

## The Relationship of EFL Learners' Socio-economic Status with Their Learning Styles

Babak Huseynpur<sup>1</sup>, Masoud Yazdani Moghaddam<sup>2\*</sup>, Ghafour Rezaie<sup>3</sup>

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1. Department of English, Faculty of Humanities, Garmsar Branch, Islamic Azad University, Garmsar, Iran. E-mail: babak.elsan@gmail.com
  2. PhD, Department of English, Faculty of Humanities, Garmsar Branch, Islamic Azad University, Garmsar, Iran. E-mail: mym1300@gmail.com
  3. PhD, Department of English, Faculty of Humanities, Garmsar Branch, Islamic Azad University, Garmsar, Iran. E-mail: rezaie434@gmail.com
- \* Corresponding Author: Masoud Yazdani Moghaddam
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### **Abstract**

The present study probed the relationship between EFL learners' socioeconomic status and their learning styles. Participants in this study were 284 Iranian male students studying English as a compulsory subject matter at senior high schools in Tehran, the capital city of Iran. Data were collected through a self-developed questionnaire in which items concerning learning styles were adopted from Wintergerst and DeCapua's (1999) Learning Style Indicator questionnaire, and some items were added to obtain data concerning the students' socioeconomic status and demographic information. SPSS 18.0 was used to analyse the data. The results of Kendall Correlation test revealed that there was no meaningful relationship between students' socioeconomic status and their learning styles.

**Keywords:** learning styles, project orientation, individual activity orientation, group activity orientations, and socio-economic status.

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## I. INTRODUCTION

In the current study, the researchers probed EFL students' learning styles and socioeconomic status and any possible relationship between these two variables. Followings are brief explanations of the related literature concerning these two variables and the link between them.

### *A. Learning Styles*

Learning styles in Applied Linguistics as well as in General Education has suffered from ambiguity in conceptualization and definition. Vaseghi, Ramezani and Gholami (2012) argue that "each researcher begins his or her work by indicating the conceptual dilemma and methodological problem surrounding this concept and almost all indicate that little agreement exists about what learning styles mean or how to adequately measure it" (p. 441).

According to Reid (1995, p. viii), learning styles refer to “an individual’s natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills”. Felder and Henriques (1995) define learning styles as “the ways in which an individual characteristically acquires, retains, and retrieves information” (p. 21). Keefe (1979) asserts that learning styles are “cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (p.4). Although these definitions “vary in terms of scope and depth” (Tabanlıoğlu, 2003), they all imply the multidimensional characteristic of the learning styles. Some of the widely recognized dimensions or related concepts to learning styles include: perceptual/sensory learning styles, cognitive learning styles, personality traits, and learning strategies.

Although some of the instruments utilized in L2 have been adopted from general psychology (for instance, Kolb’s, 1984, Learning Style Inventory; and Dunn, Dunn, and Price’s, 1991, Productivity Environmental Preference Survey), this fact has not prevented second language scholars and researchers from adapting the tools to ESL/EFL field and developing second-language-specific instruments such as Reid’s (1987) Perceptual Learning Style Questionnaire, and Wintergerst and DeCapua’s (1999) Learning Styles Indicator.

**Reid’s Perceptual Learning Style Preference Questionnaire.** The earliest and the most widely used instrument for learning styles in L2 field is Reid’s (1987, 1995) Perceptual Learning Style Preference Questionnaire (DeCapua & Wintergerst, 2005; Dörnyei, 2005; Vaseghi et al., 2012). This instrument was originally developed and validated by Reid for investigating second language learners in the US. Reid (1987) conceptualized six learning styles in her instrument including Visual (refers to learning through seeing), Auditory (using listening ability in order to perceive the information), Tactile (learning through using hands), Kinesthetic (movement-oriented learning), Group Learning (learning with others), and Individual learning (learning in isolation).

**Learning Style Indicator.** Although some researchers have reported a significant reliability of Reid’s (1987) Perceptual Learning Style Preference Questionnaire (PLSPQ), for instance, in Cheng’s (1997) pilot study, the reliability of Chinese PLSPQ was 0.81 using Cronbach’s alpha, Wintergerst, DeCapua, and Itzen (2001) reported on a series of validation studies of the PLSPQ that involved confirmatory factor analysis and subsequent interviews including direct and open-ended questions. The researchers found that some items in the questionnaire were not clearly measuring the learning styles that they intended to measure, and the outcomes of the PLSPQ and the following oral interviews contradicted each other on several points. Finally they revealed that the internal consistency reliability raised when they omitted 6 items and grouped the remaining items under three scales: (1) Group Activity Orientation (a learner’s preference of learning best when he or she works in a pair or in a group), (2) Individual Activity Orientation, which refers to a student’s preference to learn on his or her own, and (3) Project Orientation, incorporating tactile, visual, and kinesthetic items. The outcome of this study was the creation of the Learning Style Indicator (Wintergerst and DeCapua, 1999).

### *B. Socioeconomic Status*

Socioeconomic status is one of the factors that should be taken into researchers' consideration when they deal with researches in educational fields especially in Second/ Foreign Language Learning which has proved to be affected by socio-cultural factors. According to 'U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics' – hereinafter USDE- (2012) socio-economic status is "one's access to financial, social, cultural, and human capital resources" (p. 30). The most important variables of SES are: parents' income, parents' educational level, and parents' occupational prestige (Akram & Ghani, 2013; Duncan, Featherman, & Duncan, 1972; Hauser, 1994; USDE, 2012).

Higher family income may increase the students' access to resources and may result in better educational achievement. Parents with higher education level can also increase the expectation of them from their children (Davis-Kean, 2005), or higher educated parents are more aware how to follow their children's progress at school. "More prestigious jobs may help parents develop connections with others in high positions within a community and draw on those connections for information and support for navigating the educational system" (Horvat, Weininger, & Lareau; cited in Dickinson & Adelson, 2014). The vicinity the students come from (neighbourhood SES) and the school they attend (school SES) which provides resources such as inspiring neighbours, facilities like libraries, safe and quiet area, and higher level teachers are also important in determining students' SES (USDE, 2012).

### *C. The Association of SES with Language Learning Styles*

Some findings have indicated that lower class students are more collaborative and tend to work in groups because "these students have often learned from an early age to rely on their communities, friends, and family and have always also helped and been helped by others"; middle class students, on the other hand, are more competitive and prefer to do individually at schools (Slavin, 2006, p. 102). Therefore, students' SES may have relationship with Reid's (1984, and 1987) social variables of language learning style preferences (individual vs. group learning). By considering these issues, it can be hypothesized that those students who are from low SES may indicate preference to group learning style more than middle class students; in contrary, middle class students may prefer individual learning more than their low SES peers.

There is almost nothing done to explore the relationship between SES and learning styles except a few numbers of studies. For instance, Quagliata reports that students from low SES families are the largest population of the students who are at risk of abandoning high school. Many of these dropouts are because of the mismatch between the disadvantaged students' learning styles and the way the information is presented at school (Quagliata, 2008). Many learning style variables such as environmental factors (e.g. lighting, temperature, and sound), motivation, tactile/kinesthetic, auditory, and group learning play a key role in the academic achievement of the low SES students (Caldwell & Ginther, 1996; as cited in Quagliata, 2008).

Verma and Tiku (as cited in Akhtar, 2010) investigate learning styles of male and female high school students and found that their SES didn't have any effect on their learning styles. However Verma and Sheikh (as cited in Akhtar, 2010) found that advantaged students preferred independent and participant learning styles more than the disadvantaged students.

There was nothing done, to the researchers' knowledge, on investigating the relationship between these two variables in Iran. Therefore, considering the aforementioned theoretical and empirical shortcomings, the aim to this study was to probe the relationship between EFL learners' learning styles and their SES in Iranian context.

## II. METHODOLOGY

### A. Subjects

In this investigation 284 students participated to answer the questionnaire. All the students were studying English as a compulsory subject matter at the first grade of senior high schools in Tehran, the capital city of Iran. Purposeful sampling was used to choose the schools from 5 socioeconomically different districts in Tehran. According to the staff in research office of General Education Administration of Tehran five districts with their SES characteristics were introduced as: District 1 (High SES), District 6 (Quite High SES), District 11 (Middle SES), District 16 (Quite Middle SES), and District 19 (Low SES). The students were all male and their ages ranged from 13 to 19; however, the most frequent age was 15. Students came from three types of schools in the present study: three ordinary public schools, two semipublic schools, and four private schools.

### B. Instruments

Since the data reported in this article is adopted from Babak Huseynpur's MA thesis in which the relationships among three variables were probed, the original questionnaire included three sections: (a) socioeconomic status, (b) L2 motivation, and (c) learning styles. Here we presented information regarding instruments pertaining to learning styles and socioeconomic status.

**Instrument #1: learning styles.** The instrument for investigating EFL learners' language learning style preferences were based on DeCapua and Wintergerst's (2005; also Wintergerst & DeCapua, 1999) Learning Styles Indicator (LSI) questionnaire. Statements have been originally drawn from Reid (1984) by Wintergerst & DeCapua (1999). The original questionnaire had 23 items pertaining to three learning styles dimensions namely: Project orientation (PO), Group activity orientation (GAO), and Individual activity orientation (IAO). These dimensions of learning styles were developed by Wintergerst & DeCapua (1999) through regrouping Reid's (1984, 1987) PLSPQ items of four perceptual learning styles (auditory, visual, hands-on, and kinaesthetic) and two social styles (group learning and individual learning).

The reliability and validity of the original instrument were several times confirmed and reported in several studies such as Wintergerst, DeCapua, and Itzen (2001), Wintergerst,

DeCapua, and Verna (2003), and DeCapua and Wintergerst (2005). Investigating reliability and validity of the LSI and PLSPQ, Nejati and Borzabadi Farahani (2008) reported reliability of the whole LSI as 0.76 and its construct validity as 0.085 which according to the authors were acceptable.

In the current study the items for three learning styles dimensions discussed above were reduced to four items per dimension. The statements were translated into Farsi and the translation and the original English statements were given to two expert translators of English to Farsi both of whom confirmed the accuracy of the translation based on the meaning and discourse in the target as well as the original languages. In the original Likert scale was converted from four-point scale to six-point Likert scale to make up for prospective decrease of reliability and validity of our questionnaire due to decrease in item numbers of subcategories. Another rationale behind employing six-point Likert scale instead of the four-point one was providing harmony with 6-point rating scales or Likert scales of the items of Motivation in the questionnaire developed for the thesis.

**Instrument #2: socioeconomic status.** In the present study we categorized the sample into five socioeconomic groups: low, quite middle, middle, quite high, and high. Then a purposeful sampling was taken to make sure that we have participants from all social classes; to do so we attended the schools located in district with different social classes as well as schools of different types (state, semi-state, and private schools). According to US Department of Education (2012), “it is likely that school and neighbourhood SES measures would correlate highly” (p. 21). Besides, it is a rule of Education Administration in Iran to oblige the students to enrol in schools that are at the same vicinity where their homes are. Moreover, to measure the learners’ socio-economic status we added four items to the questionnaire in order to measure three scales of SES which are family income (one item), parents’ educational status (two items), and neighbour’s SES (one item).

**Pilot test.** After preparing the instruments concerning motivation, learning styles, SES and demographic information, we unified them as a single questionnaire and prepared the initial version of the questionnaire for pilot test. The newly developed test was piloted among 50 students similar to the sample of the main study. Then SPSS 18 was run to calculate the reliability of the variables. The results showed that all the variables had acceptable Cronbach's Alpha reliability. L2 learning experience (as one of the motivational factors) had the highest reliability (0.970) and individual learning orientation had the lowest one (0.708). The reliability indices are displayed in table 1.

**Table 1- Pilot Test Reliability Statistics.**

	Cronbach's Alpha	N of Items
Project	.859	4
Group	.814	4
Individual	.708	4
Total Learning Style	.893	12

**Cronbach’s alpha reliability indices of the final study.** Table 2 displays the Cronbach’s alpha reliability indices for the motivation and learning styles and the two questionnaires. Considering the low number of items in each section, the reliability indices are acceptable.

**Table 2 - Reliability Statistics**

	Cronbach's Alpha	N of Items
Project	.685	4
Group	.746	4
Individual	.569	4
Total Learning Style	.713	12

**Construct validity of the final instrument.** A factor analysis through varimax rotation is carried out to underlying construct of the components of motivation and learning styles. The assumptions of sampling adequacy and lack of multicollinearity were met. As displayed in Table 3 the KMO index of .85 was higher than the criterion of 0.60. Thus it can be concluded that the present sample size was adequate for the factor analysis.

**Table 3 - KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	979.763
	df	28
	Sig.	.000

The correlation matrix used to probe the underlying structure of the components of the two questionnaires should not suffer from multi-collinearity – too high correlations among all variables. The Bartlett’s chi-square of 979.76 was significant ( $P < .05$ ). Thus it can be concluded that the correlation matrix was appropriate for extracting the factors.

The SPSS extracted two factors which accounted for 63.87 percent of the total variance.

**Table 4 - Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.960	49.497	49.497	3.960	49.497	49.497	3.641	45.507	45.507
2	1.150	14.377	63.874	1.150	14.377	63.874	1.469	18.367	63.874
3	.896	11.204	75.078						
4	.638	7.973	83.051						
5	.430	5.369	88.420						
6	.389	4.857	93.277						
7	.325	4.069	97.346						
8	.212	2.654	100.000						

And finally as displayed in Table 5 the five components of the motivation questionnaire have loaded on the first factor which can be labeled as “motivation” factor. The three components of the learning styles also loaded on the second factor which can be named the “learning style” factor although it should be noted that the individual and project orientations partly loaded on the first factor.

**Table 5 - Rotated Component Matrix**

	Component	
	1	2
L2LearningEXP	.857	
Intended Effort	.856	
IdealL2Self	.812	
Integrativeness	.809	
OughttoL2Self	.651	
Individual	.434	.424
Group		.854
Project	.457	.667

*C. Procedure*

After getting the permission from General Education Administration of Tehran to conduct the research at schools, we approached the local Education Departments of five Districts in Tehran, namely District 1 (High SES), District 6 (Quite High SES), District 11 (Middle SES), District 16 (Quite Middle SES), and District 19 (Low SES). We received a written permission from each local Department to attend schools under their supervision. In local Departments of Education, with explaining the research objectives, the staff in charge of senior high school issues provided us the list of schools and evaluated them against the criterion sampling of the study. Once the schools were chosen, we approached the principals and/or assistants at schools. After showing the permission letters, the school principal or assistant personally approached the classes alongside with the researchers and discussed the issue with class teachers. We attended the classes in person and conducted the research in attendance of school teachers.

First of all, we introduced ourselves to the students and talked about the importance and aims of the research. We notified them that the questionnaires they are to fill out are not tests; therefore, there is no right or wrong answers, they only would express their ideas through the questionnaires. The students were asked to raise their hands and ask any question concerning the questionnaires. After all the students did the questionnaires we asked them to check any missed items and answer them. Then we collected the sheets and appreciated the students and the teachers. We again approached the school staff to ask some questions about the SES of the majority of the students. We also thanked the school staff and then we left the schools.

*D. Data Analysis*

All the questionnaires and its items were computer-coded and the Statistical Package for Social Sciences (SPSS) 18.0 was used for analyzing the data. The main statistical procedure applied will be correlation-based analyses. Because of non-normal distribution (i.e. the ratios of skewness and kurtosis over their standard errors were higher than +/- 1.96) the non-parametric tests of Kendall correlations were run to investigate the research questions posed in the present study.

**III. RESULTS**

This study aimed at investigating the relationships between EFL students' socio-economic status and L2 motivation. We hypothesized the research as:

H<sub>0</sub>: there is not any significant relationship between Iranian EFL learners' SES and motivational characteristics.

*A. Demographic data*

Although all the respondents were in first grade of senior high schools, their ages ranged from 13 to 19 with 15 as the most frequent age stated by the students. Figure 4.1 demonstrates the frequency of the respondents' ages.

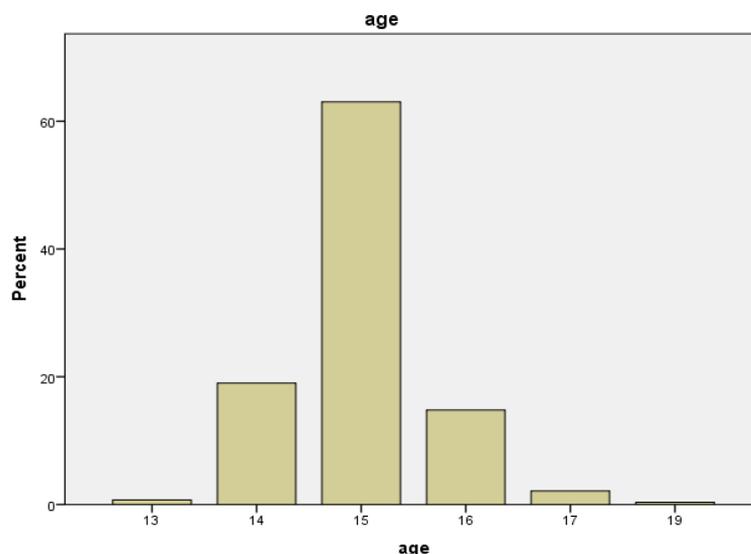


Figure 1- Percentage and range of respondents' age

*B. Findings*

Based on the results displayed in Table 6 it can be concluded that the present data did not enjoy a normal distribution. The ratios of skewness and kurtosis over their standard errors were higher than +/- 1.96. That is why the non-parametric test of Kendall correlations was run to probe the research questions posed in this study.

**Table 6 - Descriptive Statistics; Testing Normality Assumption**

SES		N	Skewness			Kurtosis		
		Statistic	Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
Low	ProjectOr	69	-.526	.289	-1.82	-.240	.570	-0.42
	GroupOr	69	-.201	.289	-0.70	-1.088	.570	-1.91
	IndividualOr	69	.095	.289	0.33	-.783	.570	-1.37
	learningstyle	69	-.299	.289	-1.03	-.051	.570	-0.09
Quite Middle	ProjectOr	50	-.840	.337	<b>-2.49</b>	.248	.662	0.37
	GroupOr	50	-.676	.337	<b>-2.01</b>	-.299	.662	-0.45
	IndividualOr	50	-.308	.337	-0.91	.066	.662	0.10
	learningstyle	50	-.553	.337	-1.64	.106	.662	0.16
Middle	ProjectOr	64	-.789	.299	<b>-2.64</b>	.716	.590	1.21
	GroupOr	64	-.204	.299	-0.68	-.891	.590	-1.51
	IndividualOr	64	-.067	.299	-0.22	-.155	.590	-0.26
	learningstyle	64	-.504	.299	-1.69	.779	.590	1.32
Quite high	ProjectOr	74	-.171	.279	-0.61	-.433	.552	-0.78
	GroupOr	74	-.191	.279	-0.68	-.790	.552	-1.43
	IndividualOr	74	-.138	.279	-0.49	-.616	.552	-1.12
	learningstyle	74	-.040	.279	-0.14	-.416	.552	-0.75
High	ProjectOr	27	-.040	.448	-0.09	-.540	.872	-0.62
	GroupOr	27	-.287	.448	-0.64	-.952	.872	-1.09
	IndividualOr	27	-.151	.448	-0.34	-.167	.872	-0.19
	learningstyle	27	-.122	.448	-0.27	-.899	.872	-1.03

**Research Question.** Is there any relationship between EFL students’ socio-economic status and their language learning style preferences?

The results of the Kendall correlations indicated that father’s and mother’s education levels did not show any relationships with the language learning style and its three components except for the mother’s education which had a weak correlation with individual orientation ( $\tau(282) = .10, p < .05$  representing a weak effect size).

**Table 7- Kendall Correlations; Language learning Style with Socioeconomic Status**

		Project	Group	Individual	Learning Style	
Kendall's tau_b	FatherEdu	Correlation Coefficient	-.011	-.007	.075	.014
		Sig. (2-tailed)	.808	.876	.087	.744
		N	284	284	284	284
	MotherEdu	Correlation Coefficient	-.036	.013	.100*	.019
		Sig. (2-tailed)	.415	.766	.023	.667
		N	284	284	284	284
	Income	Correlation Coefficient	.037	-.025	.033	.012
		Sig. (2-tailed)	.434	.591	.480	.791
		N	284	284	284	284
	School5	Correlation Coefficient	-.074	-.080	.054	-.066
		Sig. (2-tailed)	.098	.075	.228	.138
		N	284	284	284	284

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

The family income level and school types also had non-significant relationships with language learning style and its components. Thus the null-hypothesis as there was not any significant correlation between EFL students' socio-economic status and their language learning style preferences was supported.

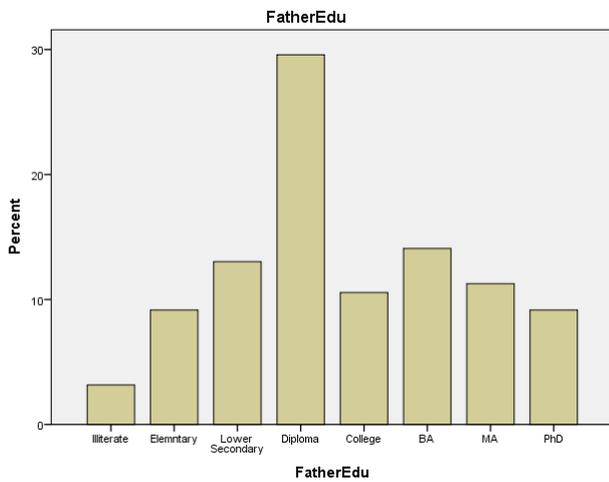


Figure 2- Fathers' educational attainment frequency

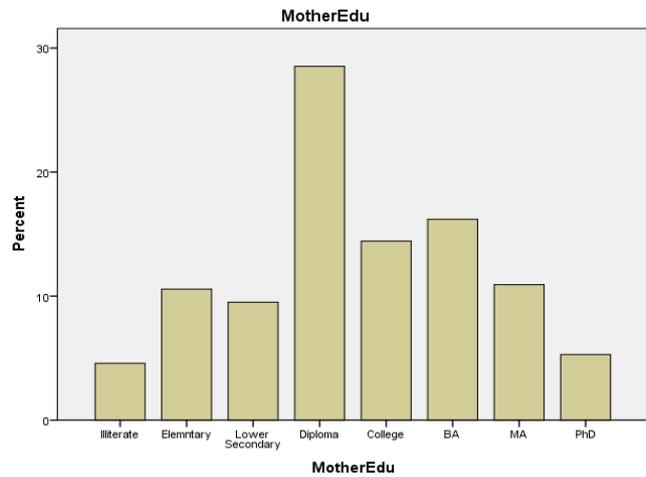


Figure 3- Mothers' educational attainment frequency

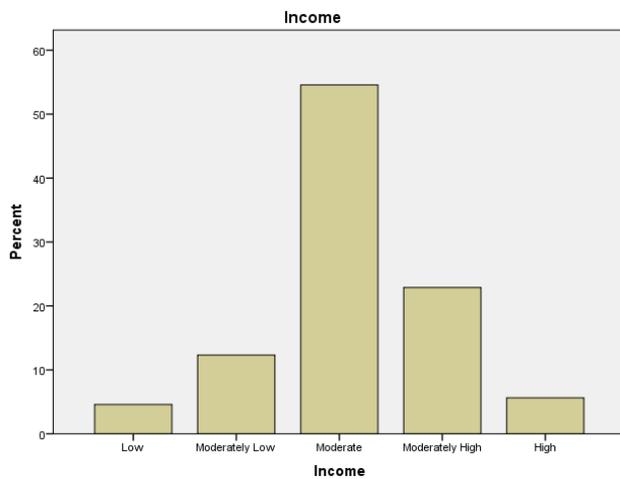


Figure 4- Family income frequency.

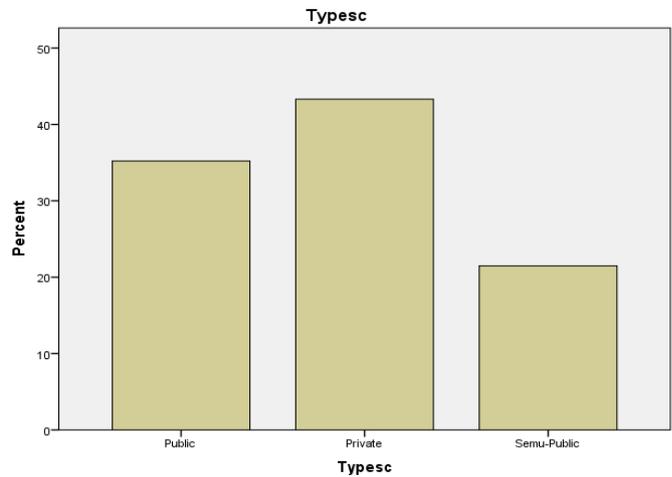


Figure 5- Frequency of school types.

#### IV. DISCUSSION

There are a very few number of studies concerning the relationship between socioeconomic status and learning styles. Lack of theoretical discussion concerning the relationship between SES and learning styles makes it impossible to compare the findings of the present study with other studies or discussions. On the other hand, the fact that learning styles literature has been suffering from ambiguity and disagreement upon the

conceptualization and categorization makes the discussion of the results obtained in the present study demanding.

However, some findings revealed that lower class students are more collaborative and consequently more likely to favour group learning and disfavour individual learning; while, students belonging to the middle class families, due to their competitive style of upbringing, prefer individual learning to group learning (Slavin, 2006, p. 102). Verma and Sheikh (as cited in Akhtar, 2010) found that advantaged students favoured independent and participant learning styles more than their disadvantaged counterparts. Quagliata (2008) proved that students from low SES families are larger population of the pupils at risk of abandoning high school. Many of these dropouts, to Quagliata (2008) are because of the mismatch between the way the information are presented at schools and the disadvantaged students' learning styles.

Since there was no relationship between group learning and individual learning with Iranian EFL learners' SES, our findings contradict Slavin's (2006) statement mentioning that Low SES students are more collaborative and consequently prefer group learning more than middle SES pupils who are competitive and individual learners.

On the one hand, there is competitiveness in educating the children among all Iranian families regardless of which social class they come from. On the other hand, the importance of learning English among all groups of Iranian families can justify the contradictory results of the current study which revealed no difference between socioeconomically different students with those of Slavin's (2006).

#### *A. Pedagogical Implications*

Findings of the current study proved that there is no relationship between socioeconomic status of the students and project orientation, individual activity orientation, and group activity orientation as learning styles variables. According to the results, because students having different SES did not significantly differ in their preferred learning styles, EFL teachers do not need to take different teaching methods, strategies, and teaching styles with respect to the students' SES. Moreover, the results of the present study implies that syllabus designers and curriculum developers do not have to control students' SES when designing the teaching materials for the sake of including all learning styles of the students (the three styles discussed in the present study). In fact, English teachers do not need to employ any different strategies towards students from different SES families or to match their learning styles with their students' SES.

#### *B. Limitations*

Because we could not find any standard instrument designed for Iranian context to measure SES of the students, we added four items to the questionnaire to measure their SES. Initially we intended to access the participants' profiles at schools but unfortunately we could not get permission to do so. Because socioeconomic status is considered as a very private issue by respondents and also by the school staff; therefore, to prevent negative reaction of

the participants, researchers had to decrease the number of items related to SES components and also limit them to subjective questions rather than precise objective ones.

### *C. Delimitations*

Participants in this study were all studying English as a compulsory subject matter at the first grade of senior high schools in Tehran. Students of the higher grades studying Mathematics, Science or Humanities were excluded from the research due to avoiding major bias.

To save the time and effort of the researchers, students of private language institutes were excluded from this research. Language institutes provide better facilities; therefore, the language students studying English at the private institutes, who are not learning English as an obligatory subject matter of schools, but rather as an optional course, may treat differently with language learning and have a different language learning styles orientations compared to their counterparts at schools.

### *D. Conclusions and Future Prospects*

What can be inferred from the findings of this study is that although sociocultural factors have proved to affect some variables pertaining to education, socioeconomic status of the students which is also a social variable proved not to relate to EFL learners' language learning styles. Besides, according to the findings, teachers who teach the students coming from one social class or another do not need to take different strategies and methods of teaching.

For the future research, considering the abovementioned delimitations, we would suggest the researchers to include female students, students from other age groups, students from towns and rural areas, and even those from other cultures and nations, and the students who learn English at private language schools.

As only three learning styles were included in the present study, in the future researches, it would be helping to include other categories of learning styles and other instruments measuring the learning styles. Developing questionnaires with more items for variables of SES and applying them to measure SES is also recommended for future researches. Other qualitative designs of researching such as interviews, observations and open ended questionnaires shall be used to reveal the depth of the variables and the prospect relationships among them.

## **REFERENCES**

- Akhtar, Z. (2010). *The Effects of Learning Styles and Socio-economic Status on Learning Achievement of Secondary School Students*, (Doctoral dissertation, National University of Modern Languages, Islamabad, Pakistan).

- Akram, M., & Ghani, M. (2013). The Relationship of Socioeconomic Status with Language Learning Motivation. *International Journal of English and Education*, 2(2), 406-413.
- Cheng, M. H. (1997). Teaching styles and learning styles. Taipei, Taiwan: The Crane Publishing Co.
- Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. *Journal of family psychology*, 19(2), 294.
- DeCapua, A., & Wintergerst, A. C. (2005). Assessing and validating a learning styles instrument. *System*, 33(1), 1-16.
- Dickinson, E. R. & Adelson, J. L. (2014). Exploring the Limitations of Measures of Students' Socioeconomic Status (SES). *Practical Assessment, Research & Evaluation*, 19(1). Available online: <http://pareonline.net/getvn.asp?v=19&n=1>
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum.
- Duncan, O. D., Featherman, D. L., & Duncan, B. (1972). *Socioeconomic background and achievement*. New York: Seminar Press.
- Dunn, R., Dunn, K. and Price, G.E. (1991). *Productivity Environmental Preference Survey*. Price System, Lawrence, KS.
- Felder, R. M., & Henriques, E. R. (1995). Learning and teaching styles in foreign and second language teaching. *Foreign Language Annals*, 28(1), 21-31.
- Hauser, R.M. (1994). Measuring socioeconomic status in studies of child development. *Child Development*, 65, 1541–1545.
- Keefe, J. W. (1979). Learning style: An overview. In J. W. Keefe (Ed.) *Student learning styles: Diagnosing and prescribing programs* (pp.1-17). Reston, VA: National Association of Secondary School Principals.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.
- Nejati, R., & Borzabadi Farahani, D. (2008). Evaluating the construct validity and reliability of instruments to measure language learning styles. *Foreign Language Research*, 42, 105-120.
- Quagliata, T. (2008). Is There a Positive Correlation between Socioeconomic Status and Academic Achievement?. *Education Masters*, Paper 78.
- Reid, J., (1984). Perceptual Learning Styles Preference Questionnaire. Copyrighted.
- Reid, J., M., (1987). The Learning Style Preferences of ESL Students. *Tesol Quarterly*, 21(1), 87-111.
- Reid, J.M. (Ed.). (1995). *Learning styles in the ESL/EFL classroom*. Boston: Heinle and Heinle.

- Slavin, R. E. (2006). *Educational psychology: Theory and practice* (8th ed.). US: Pearson.
- Tabanlıoğlu, S. (2003). *The relationship between learning styles and language learning strategies of pre-intermediate EAP students* (Master's thesis, Middle East Technical University, Ankara, Turkey). Retrieved from [http://etd.lib.metu.edu.tr/upload/1014034/index.pdf?origin=publication\\_detail](http://etd.lib.metu.edu.tr/upload/1014034/index.pdf?origin=publication_detail)
- U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics. (2012). Improving the measurement of socioeconomic status for the National Assessment of Educational Progress: A theoretical foundation. Retrieved from: <http://nces.ed.gov/nationsreportcard/pdf/researchcenter/socioeconomicfactors.pdf>
- Vaseghi, R., Ramezani, A. E., & Gholami, R. (2012). Language Learning Style Preferences: A Theoretical and Empirical Study. *Advances in Asian Social Science*, 2(2), 441-451.
- Wintergerst, A., DeCapua, A. (1999). Learning Styles Indicator (LSI). Copyrighted by Wintergerst and DeCapua. Available through Ann Wintergerst, Department of Languages and Literatures, St. John's University, Queens, New York 11439.
- Wintergerst, A. C., DeCapua, A., & Itzen, R. C. (2001). The construct validity of one learning styles instrument. *System*, 29, 385-403.
- Wintergerst, A. C., DeCapua, A., & Verna, M. A. (2003). Conceptualizing learning style modalities for ESL/EFL students. *System*, 31, 85-106.