

الف) واقعگرا شناخته شوم.  ب) خلاق شناخته شوم.

۳) هنگامی که به آنچه که دیروز انجام داده‌ام فکر می‌کنم معمولاً

الف) یک تصویر به ذهنم می‌رسد.  ب) آنرا به صورت کلمات به

خاطرم می‌آورم.

۴) من عموماً

الف) جزئیات یک موضوع را درک میکنم اما درباره ساختار کلی آن دچار سردرگمی می‌شوم.

ب) ساختار کلی را به خوبی درک می‌کنم ولی در جزئیات سردرگم می‌شوم.

۵) هنگامی که موضوعی جدید را فرامی‌گیرم. (یادگیری این موضوع جدید) به من

کمک می‌کند که درباره آن الف) صحبت کنم.  ب) فکر کنم.

۶) اگر من معلم بودم ترجیح می‌دادم درسی را تدریس کنم که:

الف) با واقعیتهای مربوط به زندگی واقعی سروکار داشته باشد.

ب) با نظریه‌ها، ایده‌ها و تئوریها سروکار داشته باشد.