The Role of L1 Transfer in the Acquisition of Lexical-Functional Categories by Persian Speaking Learners of English

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Abstract

This research project attempts to study the initial state of English acquisition by Persian learners of English. The learning hypotheses proposed for the initial state of second language acquisition i.e. Minimal trees (Vainikka and Young–Schoton, 1994), Full access/Full transfer (Schwartz and Sproues,1994), and the Weak Parametric Transfer (Valueless Features) hypothesis (Eubank 1993/94, 1996), the study attempts to show which of three viewpoints is generalizable and applicable to foreign language acquisition. For this purpose 300 subjects out of 450 were selected and based on a Oxford Quick Placement Test, they were divided into 3 levels of proficiency, i.e. elementary, intermediate and advanced groups. The subjects were supposed to retell a part of a film. The data analyzed via SPSS.9 software showed that the acquisition of all categories such as noun categories and verb categories except one category (copula "be") were consistent with Minimal trees view Point. Copula "be" category was consistent with both Minimal trees and Full access/Full transfer viewpoints. In short, Minimal trees viewpoint more convincingly gave an account for the initial state of English as a foreign language.

Key words: *Minimal Trees Hypothesis, Full Transfer/Full Access, Persian & English lexical categories, Persian & English inflectional categories*

1.0 Introduction

Many second language acquisition (L2) studies over the last 20 years have focussed on a principles and parameters model of acquisition. The aim has been to determine whether Universal Grammar (UG), an innate system of parameterised principles assumed to constrain first language acquisition (L1), also guides L2 acquisition. Although much work within this framework has focussed on adult initial L2 acquisition, several recent studies have examined the final attainment of English (see, e.g., Lardiere, 2000; Prévost and White, 2000)? However, no study to date has considered the role of the role of L1 transfer in the acquisition of lexical-functional categories by Persian speaking learners of English. The aim of this study is to see which of the current hypotheses of initial acquisition of lexical and functional categories could shed some light to the area of learning English as a foreign language.

1.1 An overview

The theory of UG has led to important theoretical and empirical advances in both L1 and L2 acquisition. Much research on L2 acquisition in the 1980s explored whether or not L2 grammars are subject to the constraints imposed by UG on L1 grammars. Among others, there are mainly two opposing views with regard to the "UG-accessibility" problem. For the proponents of a UG-based L2 model, similar to L1 learners, L2 learners also make use of UG-based knowledge in acquiring a second language (e.g. Flynn 1987; Schwartz 1991, 1992; Thomas 1993; White 1985, 1989, 1990/91). For others, (adult) L2 acquisition is fundamentally different from L1 acquisition and is mediated by general problem-solving strategies, but these strategies are not necessarily linguistic-specific (e.g. Bley-Vroman 1990; Clashen & Muysken 1986, 1989; Schachter 1989, 1990). What is important, however, is that no matter what theoretical position L2 researchers adopt, there are certain facts on which they all agree.

Perhaps it is uncontroversial to assume that some of the processes which characterise L1 acquisition may not apply to L2 in the same way, as L2 learners have previous instantiations of another language and might tend to transfer abstract properties of their L1 to the L2. Moreover, with respect to the issue of initial transfer of L1 into L2, it is generally assumed that while L1 learners transfer their language, researchers are looking for whether the same percentage of functional and lexical categories are transferred into L2. With respect to differences between L1 and L2 acquisition, one of the topics considered in this study is the issue of L2 acquisition of lexical and functional categories and the extent of L1 influence. Since current research on interlanguage (IL) representation foucuses on properties of just functional categories such as Determiner Projection (DP), Complementizer Projection (ComP), and Inflectional Projection (InflP), we investigate the extent to which IL grammars diverge from adult grammar.

2. Theoretical Theories

As we have discussed, within the Principles and Parameters model of language acquisition, it is commonly assumed that L1 acquisition is constrained by the innate language faculty, UG. Such a consensus, however, does not apply to L2 acquisition. One of the major themes in L2 acquisition theory over the last 15 years has been the role of UG in interlanguage. A considerable number of L2 researchers working within the Principles and Parameters framework have raised questions about whether or not the L2 learner is also faced with the same learnability problem, namely, whether or not L2 learners also acquire a complex grammar which is beyond the input available in the environment. Despite the fact that there are differences between L1 and L2 acquisition with respect to the issue of ultimate attainment, the aim has been to explain knowledge of L2. Many L2 studies in the 1980s examined the issue of L2 acquisition from a UG perspective (e.g. Bley-Vroman1990; Clashen & Muysken 1986, 1989; Felix 1985; Flynn 1987; Hilles 1986; papers in Eubank 1991 and Flynn & O'Neill 1988 and Gass & Schachter 1989, Schwartz 1991, 1992; White 1985, 1989). In this section, I would like to discuss some of these studies dealing with the "availability" or "non-availability" of UG as an operative mechanism in L2 acquisition.

With regard to this question of UG availability, it is important to note that the majority of L2 research in the 1980s concentrated on adult L2 acquisition. Therefore, much of the discussion in this section will be based on studies focused mostly on the development of adult L2 grammar. Studies on adult L2 acquisition within the framework of UG will be reviewed throughout the dissertation.

For the purposes of this study, I will discuss two major positions on the issue of whether or not L2 learners have access to UG. One group of researchers argue for the view that adult L2 acquisition falls within the limits of UG, *the UG is available model.* Others argue that UG is not accessible to adult L2 learners, *the UG is not available model.*[4] These theories differ with respect to the issue of L1 influence, as summarized in (1) and (2).

(1) *The UG is not available model:* UG is not accessible to the L2 learner, but aspects of UG utilised in the L1 can be used in L2 acquisition.

(2) *The UG is available model:* UG is accessible to the L2 learner, but initially L1 parameter values are utilised.[5]

2.1 UG is not available

Among research which focuses on the non-availability of UG, considerable attention has gone into the differences between L1 and L2 acquisition (Bley-Vroman 1990; Clashen & Muysken 1986, 1989; Schachter 1989, 1990). In his Fundamental Difference Hypothesis, Bley-Vroman (1990) claims that L1 acquisition and adult L2 acquisition are fundamentally different processes. Although UG is operative in adult L1 acquisition, in the case of L2 acquisition, it is replaced by non-linguistic systems which involve analogy and hypothesis testing. In his view, adult L2 acquisition is guided by general problem-solving mechanisms which are entirely different from what is assumed for adult L1 acquisition. (3) summarizes Bley-Vroman's view on adult L1 acquisition and adult L2 acquisition.

(3) Adult language development Adult foreign language development

a. Universal Grammar a. Native language knowledge

b. Domain-specific learning procedures b. Problem-solving systems (Bley-Vroman, 1990: 51)

Much of Bley-Vroman's argumentation relies on comparing the ultimate attainment of young L1 adult and adult L2 learners. For example, he points out that although every normal adult attains native speaker competence, adult L2 learners generally do not reach this level. That is, unlike L1 acquisition, there is a general failure in adult L2 acquisition with respect to ultimate attainment. He also claims that while there is no instruction or training involved in L1 acquisition, adult L2 is characterised by systematic, organised and controlled practice.

A related issue is the use of negative evidence in L2 acquisition. As is widely accepted, L1 acquirers are not assumed to make use of systematic negative feedback in the form of corrections. Bley-Vroman, among others, argues that negative evidence in L2 acquisition might be useful, even necessary. Schwartz (1990) presents a detailed critique of Bley-Vroman's Fundamental Difference Hypothesis. While she does not deny the fact that there are differences between L1 acquisition and L2 acquisition, the crucial point she makes is related to the type of knowledge created in both cases. In her view, the two knowledge systems, L1 and L2, may be *epistemologically equivalent*. Recall that for Bley-Vroman the two processes are different due to lack of equivalent ultimate attainment and to observed differences between L1 and adult L2 acquisition. In regard to the notion of *epistemological non-equivalence*, Schwartz focuses on historical changes in language. Based on the notion of "*abductive change*" proposed by Andersen (1973), Schwartz argues that simply because Modern English and Old English differ, this does not mean that they represent two different types of knowledge. Similarly, for Schwartz, the final state of L1 and L2 acquisition of a particular language might differ, but they may be *epistemologically equivalent* (Schwartz 1990), i.e. the knowledge created in both L1 and L2 acquisition could be of the same type. What is crucial in Schwartz's argument is that the lack of success in ultimate attainment alone does not entail a different knowledge type in L2 acquisition.

Clashen (1988) and Clashen & Muysken (1986, 1989) are also among those who argue that some innately specified system like UG does not operate in adult L2 acquisition. They examine the acquisition of German as a first language and compare these adult L1 data with L2 German data from adult native speakers of Italian, Spanish, Portuguese and Turkish. Clashen & Muysken (C&M) show that L1 adult acquire German word order through a series of steps compatible with principles of UG, while adult L2 learners do not pass through similar stages. Rather, their word order patterns involve, according to C&M, illegitimate generalizations and movements. In addition, C&M argue that the L2 learners employ a canonical word order strategy (SVO) which holds regardless of the learner's L1.[6] They conclude that L1 and L2 are different processes: while L1 acquisition is constrained by principles of UG, the process of adult L2 development involves principles of information processing and general problem-solving strategies.

Schachter (1989, 1990) also argues in favor of a position which rejects the availability of UG to adult L2 learners. Focussing on the role of the L1 in L2 acquisition, Schachter (1989) argues that UG is not accessible to L2 learners but aspects of UG instantiated in the L1 can be activated and used in the L2. In other words, L1 value of parameters will be of use to the L2 learner. Crucially, however, L2 learners cannot reset parameters in the course of L2 acquisition.

2.2 UG is available

In contrast to Bley-Vroman, Clashen & Muysken and Schachter, another group of L2 researchers argue for the operation of UG in adult L2 acquisition (e.g. Franceschina, 2001; Tomaselli & Schwartz 1990; White 1989). They have mainly focused on how to account for the L2 data in terms of UG-based hypotheses (e.g. Franceschina, 2001; Schwartz 1991). It is argued that if UG-based analyses can provide an explanation for any particular set of L2 data, they should be preferred over problem-solving strategies or performance related explanations. This is because not much is known about the problem-solving mechanisms, and thus until empirical evidence proves the opposite, UG-based analyses, because they are more explicit, offer a theoretically simpler explanation than problem-solving mechanisms (Schwartz 1991).[7] The operation of UG in L2 acquisition can be tested in various ways. One way is to show whether or not L2 grammars are compatible with the independently motivated principles and parameters of UG (Franceschina, 2001).

One can also look at the presence or absence of clustering associated with a particular parameter (Schwartz 1991; Meisel 1991). Another way, proposed by Schwartz (1992), is to compare the developmental sequences of adult L2 and adult L2 acquisition, holding the L1 constant. It is usually the case that adult L2 learners end up being native-like, and therefore, perhaps, adult L2 grammars are ideal candidates for one to investigate whether L2 grammars are constrained by the principles of UG. With respect to developmental sequences, Schwartz argues that if there is a similar developmental sequence for both adult and adult L2 learners, then the UG-based model of L2 acquisition wins over the problem-solving approaches. Problem-solving accounts, on the other hand, predict different developmental sequences for each group. For Schwartz, the fact that L2 systems are usually different from L1 systems in terms of the issue of ultimate attainment cannot be used as evidence for the non-availability of UG in L2 grammar construction, precisely because UG is not responsible for all aspects of grammar construction.

3. Methodology

3.1 Subjects

In order to find an answer to the proposed question an experimental study on the initial state of acquisition of English as a foreign language was conducted. We are going to find whether the markers of functional and lexical categories appear in the performance of Persian learners of English at an initial stage of acquisition. This section explains how the present research was carried out. It describes the procedure of experiment, the subjects and the tasks manipulated in this study. Three hundred subjects were selected out of 450 students who were 18-25 years old. The students were studying English in Sokhan English institute of Yazd, in Iran. They were divided in to three groups of elementary, intermediate and advanced levels based on their scores in Oxford Quick Placement Test to see whether their proficiency influences the rate of their L1 interference.

3.1.2 Materials

Two types of materials were used in the process of data collection in this task: Oxford Quick Placement Test (henceforth OQPT) and a retelling task. The OQPT Test was used to differentiate among the participants proficiency levels.

3.2 Clause structure in Persian

3.2.1 VP in Persian:

Persian is standardly classified as a head-final language with an SOV word order, both in main clauses and embedded clauses. Consider the following examples.

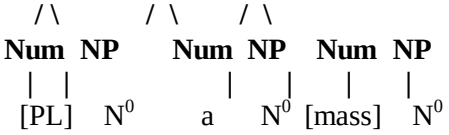
(4) a. Ehsan ghaza-ra **dust-(mi) darad-Ø.**
Ehsan ghaza -acc **like-pres-Ø**
'Ehsan likes the food'
b. (soma) mi-dan-id ke Ehsan ghaza-ra **dust-(mi) darad-Ø.**
(You) pres.-know-2sg that Ehsan ghaza -acc **like-pres-Ø**
'You know that Ehsan likes the food'

Examples (1a-b) show that both the main-clause verb and the embedded verb appear at the end of the clause. They also exemplify the rich clitick character of Persian morphology. The verb in the root clause, *mi-dan-id* 'know', consists of the root plus the morphemes *-mi* and *-id,* referring to present tense and 2sg agreement, respectively. The verb and the inflectional suffixes display a strict order in that no other morpheme can intervene between the verb and the subsequent suffixes. Consider the following ungrammatical example in (16), in which the order of the agreement morpheme *-idz* and the present tense suffix *mi-* is reversed.

(5) *(soma) dan- **mi -id** ke Ehsan ghaza-ra dust-(mi) darad-Ø**.**
(You) **know-pres-2sg** that Ehsan ghaza -acc like-pres-Ø

3.2.2 NP in Persian & English

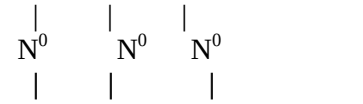
(6) a.NumP$_{PL}$ b. NumP$_{sg}$ c. NumP$_{Mass}$



(6a) represents plural count nouns (cats) and plural mass nouns (teas); (6b) represents singular count nouns (a cat) and singular mass nouns (a tea); and (6c) represents mass count noun (cat) and mass mass noun (tea).

As noted earlier, the understood-quantity effect does not hold of non-referential noun. Below Ghomeshi (2003) shows that the lexical specification of a noun as count or mass is not represented on the NP node:

(7) a. NP b. NP c. NP



Noun $_{count/mass}$ ketab $_{count}$ namak $_{mass}$
'book' 'salt'

The grammatical distinction between count and mass need not be realized at the same level or in the same projection cross-linguistically. For instance, it has been suggested that languages in which all nouns require a classifier in order to be countable, as Persian does, lack the count/mass distinction (Ghomeshi 2003). Persian employs classifiers that simply name the unit in which the entity denoted by the noun naturally occurs. That is, the classifier must be accompanied by it even if the nominal complement is a count noun.

(8) a. se kilo gu t b. se livan ab
three kilo meat three glass water
'three kolos of meat' 'three glasses of water'
c. se n f r dan t u
three persons student
'three students'

We have seen that Persian makes the count/mass distinction at the level of classifier, while English realizes the count/mass and the singular/plural distinction at the level of NumP.

3.2.4 Lexical and Functional categories in English and Persian

The four main lexical categories in English and Persian are noun (n), verb(v), adjective (a) and preposition (p), whereas, pronoun, article, progressive marker (*ing*), plural marker(*s*), past regular tense (ed), possessive marker(*'s*) and verb and subject agreement marker are functional categories. Modals and copula "be" are two kinds of functional categories in English whereas their Persian correspondents are lexical. In English copula "be" and modals are instantiated in IP and main verbs are represented under VP whereas in Persian *"budan"* (be) and modals are like main verbs and are instantiated at the VP level. Thus copula "be" and modals function like functional categories in English but they function as lexical categories in Persian.

3.3 Tasks and Procedure

In this study, two tasks were administered including retelling of a film and description of pictures. In Retelling task, each subject individually watched a five – minute cartoon film of Tom and Jerry. The five minute episode of cartoon shown to individuals was common for all of them and every one was allowed to watch the episode just for one time. After watching, each individual described the events happened in the film. In the second task (description of pictures) subjects were shown five pictures which in sequence of each other represented the occurrence of an event. We asked the subjects to describe the events they saw in the pictures, and meanwhile on the basis of various structural categories which were the focus of this study, we asked them different kinds of questions and tried to give them a clue to make them follow a particular grammatical category in their replies. The whole time devoted to each individual to talk about film and the pictures was ten minutes. There was a microphone to which subjects were talking and their talks were recorded. In order to analyze the data, SPSS 9 software (statistical package of social science) i.e. descriptive statistics, ANOVA test and Scheffe test Multiple comparisons and the counting part of Word 2000 software used for counting different categories, were manipulated. Each individual's talk was written down and then typed. Each utterance or sentence was analyzed regarding the absence or the presence of various morphological markers of functional categories. The functional categories which were the focus of this study were the initial acquisition of *subject pronoun, tense, agreement, plural marker, possessive marker, copula be and modal*. Withy respect to initial acquisition of pronoun and agreement categories, following examples taken from the utterances uttered by elementary subjects clarify the idea:

(9) -*dog see*-**NOAgr**- *cat and dog*-**NOPRON**-*run cat.*
(10) -*mouse drinks*-Agr- *milk and he*-PRONN- *is happy***.**

The number of each morphological marker was calculated and then by the means of ANOVA the difference between groups was gained and in order to see where the exact difference is Scheffe test multiple comparison representing the mean difference between elementary-intermediate, elementary-advanced and intermediate-advanced subjects were manipulated. In this study we decided on the level of significance at the level of .05 at which we tried to reject the null hypotheses. The hypotheses of the study are as follows:

1. There is no relationship between Minimal trees and the initial state of English as a foreign language.
2. There is no relationship between Full access/Full transfer and the initial state of English as a foreign language.

3.4 Data Analysis and Results

This section discusses the analysis and the results of data derived from various functional/lexical categories used by individuals. Functional categories i.e. *pronoun, tense, agreement possessive marker, plural marker, modal and copula "be"* will be taken into account respectively.

3.4.1 Pronoun category

In collected data the places in which the nouns were to be replaced by pronouns were marked. It is believed that while talking or writing, a noun is used to specify an entity in an utterance, but in the following utterances an appropriate pronoun replaces the noun (its antecedent) to specify the entity. The places in which individuals correctly used subject pronouns to represent nouns were coded as PRON and those places in which individuals did not use subject pronouns and rather used proper names such as *girl* instead of *she* in an utterance produced by one of the elementary learners: *Girl is sit and girl* **-NOPRON** *read book*, to indicate nouns (its antecedents) were coded as NOPRO. Table 1 represents the number and the percentage of subjects pronouns correctly used by elementary individuals which are 132 and 4.28% respectively, whereas the number and the percentage for intermediate and advanced individuals are 570,1850%and237977.22% respectively.

Table 1: Relative frequency of PRON category

Level	Frequency	Percentage
Ele	132	4.28%
Inter	570	18.50%
Adv	2379	77.22%
Total	3081	100

Table 2 shows that the frequencies and the percentages of NOPRON for elementary, intermediate and advanced groups are 255, 162,126, 46.96%, 29.84%, 23.20% respectively.

Table 2: Relative frequency of NOPRON category

Level	Frequency	Percentage
Ele	255	46.96%
Inter	162	29.84%
Adv	126	23.20%
Total	543	100

With respect to SPSS software, ANOVA and Scheffe test Multiple comparisons explained the mean difference at the level of .05 among elementary, intermediate and advanced levels. ANOV Test indicates that the subjects grouped in three levels of proficiency performed significantly different from each other and there is a high difference between groups. (F=16339.075 P<.000). Considering PRON category, the level of significance in comparisons between elementary and advanced and also intermediate and advanced individuals are significant, while the mean difference between elementary and intermediate individuals is not significant at the level of .05.

According to SPSS software for NOPRON category , ANOVA test showed that between groups differences are significant for three levels of proficiency (F=85.179, P<.000). Scheffe test Multiple comparisons showed the differences between elementary and intermediate and elementary and advanced levels and also between intermediate and advanced were significant at the level of.05 (Table 3).

Table 3: SPSS Scheffe test Multiple comparisons

Category	Comparison	Means Difference	Sig
PRON	Ele-Inter	-4.866	.202
PRON	Ele-Adv	-24.966	.000
PRON	Adv-Inter	-20.100	.000
No PRON	Ele-Inter	1.100	.001
No PRON	Ele-Adv	1.500	.000
No PRON	Adv-Inter	1.4000	.073

The mean difference is significant at the level 0f.05

3.4.2 Tense projection category

In this part, we further analyze the data taken from the individuals. Since the subjects required to retell the cartoon film which in sequence indicated an occurrence of an event they had to refer to the activities through past tense. With respect to ED category (simple past tense), the numbers and the percentages of elementary intermediate and advanced individuals using ED in their utterances were 57, 6.88%; 246 , 29.72% and 525, 63.40% respectively.

Table 6: Relative frequency of ED category

Level	Frequency	Percentage
Ele	57	6.88%
Inter	246	29.72%
Adv	525	63.40%
Total	828	100

Table 4 represents the frequencies and the percentages of various levels with respect to No Ed category. The frequencies and the percentages are 192, 46.38%; 147, 35.50%and75,18.12%respectively.

Table 4: Relative frequency of NOED category

Level	Frequency	Percentage
Ele	192	46.38%
Inter	147	35.50%
Adv	75	18.12%
Total	414	100

ANOVA test showed that between groups differences are significant for three levels of proficiency (F=1733308, P<.000). Table 5 represents the Scheffe test Multiple comparisons for ED category, the mean differences between elementary and intermediate, intermediate and advanced and also advanced and elementary levels are significant. On the other hand, considering NOED category, ANOVA test indicated that the subjects grouped in three levels of proficiency performed significantly different from each other and there was a high difference between groups(F=80.009.075,P<.000), the Scheffe test Multiple comparisons indicated that the mean difference between elementary and advanced , and also intermediate and advanced individuals are significant , while the difference between elementary and intermediate individuals was not sufficiently significant (see table 5).

Table 5. Spss Scheffe test Multiple comparisons

Category	Comparisons	Mean difference	Sig
Ed	Ele-inter	-2.466	.001
Ed	Ele-adv	8.666	-000
Ed	Inter-adv	8.666	-000
NoEd	Ele-Inter	2.666	0.73
NOED	Ele-adv	4.800	-000
NOED	Inter-adv	2.133	.002

The mean difference is significant at the level of .05

3.4.3 Agreement category

The study examined the utterances and phrases in which the agreement between subject and verb was marked and those sentences and utterances in which the agreement was not marked. We coded them Agr and NOAgr respectively. As table 6 indicates the frequency and the percentage of elementary individuals who marked the agreement between subject and verb are 138 and 9.54% and the frequencies and percentages of intermediate and advanced individuals are 390, 29.98% and 918, 63.48 % respectively.

Table 6: Relative frequency Agr category

Level	Frequency	Percentage
Ele	138	9.54%
Inter	390	29.98%
Adv	918	63.48%
Total	1446	100

On the other hand, table 12 indicates that the frequencies and the percentages of NOAgr category for elementary, intermediate and advance level are 185, 55.89%; 105, 31.72% and 41, 12.39 % respectively.

Table 7: Relative frequency NOAgr category

Level	Frequency	Percentage
Ele	555	53.62%
Inter	315	30.44%
Adv	165	15.94%
Total	1035	100

ANOVA test indicated that the subjects grouped in three levels of proficiency performed significantly different from each other and there was a high difference between groups (F=689.742 P<.000). Scheffe test Multiple comparisons was further carried out to indicate that the mean differences between elementary and advanced and also intermediate and advanced individuals were significant at the level of .05 but the mean difference between elementary and intermediate was not enough significant at the level of .05 (see table 8). On the other hand, According to SPSS software for NOAgr category, ANOVA test showed that between groups differences were significant for three levels of proficiency (F=823.278, P<.000) and the mean differences between elementary and intermediate, intermediate and advanced and also elementary and advanced were significant at the level of .05 (table 8).

Table 8: SPSS Scheffe test Multiple comparisons.

Category	Comparison	Means Difference	Sig
Agr	Ele-Inter	2.466	.286
Agr	Ele-adv	8.666	.000
Agr	Inter-adv	6.200	.001
No Agr	Ele-Inter	2666	.000
No Agr	Ele-Adv	4.800	000
No Agr	Inter-adv	2.133	-000

The mean different is significant at the level 0f.05

3.4.4 Possessive marker category

Table 9 indicates that the frequencies and the percentages of POSS category for individuals of elementary, intermediate and advanced are 27, 4.79% ; 126, 22.34% and411,72.87% respectively.

Table 9: Relative frequency POSS category

Level	Frequency	Percentage
Ele	27	4.79%
Inter	126	22.34%
Adv	411	72.87%
Total	564	100

As table 10 indicates the numbers and the percentages of elementary, intermediate and advanced individuals for NOPOSS category are 219 , 54.87 %; 126, 33.88% and27, 7.25 % respectively.

Table 10: Relative frequency NOPOSS category

Level	Frequency	Percentage
Ele	219	58.87%
Inter	126	33.88%
Adv	27	7.25%
Total	372	100

ANOVA Test indicates that the subjects grouped in three levels of proficiency performed significantly different from each other and there was a high difference between groups (F=1492.358 P<.000). Scheffe test Multiple comparisons for three levels of proficiency considering POSS category, indicated that the mean differences between elementary and advanced and also intermediate and advanced levels were significant at the level of .05, but the difference between elementary and intermediate is not sufficient significant. Regarding NOPOSS category, ANOVA test showed that between groups differences were significant for three levels of proficiency (F=55.680 P<.000) and the mean differences between elementary and intermediate , elementary and advanced and intermediate and advanced were significant at the level of .05 (table 11).

Table 11. SPSS Scheffe test Multiple comparisons

Category	Comparison	Mean difference	Sig
Poss	Ele-inter	2.666	.001
Poss	Ele-adv	4.266	.000
Poss	Inter-adv	3.166	.000
Noposs	Ele-inter	1.366	.000
Noposs	Ele-adv	1.466	.000
Noposs	Inter-adv	4.266	.020

The mean difference is significant at the level of.05

3.4.5 Plural marker category

Table 12 indicates the frequency and percentage of plural marker category for elementary, intermediate and advanced level which are as follows 42, 5.76%; 72, 9.88% and 615, 84.36% respectively.

Table 12: Relative frequency PLU category

Level	Frequency	Percentage
Ele	42	5.76%
Inter	72	9.88%
Adv	615	84.36%
Total	729	100

Table 13 represents the frequencies and the percentages of NOPLU category for elementary. Intermediate and advanced individuals are 150, 51 55 % 102, 35.05% and 39, 13.40 % respectively.

Table 13: Relative frequency NOPLU category

Level	Frequency	Percentage
Ele	150	51.55%
Inter	102	35.05%
Adv	39	13.40%
Total	291	100

Acording to SPSS software for PLU category ,ANOVA test showed that between groups differences were significant for three levels of proficiency (F=2880.178 P<.000). Regarding plural category the mean differences between elementary and intermediate, elementary and advanced and also intermediate and advanced were significant.

ANOVA test indicated that the subjects grouped in three levels of proficiency performed significantly different from each other and there was a high difference between groups (F=35.616 P<.000) and the mean differences for no plural category between elementary and intermediate, intermediate and advanced and also advanced and elementary individuals were significant(Table14).

Table 14: SPSS Scheffe test Multiple comparisons

Category	Comparison	Mean difference	Sig
Pl	Ele-inter	1.133	000
Pl	Ele-Adv	3.033	001
Pl	Adv-Inter	1.900	-000
NopL	Ele-Inter	.50000	.044
Nopl	Ele-Adv	1.233	.000
Nopl	Inter-Adv	.733	.002

The mean difference is significant at the level of .05

3.4.6 Copula be and Modal categories

The numbers and the percentages of Copula "be" for elementary, intermediate and advanced individuals are 432, 37.70%; 330, 28.79% and 384, 33.51% respectively (table 15). Meanwhile, the frequencies and percentages of Modal category for three levels of proficiency are 15, 5.19%; 75, 25.95% and 199, 68. 86% respectively(table28).

Table 15: Relative frequency Copula Be category

Level	Frequency	Percentage
Ele	432	37.70%
Inter	330	28.79%
Adv	384	33.51%
Total	1146	100

Table 16: Relative frequency of Modal category

Level	Frequency	Percentage
Ele	15	5.19%
Inter	75	25.95%
Adv	199	68.86%
Total	289	100

With respect to copula "be" category, ANOVA Test indicated that the subjects grouped in three levels of proficiency did not performed significantly different from each other and there was not a high difference between groups (F=16339.075, P<.000). However, Scheffe test Multiple comparisons indicated that the mean differences for copula "be" between elementary and intermediate, and intermediate and advanced and also elementary and advanced were not significant. According to SPSS software for Modal category, ANOVA test showed that between groups differences were significant for three levels of proficiency (F=237.781 P<.000). Scheffe test Multiple comparisons show that the mean differences for modal category between elementary and intermediate and intermediate and advanced and also elementary and advanced were significant at the level of .05.

Table 17: Scheffe test Multiple comparisons

Category	Comparisons	Mean difference	Sig
Be	Ele-inter	1.100	.065
Be	Ele-Adv	.5000	-560
Be	Inter-Adv	.6000	-436
Modal	Ele-inter	2.2333	-000
Modal	Ele-adv	1.200	-000
Modal	Inter-adv	2.666	-000

The mean difference is significant at the level of.05.

4. Discussion & Conclusion

4.1 Discussion

The first category that we discuss is the acquisition of pronoun. The subject originates internally within the subject VP or in the spec of VP and it moves from the spec of VP to the spec of IP where its nominative case is checked by the means of a type of movement traditionally known as *subject to subject raising* (Radford, 1997, p.132). Following example would clarify the issue; (11) *He will throw the ball*
In this sentence, the VP is merged with an inflection (I) constituent *will* and forms the I-bar *will throw the ball* . The subject *he* moves to the spec of IP. Table 1 represented the frequency and percentage of PRON category. The percentage of pronouns (4.28%) used by elementary individuals declared that they had used the least number of pronouns, in other words they had used the highest level of NPs where it was necessary to use DPs (pronouns). This fact proved that these individuals were still at the VP level and used lexical items (NPs) instead of functional item (DPs) thus lexical category was present at the initial state and then with more exposure to English, the functional category replaced it.

These results were consistent with Minimal trees hypothesis believing that only lexical categories were present at the earliest stage and functional categories developed in succession. In contrast, the findings were inconsistent with Full transfer/Full access stating that functional categories (DPs) were present from the earliest stages. Meanwhile, ANOVA test and Scheffe test Multiple comparisons show the mean differences between groups verify the finding mentioned earlier. Regarding the result the first hypothesis is rejected and we come to this point that there is a positive relationship between Minimal trees view and the initial state of English acquisition as a foreign language, whereas there is no relationship between Full access/Full transfer view and initial state of English acquisition as a foreign language, with respect to pronoun acquisition which is both functional in English and Persian. So the second hypothesis is not rejected.

One confusing point, regarding the mean difference between elementary and intermediate for PRON category is that the difference was slightly high. The reason is perhaps because of the insufficient exposure to English at intermediate stage but they gradually with more exposure to English input acquired PRON category at the advanced level. Considering the NOPRON aspect of pronoun category, the data represented that the NOPRON percentages for elementary, intermediate and advanced individuals were 46.96%; 29.84% and 23.20% respectively (table 2) on the other hand, ANOVA test and Scheffe test Multiple comparisons between these groups showed that the mean differences between elementary–intermediate; elementary–advanced and advanced-intermediate levels were significant at the level of .05. The results concur with Minimal trees hypothesis in that elementary individuals were at the VP level and used lexical categories (NPs) and gradually, with more exposure to language input at the intermediate and ultimately at the advanced level, they used significantly more functional marker at the IP level categories than lexical categories at the VP level. It is obvious that the result are on the contrary to Full access/Full transfer viewpoint, since elementary subjects did not use functional categories (DPs) at the earliest stage of foreign language acquisition and just with more exposure to English as a foreign language, functional category (Pronouns) replaced lexical categories (NPs) hence, elementary individuals did not initiate with IP level but VP level.

Next category I discuss is the data collected from tense category. Tense is a grammatical category which correlates most directly with distinctions of time. Tense is a frequent it is far from universal. Tense distinctions are frequently marked on finite verbs. English exhibits a minimal tense system with a two way contorts between past and non-past forms (Trask, 1995). Inflection phrase consists of two features namely as tense and agreement. Chomsky and Lansik (1993) state that inflection phrase has the strange of double headedness. With respect to the question of which feature (tense or agreement) dominates the other, Chomsky (1981) believes that tense phrase (TP) is dominated by the agreement phrase (AgrP). Meanwhile ANOVA and Scheffe test showed the mean differences between three groups were significant at the level .05 level indicating that there was a considerable difference between these levels. Elementary individuals used the lowest number of tense category at initial state and the data were consistent with minimal trees viewpoint, since tense category which is functional category in English was not used in VP stage. The elementary, intermediate and advanced levels students' percentages schematize a continuum. At one end of continuum lexical category (no tense category, VP) is more frequent and at the other end functional category (tense category IP) is abundant and intermediate level group stands in the middle of continuum indicating the there is a movement from VP (no tense) to IP (tense) as the individuals proficiency in using tense category increase.

The data also foresees that Full transfer/Full access cannot account for the findings of this category, since the tense as a functional category in Full transfer/Full access viewpoint is not observed from the earliest stage and just acquired with more exposure to input. The significant finding is that in initial state of English as a foreign language, tense category is not transferred to foreign language hence if tense were transferred it would be observed at the VP level. With respect to the results, the first null hypothesis is rejected and it is observed that there is a positive relationship between Minimal trees view and the initial state of English acquisition as a foreign language, while the second null hypothesis is not rejected and there is no relationship between Full access/Full transfer viewpoint and initial state of English acquisition as a foreign language. Again, the puzzling point considered in Pro category is observed here too i.e. the mean difference between elementary-intermediate level is not significant. This issue is perhaps due to lack of enough exposure to input.

Data dealing with NOED (no tense) category and Multiple comparisons between three groups showed that the means differences were significant. The results are consistent with Minimal trees viewpoint and they reject the first null hypothesis indicating that there is a positive relationship between Minimal tress viewpoint while the second null hypothesis is not rejected and there is no relationship between Full access/Full transfer viewpoint and the initial state of English as a foreign language.

The next category I take into account is the acquisition of agreement. Agreement is a phenomenon by which the appearance of one item in a sentences in a particular form requires a second item which is grammatically linked with it to appear in a particular form. Agreement takes place within the range of choices offered within one or more grammatical classes of words such as Person or Tense (Trask, 1993). By the means of SPSS software we calculated the frequency and percentage of observed agreement in individuals utterances and we also determined the frequency of the utterances in which agreements were not observed. I coded them as Agr and NOAgr respectively. As I noted agreement both in English and Persian is a type of functional category . In utterances which lacked agreement the individuals were at the VP stage and in sentences having agreement they were at the IP stage of English acquisition .
The data represented that percentages of agreement category (Agr) for elementary, intermediate and advanced individuals were 9.54 %, 29.98% and 63.48% respectively. The following utterance was used by an elementary subject, the sentence represented that the subject had not yet acquired agreement inflection and his utterances lacked agreement.
(12). Elephant see-**NOAgr**- milk and elephant eat-**NOAgr**- it.
On the other hand, the following sentence indicated that the subject was at the IP level and had already acquired agreement inflection.
(13). The little mouse drinks-**Agr**- the bottle of milk.

Meanwhile the mean differences between elementary and advanced and also intermediate and advances were significant while the mean differences between elementary and intermediate were not significant at the level of .05 (Tables 13 and 15). The data represented that the elementary subjects were using the lowest number of agreement category in their utterances. Gradual increase in number of agreement category from intermediate to advanced individuals represented this fact that with more exposure to English individuals became more proficient and replaced lexical category with functional category indicating that they were at the IP stage . The results are consistent with Minimal trees viewpoint and inconsistent with Full access / Full transfer viewpoint. Minimal tress stating that in initial state of language acquisition VP exists and with more exposure to language IP gradually takes its place is in accordance with the finding of agreement category acquisition. Thus the first null hypothesis is rejected and there is a positive relationship between Minimal tress viewpoint and the initial acquisition of English as a foreign language. On the other hand, there is no relationship between Full access / Full transfer viewpoint and the finding of agreement acquisition by Persian learners of English as a foreign language .

With respect to no agreement category (NoAgr) the data (table12) showed that the percentages for elementary, intermediate and advanced individuals were 53.62%, 30.44% and 15.94 % respectively. The Multiple Comparisons showed that the mean difference between three levels were significant at the level of .05. It means that there is a crucial difference between elementary, intermediate and advanced individuals. In other words individuals at the earliest stages (elementary) lack agreement category (they are at the lexical level or VP stage) and with more exposure to English intermediate and advanced individuals gradually use agreement phrases in their utterances (they are at the functional level or IP stage).

These findings are again consistent with Minimal tress viewpoint and in disagreement with Full access/Full transfer viewpoint. The results reject the first null hypothesis and they prove that there is a positive relationship between Minimal tress view point and the initial state of English and the second null hypothesis is not rejected and there is no relationship between Full access/Full transfer and the initial state of foreign language acquisition. Again the mean difference for Multiple comparison between elementary and intermediate individual is not significant . It is perhaps due to lack of sufficient exposure to English.

The next category, we discuss its initial acquisition is possessive marker category. In this part we discuss the data driven from those nouns which have possessive marker " *s*" and those which lack it. Possessive is a kind of possession in which two noun phrases are related together and the second noun in some sense belongs to the first noun (one noun is possessed and another is possessor). Possessive marker in Persian is a type of functional category, thus, like, English possessive marker is observed at the DP stage. Table 9 represented the percentages of possessive marker (POSS) category observed in elementary, intermediate and advanced individuals' utterances. Meanwhile table 11 represented that the mean differences between elementary and advanced and also intermediate and advanced individuals were significant at the level of .05. However the mean difference between elementary and intermediate individuals was not significant at the level of .05. The findings declare that there are crucial differences between three levels, and data consistent with Minimal trees view point in that elementary individuals used the lowest number of possessive markers in their utterances since possessive marker is a type of functional category , it was not observed at the earliest stage (VP) of language acquisition .

With more exposure to English, learners gradually used possessive marker in their utterances at the IP stage as the data of this study confirmed it. On the other hand, since elementary individuals did not use possessive marker in initial state, the data were inconsistent with Full access/Full transfer viewpoint. The results reject the first null hypothesis indicating that there is a positive relationship between Minimal tress view point and the initial state of English acquisition as a foreign language , whereas the second null hypothesis in not rejected and there is no relationship between Full access/Full transfer viewpoint and the initial state .

With respect to no possessive (NOPOSS) category, the data indicated the percentages of elementary, intermediate and the advanced subjects were 58.84 %; 33.88 % and 7.25 % respectively (Table18). In the following example the subject's examples lacked possessive marker. The utterances show that subjects are at the VP stage.
(14). Elephant nose-**NOPOSS**- is big very.
(15). Bird house-**NOPOSS**- have door.
On the other hand, ANOVA test and Scheffe test Multiple comparisons test indicated that there were crucial mean differences between three groups. This finding represented that elementary individuals did not use possessive marker at the earliest stage of English acquisition as a foreign language and only with more exposure at intermediate and then at advanced levels used possessive marker in their utterances since they are at the IP stage and use functional categories in their utterances. The results reject the first null hypothesis and confirm that there is a positive relationship between Minimal tress viewpoint and the initial state of English of foreign language while there is no relationship between Full access/Full transfer viewpoint and the initial state of English acquisition as a foreign language (the second null hypothesis is not rejected).

The next category which we take into account is plural marker category. In a language with grammatical distinctions of number , that number category represents possible number of entities . In English and most other European languages the plural contrasts only with the singular and hence it appears at the IP stage. The percentages of plural marker (PLU) category for elementary, intermediate and advanced individuals were 5.76%, 9.80% and 84.36 % respectively. Meanwhile the mean differences between groups were significant at the level of.05. The findings showed that there was a high difference between three levels and they form a continuum in which at one end the minimal number of plural markers exist and at the other end the maximum number of plural markers exists. It means that individuals move through a continuum from elementary (the lowest number of plural marker) to intermediate (the medium number) and then to advanced level (the highest number of plural marker). The findings showed that at the earliest stages only lexical categories exist at the VP stage then with enough exposure to foreign language functional category appear in their performance. As you noticed in this study, at the earliest stage there was a lack of functional category (existence of lexical category) and with more exposure at intermediate and advanced level functional category (plural marker) appeared.

Again, the findings are consistent with Minimal trees viewpoint and they are inconsistent with Full access / Full transfer. The results indicated that the first null hypothesis is rejected. Regarding the data, thus there is a positive relationship between Minimal tress viewpoint and the initial state of English acquisition and the second null hypothesis is not rejected and there is no relationship between Full access/Full transfer and initial state of English acquisition as a foreign language . With respect to no plural marker (NOPLU), the data based on percentages of elementary, intermediate and advanced levels and Multiple comparisons between three levels represent that there was a high difference between them. Elementary individuals had the highest number of NOPLU category and advanced level individual had the lowest number, whereas the individuals stood in the middle using the medium number of PLU in their utterances. This finding showed that elementary individuals were at the VP stage and only use lexical category in their utterances and with more exposure to English as a foreign language they used functional category at intermediate and advanced levels (Plural marker). On the other hand , there was no transfer from first language at the earliest stage since individuals were at the VP (lexical) stage and plural marker is functional category elementary individuals used the lowest number of plural marker in their utterances. The results reject the first hypothesis indicating that there is a positive relationship between Minimal trees and the initial state of English acquisition as a foreign language . The second null hypothesis is not rejected and there is no relationship between Full access/Full transfer and the initial state of English as a foreign language .

The last two categories we consider are Copula "*be*" and Modal categories. Modal is a lexical item which usually exhibits the inflectional behavior of a verb. It serves primarily to express a distinction of mood. English has a number of such modals including *must / can / could , will / would , shall / should , may / might* and *ough to*. The English auxiliaries are usually divided into modal auxiliaries and non-modal auxiliary. Auxiliary is an abstract category which is postulated as being universally present in sentences and which serves as locus for certain grammatical categories , notably tense (Trask, 1995) and it has been replaced by INFI category .Copula is an empty formative , most often a verb , which in same language serves to link a subject NP to a predicate which either is identified with the subject or characterizes the subject . The data, regarding copula "*be*" showed that the percentages for elementary, intermediate and advanced individuals were 37.7 %, 28.79% and 33.51% respectively. Meanwhile the ANOVA and Scheffe test Multiple comparisons indicated that the mean differences between three groups were not significant. This finding represented that there was not a significant difference between groups. In other words at each stage of language proficiency, individuals used copula "*be*" in their utterances.

In English, Copula "*be*" is functional whereas its correspondent Persian is a type of lexical category. The finding showed that at the earliest stage either there was a transfer from first language since elementary individual used the high number of copula " *be*" which is lexical in Persian at the VP stage or elementary individuals with the earliest exposure to English use English copula "*be*" in their utterances. The former point of view is consistent with Minimal tress and the latter is consistent with Full access / Full transfer viewpoint . In contrast to other discussed category which were consistent only with Minimal tress view point , Copula "*be*" seems to consistent with both Full transfer / Full access and Minimal trees viewpoints indicating that subjects at the initial state are at IP stage and used functional category (copula *be*) and on the other hand the findings showed that subjects at the initial state transfer copula "*be*" Persian correspondent from first language into English as a foreign language. And this fact is in harmony with Minimal trees viewpoint. Therefore the findings reject both of the null hypotheses and it shows that there is a positive relationship between Full transfer/Full access and Minimal trees viewpoints and the initial state of English acquisition as a foreign language.

With respect to Modal category the data based on percentages of elementary, intermediate and advances levels and also Scheffe test Multiple comparisons between them indicated that there was a high differences between three levels Elementary individuals used the lowest number of Modal category which is functional in English. This issue indicated that individuals at the earliest stage of English acquisition were at the VP stage and did not use functional category (Modal). The results are consistent with Minimal tress viewpoint and are in disagreement with Full access/Full transfer. Therefore, the results reject the first null hypothesis indicating there is a positive relationship between Minimal tress and the initial state of English acquisition as foreign language whereas the second null hypothesis is not rejected and there is no relationship between Full transfer and the initial state of English as a foreign language .

4.2 Conclusion

It appears that the initial acquisition of all categories but copula *be* category are consistent with Minimal tress view point. Copula *be* category is consistent with Full access/Full transfer view point. The categories are listed below:

4.1.1 PRON category (Pronoun category). There are high differences between three levels. The data reject the first null hypothesis. The only problematic point is the slightly significant difference between elementary and intermediate individuals which seems to be due to lack of sufficient exposure to input .

4.1.2 NOPRO category. The mean differences are noticeably significant between compared levels. The data again rejects the first null hypothesis and Minimal trees viewpoint accounts for the findings.

4.1.3 ED category (Tense projection). There are high mean differences between three levels and the data reject the first null hypothesis , and they are consistent with Minimal tress view point .Again , the mean differences between elementary and intermediate levels is slightly significant . I believe that this issue is due to lack of enough exposure to English input .

4.1.4 NOED category . The mean differences between three levels are highly significant indicating that the data reject the first null hypothesis and they are compatible with Minimal tress viewpoint .

4.1.5 Agr category (Agreement Category). There are high mean differences between three groups which reject the first null hypothesis and the finding represent that Minimal trees hypothesis account for the initial state of agreement acquisition of English as a foreign language. The differences between elementary and intermediate individuals are slightly significant. This point is perhaps due to lack of sufficient exposure to input.

6.1.6. NOAgr category. The mean differences between three levels are remarkably significant at the level of .05.This finding rejects the first null hypothesis indicating that the results are consistent with Minimal tress view point .

4.1.7 POSS category (Possessive Marker). There are considerable mean differences between level at the level of .05.The finding reject the first null hypothesis representing that the Minimal tress viewpoint is compatible with the initial state of English possessive acquisition as foreign language .

4.1.8 NOPOSS category. The high differences between three level indicate the mean differences are significant between three levels of proficiency . The data reject the first null hypothesis and show that there is a positive relationship between Minimal tress viewpoint and the results dealing with NOPSS category ,

4.1.9 PLU marker category (Plural Marker). The mean differences are remarkably significant between three levels of proficiency. The results reject the first null hypothesis indicating that there is a positive relationship between Minimal trees view point and the initial acquisition of English plural Marker category as a foreign language.

4.1.10 NOPLU Marker category. The high differences between three levels of proficiency represent that the mean differences between them are significant at the level of .05. The results reject the first null hypothesis indicating that the Minimal tress viewpoint is consistent with the initial state of English plural marker acquisition as a foreign language.

4.1.11 Modal category. The mean differences are remarkably significant between three level of proficiency at the level of .05. The findings reject the first null hypothesis and they prove that the Minimal tress view point accounts for the initial acquisition of English Modal as a foreign language .

4.1.12 Copula "*be*" category. The mean differences between three levels of proficiency are not significant at the level of .05. The findings state that elementary, intermediate and advanced levels use copula "*be*" in their utterances from the earliest stage of English acquisition. The results reject both of the null hypotheses representing that in one hand there is positive a relationship between Full access / Full transfer viewpoint and the initial acquisition of copula "*be*" as a foreign language and in the other hand Minimal trees viewpoint is in harmony with the initial state of English acquisition as a foreign language. The last crucial finding of this research is that though Persian is verb final language and its word order is *subject-object-verb*, the individual's utterances indicated no sign of transfer from first language and the word order of all utterances uttered by individuals were following English word order pattern i.e. subject-verb-object.

Thus ,we conclude that with respect to two view points of the initial state of English acquisition as a second viewpoints , Minimal trees and Full access view points, there is a positive relationship between Minimal trees and the initial state of English categories acquisition as a foreign language. Thus Minimal trees is generalized and applied to foreign language acquisition. The only exception is copula "*be*" category which is compatible with both Minimal trees and Full access/Full transfer view points .

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