Locative Constructions in English Interlanguage: A Study of the Acquisition of Argument Realization in English by Iranian EFL Learners

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Abstract. Locative constructions, as an instance of double object constructions with various cognitive-linguistic concepts, have been successful in attracting the linguists. This paper tried to evaluate the acquisition of English locative constructions by Persian native speakers in the absence of negative evidence, focusing on the influence of L1 and participants' proficiency level in the course of acquisition. The participants of the study were a group of 90 Iranian EFL learners divided into low, mid, and high proficiency groups asked to carry out a production and

a grammaticality judgment task on English locative constructions. The gathered data were analyzed, using one-way ANOVA and the following post hoc tests. The results of the study revealed that L2 learners' mother tongue (Persian) was an influential factor, and proficiency level affected the performance of participants in the grammaticality judgment task and to a lower degree in the production task. The findings of this study are expected to have pedagogical implications for EFL teachers, making them aware of possible problems EFL learners may be faced with in the course of acquisition of these structures in a foreign language.

Keywords: Alternation, grammaticality judgment task, locative construction, production task, proficiency level

1. Introduction

One of the most commonly used sentence patterns in human languages, attracting so many linguists (e.g., Bley-Vroman & Joo, 2001; Pinker, 1989; Rappaport & Levin, 1988) is Double Object Construction (DOC). Double object verbs are predicates which select a noun phrase (NP) to fill the spec position and two nouns to act as the direct and indirect objects. Verbs such as "read", "sell", "teach", "give", "bake", "find", and "order" are some instances of double object verbs. Locative constructions are one type of such double object constructions. Lee (2009) defined locative verbs as verbs that denote a relationship between a thematic entity (Figure) and a location (Ground). As stated by Olbishevska (2005), Goal, Ground, or Location are different labels referring to the entity into/onto or from which the object or substance is moved. Theme, Figure, or Locatum are different names used to refer to the entity being transferred.

A locative verb belongs to figure-oriented class if it maps its Theme onto the direct object position and its locative argument is realized as the complement of a locative preposition like into/onto or from (she dribbled paint onto the floor/? she dribbled the floor with paint). A locative verb, however, would be classified in ground-oriented class if its theme position is occupied by a prepositional phrase headed by the preposition 'with' and the direct object position is filled by the locative argument (she soaked the sponge with water/? she soaked water into the sponge) (Olbishevska, 2005).

What is especially significant about locative constructions is that they can participate in alternation. Some locative verbs, as triadic verbs, have the capacity to set the same set of their internal arguments in more than one way, creating two argument realization patterns which are felt to be near-paraphrase. For instance, Tom loaded the apples onto the truck/ Tom loaded the truck with apples. The so-called locative alternation represents one instantiation of the larger phenomenon of multiple argument realization (Levin & Rappaport, 2005). However, all of the locative verbs cannot participate in alternation. Verbs which denote only either the motion (e.g. pour) or the final state (e.g. fill) do not alternate. On the other hand, verbs that in some manner focus both on motion and the resulting state do alternate.

Learners first acquire the broad constructional meaning of locative verbs based on so-called broad-range rules. The classes of verbs to which they apply are called broad conflation classes and include the two semantic categories: manner of motion (figure verbs) and change-of-state (ground verbs). Broad-range rules constitute the necessary but not sufficient criteria by which learners determine whether a verb can participate in the locative alternation. That is, the minimum necessity though not sufficient requirement for a verb to be an alternator, is that it must belong to a broad conflation class. These rules have been reported to be universal; that is, locative verbs in all languages have the two broad semantic constructions (Lee, 2009). Pinker (1989) suggested that there are also "finer-grained criteria" that determine if a verb possesses components of meaning for end states or motions. That is, set of narrow-range rules determine the sufficient condition for alternation and classify verbs into narrowly-defined semantic classes, so called narrow conflation classes.

The difficulty of learning locative verbs in English is apparent if we just consider the number of classes into which they can be categorized (Lee, 2009). Pinker (1989) classified narrow-range classes of English locative verbs as follows (126-127): (figure-oriented non-alternating): A mass is enabled to move via the force of gravity. This group of verbs would just allow the figure to occupy their direct object position.

a. John poured water into the glass   [figure frame]

b.*john poured the glass with water   [ground frame]

(figure-oriented alternating): Force is imparted to a mass, causing ballistic motion in a specified spatial distribution along a trajectory. They allow both the figure and ground frames, but the figure is the obligatory element.

a. john piled books into the shelves   [Figure frame]

b. john piled the shelves with books   [ground frame]

(ground-oriented non-alternating): A layer completely covers a surface. These verbs just allow the Ground to be mapped onto the direct object position.

a.*john filled water into the glass.   [Figure frame]

b. John filled the glass with water.   [Ground frame]

(ground-oriented alternating): A mass of a size, shape, or type defined by the intended use of a container is put into the container, enabling it to accomplish its function. They allow both the figure and ground frames, but the obligatory element is the ground.

a. John painted paint to the wall   [Figure frame]

b. John painted the wall with paint   [Ground frame]

In Persian, however, locative verbs do not participate in alternation. To put it other way, the syntactic structure of the modern Persian does not allow the locative verbs to participate in alternation. Therefore, although pair sentences such as those presented below are grammatical sentences in Persian, they are not the two variants of the locative verb:

(a) Kimia mivehara tuye kamiun barzad

(b) Kimia tuye kamiun mive bar zad

Kimia fruit Pl ra into the truck loaded
Kimia in truck fruit loaded

Ki:mi:a fru:t Pl ra intu: $\partial\sigma$ trΛk lσudσd
Ki:mi:a in trσk fru:t lσudσd

"Kimia loaded the fruits into the truck"

"Kimia loaded the truck with fruits"

Taking into consideration the Syntactic Word Formation (SWF) process in Persian, we can claim that those constructions like (b) in which the non-specific object is joined to the complex verb creating one syntactic unit are not an instance of locative constructions. Since for a construction to be considered as locative, it should not only contain a location and a locatum argument, but also both of these arguments should be a participant in the event, and not part of the event. As stated by Karimi (2003) in constructions like (b) where non-specific object is adjacent to the complex verb, the non-specific object undergoes word syntactic formation process and creates one syntactic and semantic unit that saturates one argument position, therefore in such constructions only one of the arguments participates in the event and the other one is just part of the event. Such Persian constructions include only one argument (location) that participates in the event and the other one (locatum) has become a part of the event.

Statement of the problem

Reviewing the literature reveals the existence of a big gap regarding the acquisition of English locative verbs and narrow-range constraints controlling them by Persian EFL learners. Much research has examined the acquisition of English locative verbs and access to narrow-range constraints guiding them by speakers of languages such as Korean (e.g., Joo, 2003; Lee, 2009), Japanese, Chinese (e.g., Juffs, 1996), and some other languages, but very few studies have investigated the acquisition of English locative constructions and such constraints by Persian EFL learners.

A body of studies on L2 locative constructions has been conducted over the past three decades. However, the results have been inconclusive because some studies revealed that L2 learners cannot acquire the native-like knowledge of narrow-range constraints which are language specific (Bley-Vroman & Joo, 2001; Joo, 2003; Lee, 2009; Rezai & Avand, 2008) whereas others believe that, in some aspects of language, L2 learners can acquire the native-like knowledge of narrow-range con-

straints (Juffs, 1996; Choi & Lakshmannan, 2002; Sawyer, 2002). In addition, the majority of studies conducted have focused on semantic interpretation, i.e. holism effect, not on the argument structure itself.

Significance of the study

Locative constructions, as an instance of double object constructions, represent syntax-semantics correspondences that are language specific, peripheral language elements (as opposed to core universal language elements) that are different from one language to another language and, consequently, one of the main sources of difficulty for EFL learners. Awareness of the factors that can influence the acquisition of such peripheral language elements can be helpful for both EFL teachers and learners. Focusing on such influential factors, EFL teachers can design innovative appropriate teaching techniques to enhance the acquisition of such language-specific syntax-semantics correspondences.

The verbs belonging to this narrow semantic class are more complex types of verbs that can pose difficulty for many EFL learners, mainly because they are subject to greater argument structure variation. According to Lee (2009), these verbs may appear in different syntactic structures but have the same arguments, or may appear in the same syntactic structures but have different arguments. English Locative verbs are one such kind of verbs which are subject to great variation in their argument structure and can, consequently, make their acquisition difficult for EFL learners. Studying locative constructions as the representative member of the whole argument structures (syntax-semantics correspondences) of this type, the problems EFL learners may be faced with when acquiring them and the factors affecting their acquisition can help to find pedagogical and instructional solutions and techniques for their effective teaching to EFL learners.

Objectives of the study

The present paper endeavors to investigate the acquisition of the argument structure of English locative constructions and the narrow-range constraints controlling them by Iranian EFL learners, focusing on main factors such as L1 transfer and language proficiency. To this aim two research questions are suggested:

Research Questions

1- Does the proficiency level of the Iranian EFL learners affect the acquisition of the argument structure of English locative constructions in the absence of negative evidence?

2- Does Iranian EFL learners' L1 (Persian) affect the acquisition (the judgment and production) of the argument structure of English locative constructions?

2. Literature Review

Pinker (1989) stated that attaining a native-like understanding of the syntax-semantics correspondences in locative constructions in L2 requires the knowledge of both broad constructional meaning and narrow-range constraints.

Compared with first language acquisition, in second language acquisition, due to the intervention of other variables such as L1 transfer, proficiency level, instruction, etc. the learnability issue of the locative constructions becomes more complicated. The main question is if second language learners can acquire native-like knowledge of argument structure alternations and, more specifically, whether they have knowledge of broad-range classes and narrow-range classes (Joo, 2003). Unlike L1 learners, L2 learners often do not seem to overcome learnability problems. The majority of previous research studies have shown that L2 learners do not acquire native-like knowledge of constructional alternations- the dative alternation (Bley-Vroman & Yoshinaga, 1992; Wolfe Quintero, 1992; Inagaki, 1997) and the locative alternation (Juffs, 1996)-especially as regards eliminating negative exceptions.

Kim, Landau, and Phillips (1999) reported that cross-linguistic differences exist in the syntax of locative verbs, suggesting that these syntax-semantic correspondences may not be universal, weakening the reliability of learning strategies based on universal syntax-semantics mapping. Bley-Vroman and Joo (2001) pointed out that although L2 learners attain some knowledge of narrow constraints by relying on rather insufficient input they receive in EFL context (p. 216), they are

not able to apply them to novel verbs, indicating reduced linguistic productivity. Unlike the native speakers, L2 learners fail to apply the narrow constraints to novel verbs of the same semantic classes. This led the researchers to come to the conclusion that it is difficult or impossible for L2 learners to acquire principled knowledge of narrow classes, which distinguishes verbs like 'fill' from verbs like 'pour'. In fact, Bley-Vroman and Joo (2001) believed that because UG-which allows native speakers to show early syntactic productivity and act on principle-is inaccessible and unavailable in L2 acquisition, L2 learners have to learn the narrow constraints in an unprincipled way, i.e., through association (relating certain syntactic constructions to certain meanings) based on explicit instruction and limited input exposure.

In order to compare the performance of 20 adult Korean EFL learners in the USA with 10 English native speakers on locative verbs, Choi and Lakshmanan (2002) designed a study. First, they conducted a pretest, which was a grammaticality judgment task for locative alternations. Based on the scores of the pretest, the participants were divided into two proficiency groups, the intermediate group and the advanced group. Choi and Lakshmanan (2002) claimed that the advanced group (participants whose pre-test scores were 16 or above out of a maximum of 20) judged locative alternation in a way similar to native speakers, concluding that the Korean language learners had native-like knowledge of the argument structures of English locative verbs even at narrow-range level.

Al-Wahaib (2004) investigated the acquisition of English locative alternation by Jordanian students of EFL. The primary aims were to identify the problems encountered by students of English during the process of acquiring English locative alternation and to attempt to account for the causes of these difficulties. To achieve this end, the research relied heavily on the grammaticality judgment task (GJT) which was prepared and given to 60 Jordanian students from the Department of English Language and Literature in the Jordan University. The results revealed that the responses of participants to the GJT items were mostly inaccurate, meaning that English locative alternation poses a real challenge to Jordanian EFL students. Alwahaib (2004) claimed that intra-linguistic and cross-linguistic factors worked hand in hand in impeding the partici-

pants' acquisition of the English locative alternation. The prominent intra-linguistic factor was found to be the large number of constraints that governed English locative verbs and the main cross-linguistic factor was L1 transfer.

In order to test how successfully Korean L2 learners acquire the argument structure of English locative verbs, compared to native speakers of English, Joo (2003), based on Joo (2000) and Blay-Vroman and Joo (2001), employed a forced-choice sentence selection task in addition to the forced-choice picture description task and asked fifty-nine college students in Korea, whose TOEFL scores ranged from 550 to 650 to respond to these two tests. Based on the obtained results, joo claimed that Korean EFL learners have knowledge of the holism effect, which is associated with broad-range rules, but even advanced Korean EFL learners do not possess the native-like knowledge of the narrow-range rules. Schwartz et al (2003) criticized the results obtained from this study as being premature on two accounts: First, the instruments used were not suitable for such conclusion as they tested interpretive effects, not grammaticality or acceptability. Second, the tasks may have led to a phenomenon known as "coercion".

Rezai and Avand (2008) conducted an experiment to investigate the acquisition of English locative verbs by Iranian EFL learners. In this study, 60 participants divided into intermediate and advanced groups were asked to complete three tasks, namely forced-choice picture selection, production, and grammaticality judgment task. The results obtained from the production and grammaticality judgment tasks revealed that participants in both groups of learners mainly produced just one structure of alternating verbs in the production task and judged only one form of alternating verbs as acceptable in the grammaticality judgment task. Such a result was interpreted by the authors as an indication of the fact that even the advanced Persian learners of English had not achieved native-like knowledge of the "narrow -range rules that govern more language specific properties and determine subclasses of locative verbs" (Rezai & Avand, p. 255).

3. Methodology

Participants

The participants in this study were 90 Iranian EFL learners. To choose these participants, the researchers randomly selected 120 Iranian EFL learners from among BA, MA, and PhD students-both male and female-studying English at Isfahan (khorasgan) Islamic Azad University. An Oxford Placement Test OPT (Allen, 1992) was administered to these 120 students, out of whom 90 subjects were selected, based on their scores on the proficiency test, and assigned to the three groups of low-proficiency (n=30), mid-proficiency (n=30), and high-proficiency (n=30). Iranian EFL learners with different levels of proficiency were selected to test their developmental effects, that is, to test the effect of proficiency level on how they use and judge English locative constructions.

The present study is an experimental one with quantitative, hypothesis-testing nature. As experimental studies require more than 50 samples, a sample size of 30 for each of the three groups involved in this study (totally n=90) allowed us an adequate observation to take benefits of the central limit theorem. This means that at n=30 and more, if the data is normally distributed, the bell shape curve can be observed. Such a sample size also helped to ensure the generalizability of the research findings and to draw strong robust conclusions.

Instruments

To gather the required data, the following instruments were used:

Questionnaire of exposure to locative constructions

As there was the possibility that the participants of the study may have been exposed to locative constructions in any way, before doing the tasks, they were asked to fill this questionnaire whose target was to find out and eliminate those EFL participants who may have had any previous familiarity with English locative constructions. In this way, the researcher could make sure that the participants had received no negative evidence.

Oxford placement test

The Oxford Placement Test (OPT) was administered to 120 Iranian EFL

learners selected randomly from among B.A, M.A, and Ph.D students, studying English at the Isfahan Islamic Azad University, out of whom 90 participants were selected and assigned to the three groups of low-proficiency, mid-proficiency, and high-proficiency, based on their scores on the test.

The production task

The purpose of this task was to investigate if Iranian EFL learners with different levels of proficiency could produce native-like locative constructions in the absence of negative evidence. The participants were asked to describe some pictures in writing, using as many possible sentences as they could. They were provided with 50 pictures, each accompanied by four words: A locative verb and three nouns that one of which was the subject, and the other two could be used by participants either as the direct or indirect object. A part of the production task has been presented in Appendix A.

The grammaticality judgment task

After the completion of the production task, Iranian EFL learners were given a grammaticality judgment task to do on English locative constructions based on a five-point Likert scale from -2 to +2: from completely impossible to completely possible. This task involved 50 items out of which 10 items were fillers. The aim of this task was to investigate if Iranian EFL learners with different levels of proficiency could accurately judge the grammaticality of English locative constructions. A part of the grammaticality judgment task has been provided in appendix B.

Since the data gathering instruments (grammaticality judgment test and production test) were both designed and prepared by the researchers, it was a must to control the reliability and validity of the tests before the main data gathering in the study:

Validity of instruments

To ensure the validity of the instruments used, the two tests (grammaticality judgment test and production test), after being designed, reviewed, and revised by the researchers themselves, were validated by a team of English language specialists in the English Department of Khorasgan Islamic Azad University. The team was requested to validate

the two tests with respect to test instructions, the appropriateness of the test items regarding research goal and objectives, the number and arrangement of items, and the suitability of the time allocated to each test. The remarks and suggestions offered by the validating team were taken into consideration and the researchers made the necessary modifications, before applying the main tests.

Reliability of instruments

Cronbach alpha was used to calculate the reliability of the grammaticality judgment test designed in the form of a 5-point Likert scale. To this aim, a pilot experimentation of the grammaticality judgment test was performed on 30 EFL learners whose characteristics were similar to the main participants of the study. After collecting and analyzing the data in SPSS, reliability of the test was calculated with Cronbach's alpha, yielding a reliability score of 0. 83. The obtained score demonstrated a reasonable level of reliability. Establishing the reliability of the production tests, however, is very difficult because of the potential variations in responses to a question. In the case of a production test, however, inter-rater reliability was also calculated and demonstrated to be high.

Procedures

The researcher randomly selected 120 Iranian EFL learners from among BA, MA, and PhD students-both male and female-studying English at Isfahan (khorasgan) Islamic Azad University. The Oxford Placement Test OPT (Allen, 1992) was administered to these 120 students, out of whom 90 subjects were selected, based on their scores on the proficiency test, and were assigned to the three groups of low-proficiency (n=30), mid-proficiency (n=30), and high-proficiency (n=30). As the first research question of the study was concerned with the effect of the proficiency level of Iranian EFL learners on the acquisition of the argument structure of English locatives (the narrow-range constraints) in the absence of negative evidence, the researcher, first, had to make sure that the subjects of the study had not previously been exposed to English locative constructions. To this aim and before doing the main tasks, they were given a questionnaire which assessed the subjects' previous exposure, familiarity or instruction on English locative constructions. If

the provided answers in the questionnaire indicated that the subject had received any instruction on English locative verbs, he/she was omitted from the study and another subject was instead substituted.

As the next step, the participants were asked to perform a production task. In this task they were provided with 48 pictures depicting a person performing an action. The subjects were asked to describe these pictures in writing, using the provided words (a verb under the picture and three nouns directed by arrows). Underneath each of these pictures, there was an English locative verb with its Persian translation. Moreover, in each picture three nouns were referred to, each by one arrow. One of these arrows in each picture targeted the person who performed the action of the verb and the other two arrows showed two other nouns (a substance and a location) that could be used by the subjects as the direct and indirect object of the produced sentences.

The pictures were selected in such a way that the intended sentences would cover all four kinds of locative verbs based on the classification of English locative verbs reported by Rappaport and Levin (1985) and Pinker (1989) as shown below:

a) 10 non-alternating figure verbs: Plant, Drip, Paste, Pour, Wind, Spill, Pin, Stick, Tape, nail

b) 10 non alternating ground verbs: Face, Dirty, Soak, Pave, Chain, Bandage, Cover, Rope, Spot, Fill

c) 10 alternating figure verbs: Spray, Spread, Brush, Pile, Rub, Scatter, Inject, Plaster, Splash, Plate d).
8 alternating ground verbs: Load, Wad, crowd, pack, Cram, Stock, Jam, Stuff

e) 10 distractor sentences: Hand, Teach, Heat, Pound, Read, Knock, Slap, Tap, Write, Type

In order that participants could not guess the purpose of the study, 10 distracter pictures accompanied by verbs other than locative verbs were also included among the other 38 pictures. 10 distracter verbs were selected from among dative and causative verbs that like locative verbs could have two objects as their arguments. This helped to prevent par-

ticipants guessing the purpose of the study.

The basic criteria for the selection of target locative verbs were the frequency of use and practicality, respectively. Frequency of the intended locative verbs was obtained from the UK CHILDES data base that included frequencies of locative verb use in child and adult utterances. The target verbs for the present study were reasonably required to be frequent and thus, likely to be familiar to learners even at the beginner level. Considering the positive relationship between verb frequency and its easiness (being understandable), the verbs with the highest frequency were first selected for each group of locative verbs. As in the production task, the pictures should clearly show the action of the verb, from among verbs with the highest frequency those which followed the practicality principle (that could be easily shown by picture or drawing) were chosen to ensure that the pictures clearly reflected the action of the verb. The remaining frequent verbs were then used for the grammaticality judgment task. Different ordering of test items was also designed for the participants, that is, the order of picture presentation was counterbalanced so that it may not affect the results of the study.

The produced sentences were scored as follows: For non-alternating structures if participants produced the correct form, they scored 1 point; if they produced a wrong structure, they scored 0. For alternating verbs, if one of the possible alternating forms (either figure or ground) was produced the participant scored 1; if both forms of alternating verbs were produced' the participants scored 2 and in the case of no production, they scored 0.

The second task that EFL learners were asked to perform was the grammaticality judgment task. The task involved 50 items out of which 10 sentences were fillers (distracter sentences) so that participants could not easily guess what the study was about. Forty other sentences involved: 10 sentences with non-alternating figure verbs (5 grammatical and 5 ungrammatical sentences), 10 sentences with non-alternating ground verbs (5 grammatical and 5 ungrammatical sentences), 10 figure alternating verbs (both possible forms of each 5 sentences), and 10 ground alternating verbs (both possible forms of each 5 sentences). In this task, participants were asked to judge the grammaticality or un-

grammaticality of English sentences including locative verbs based on a five point Likert scale from -2 to +2: -2 shows completely impossible (definitely incorrect) sentences in English; -1 indicated partially impossible (probably incorrect) constructions in English; 0 presented no idea (don't know); +1 showed partially possible (probably correct) forms; and +2 indicated completely possible (definitely correct) sentences. The verbs used in this task were as follows:

a) Non-alternating figure verbs (5 grammatical and 5 ungrammatical sentences): Attach, Dump, Slop, Dribble, Twirl, Spin, Slosh, Shake, Ladle, Glue

b) Non- alternating ground verbs (5 grammatical and 5 ungrammatical sentences): Soil, Dam, Deck, Plate, Flood, Litter, Block, Coat, Pad, Plug

c) Alternating figure verbs (both the figure and the ground frame of each verb): Smudge, Sprinkle, Dab, Daub, Squirt

d) Alternating ground verbs (both figure and ground frame of each verb): Pack, Load, Jam, Crowd, Cram

e) Distracter sentences: Tell, Sell, Fax, Bake, Thump, Bring, Tap, Send, Loan, Bring

This task examined participants' recognition and understanding of English locative constructions and locative alternation. The participants were also asked to make corrections to the sentences that they judged as incorrect immediately following the judgment. All sentences were followed by a space beneath them, so that participants could write the correct form of sentences they had judged as ungrammatical. The purpose of such correction was to make sure that the nonnative speakers' focus was the same as research focus.

The grammaticality judgment test was scored as follows: For non-alternating grammatical forms if participants judged the grammatical sentence as definitely correct (select +2) they scored 4, if judged it to be probably correct (select +1) they scored 3, if they chose don't know (select 0) they scored 2, if their judgment was probably incorrect (select -1) they scored 1, and if judged it as definitely incorrect (select

-2) they scored 0. Scoring of non-alternating ungrammatical forms was completely reversed, that is, if participants judged the sentence to be definitely incorrect (select -2) they scored 4, if judged it as probably incorrect (select -1) they scored 3, in the case their selection was don't know (select 0) they scored 2, if their selection was probably correct (select +1) they scored 1, and if judged it as definitely correct (select +2) they scored 0. In the case of alternating constructions, as both forms involved were grammatical, the same scoring procedure used for non-alternating grammatical forms was also used for the separate scoring of each form of alternating verb. A value averaged over the items was considered as the score the participant got. When doing the actual scoring, the grammatical sentences were separated from the ungrammatical ones to determine learners' knowledge of what is grammatical and what is ungrammatical. That is for non-alternating verbs, we would have four sets of scores: grammatical figure-only, ungrammatical figure-only, grammatical ground only and ungrammatical ground-only.

In this study, the participants' performance in the production and judgment of the locative constructions and their alternation was compared with and assessed against Pinker's narrow-range classes considered as a "categorical predictor variable".

Data Analysis

To analyze the obtained data, first, ANOVA was used to make a general comparison among the three proficiency groups regarding their ability in the accurate production of the locative constructions. Then, four subsections (figure-only, ground-only, alternating figure, and alternating ground) were compared one-by one across the three groups, using one-way ANOVA. Following ANOVA, LSD post-hoc test was employed in order to determine the exact places and location of the existing differences. The same statistical procedures were followed for the grammaticality judgment task. The six subsections compared in this task were grammatical figure-only, ungrammatical figure-only, grammatical ground-only, ungrammatical ground only, alternating figure, and alternating ground.

4. Results

The production task

The statistical procedures related to the production task are presented first. In the case of the production task, the independent variable is the proficiency level and the dependent variable is the context with four subsections, namely figure-only, ground-only, alternating figure, and alternating ground. In the present study, the comparison was first made among the three groups totally and then four subsections were compared one-by one across the three groups, using one-way ANOVA.

Table 1: The Descriptive Statistics of the Three Groups for the Production Task

Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low	30	30.1333	1.52527	.27847	29.5638	30.7029	27.00	32.00
Mid	30	32.2000	1.82700	.33356	31.5178	32.8822	29.00	36.00
High	30	35.3667	2.47028	.45101	34.4442	36.2891	32.00	40.00
Total	90	32.5667	2.91856	.30764	31.9554	33.1779	27.00	40.00

Table 1 shows the descriptive statistics for the three groups mean scores for the production task. As can be seen in this table, there exist differences among the mean scores of the three groups involved (Low, mid and high). The mean score of the low proficiency group is 30.133 with SD= 1.52527, the mid proficiency group is 32.2000 with SD= 1.82700, and the high proficiency group is 35.3667 with SD= 2.91856. In order to find out if these differences are statistically significant or not, one-way ANOVA needs to be calculated. Table2 depicts the results of ANOVA.

Table 2: The Results of the ANOVA of the Three Groups for the Production Task

ANOVA					
Group	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	416.867	2	208.433	53.142	.000
Within Groups	341.233	87	3.922		
Total	758.100	89			

Table 2 indicates that the amount of the observed F (F= 53.142) is significant at the probability level of 0.05(P 0. 05), confirming that the

differences among the three groups are statistically significant. Following ANOVA, LSD post-hoc test was employed in order to determine the exact places and location of such differences.

Table 3 shows the obtained results.

Table 3: The Results of the Post-hoc Test of the Three Groups for the Production Task

LSD						
(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low	Mid	-2.06667*	.51135	.000	-3.0830	-1.0503
	High	-5.23333*	.52139	.000	-6.2497	-4.2170
Mid	Low	2.06667*	.51129	.000	1.0503	3.0830
	High	-3.16667*	.51235	.000	-4.1830	-2.1503
High	Low	5.23333*	.52134	.000	4.2170	6.2497
	Mid	3.16667*	.51133	.000	2.1503	4.1830

*The mean difference is significant at the 0.05 level.

By looking at Table 3, one can easily understand that the difference among the mean scores of all the three groups is significant because the probability value is substantially smaller than the pre-specified critical value (0.000 0.05).

After it was recognized that the three groups had statistically significant differences, a comparison was then made one by one among the similar subsections across the three groups in order to evaluate the role each played in creating the significant differences involved.

The Grammaticality Judgment Task

Following the presentation and evaluation of the statistical procedures related to the production task, the obtained results from the grammaticality judgment task were evaluated. In the case of the grammaticality judgment task, the independent variable is the proficiency level and the dependent variable is the context with six subsections, namely grammatical figure-only, ungrammatical figure-only, grammatical ground-only, ungrammatical ground only, alternating figure, and alternating ground. Like what was done for the production task, the comparison was first made among the three groups totally and then six subsections were compared one-by one across the three groups.

Table 4: The Descriptive Statistics of the Three Groups for the
Grammaticality Judgment Task

Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimu m	Maximum
					Lower Bound	Upper Bound		
Low	30	89.9000	17.66616	3.22538	83.3033	96.4967	7.00	110.00
Mid	30	100.6000	8.29458	1.51438	97.5028	103.6972	76.00	119.00
High	30	117.2667	10.60557	1.93630	113.3065	121.2269	98.00	135.00
Total	90	102.5889	16.99960	1.79192	99.0284	106.1494	7.00	135.00

Table 4 shows the descriptive statistics for the three groups mean scores
for the grammaticality judgment task. The presented data revealed that
there existed differences among the mean scores of the three groups in-
volved (Low, mid and high). The mean score of the low proficiency group
was 89.9000 with SD= 17.66616, the mid proficiency group was 100.6000
with SD= 8.29458, and the high proficiency group was 117.2667 with
SD= 10.60557. In order to find out if these differences are statistically
significant or not, one-way ANOVA was run.
Table 5 represents the results of ANOVA.

Table 5: The Results of the ANOVA of the Three Groups for the
Grammaticality Judgment Task

ANOVA					
Group	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11412.022	2	5706.011	34.696	.000
Within Groups	14307.767	87	164.457		
Total	25719.789	89			

Based on the information presented in Table 5, the amount of the ob-
served F (F= 34.696) is significant at the probability level of 0.05 (P 0.
05). This means that the differences among the three groups are statisti-
cally significant regarding the grammaticality judgment task. Although
the presented data in this table is quite revealing, it does not show the
exact location where the observed differences lie. Following ANOVA,
LSD post-hoc test is employed in order to determine the location of
such differences. Table 6 shows the obtained results:

Table 6: The Results of the Post-hoc Test of the Three Groups for the
Grammaticality Judgment Task

Multiple Comparisons

LSD (I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low	Mid	-10.70000*	3.21216	.002	-17.2813	-4.1187
	High	-27.36667*	3.31101	.000	-33.9480	-20.7854
Mid	Low	10.70000*	2.31117	.002	4.1187	17.2813
	High	-16.66667*	3.21126	.000	-23.2480	-10.0854
High	Low	27.36667*	3.31105	.000	20.7854	33.9480
	Mid	16.66667*	3.31116	.000	10.0854	23.2480

*. The mean difference is significant at the 0.05 level.

By looking at the presented data, one can easily understand that the difference among the mean scores of all the three groups was significant. To evaluate in which of the subsections of the context in the grammaticality judgment task the difference was especially significant, one-way ANOVA and LSD post-hoc test was performed for each of the six subsections one by one across the three groups.

5. Discussion

The results of the grammaticality judgment task showed that the learners' general proficiency level in English significantly affected their recognition and accurate judgment of English locative verbs and their alternation. The beginners in the low proficiency group showed little knowledge of English locative constructions and narrow-range constraints controlling them. They performed almost well in the case of grammatical figure-only and grammatical ground-only constructions, respectively. However, they had a weak performance in both ungrammatical and alternating constructions as they did not reject ungrammatical sentences such as: he poured the glass with water. The beginners vividly had shaky intuitions about English locative constructions, especially with respect to alternating, ungrammatical, and ground classes respectively. Generally, just their performance on non-alternating figure-frame was at an acceptable level.

The intermediate learners, however, showed a better performance compared with the beginners. Based on the obtained results, they were

almost in the middle of developmental process of acquiring the locative constructions. They specially made a progress in the figure frame (grammatical figure; ungrammatical figure, and alternating figure). However, their performance on ungrammatical and alternating ground was not so different from the beginner group.

The advanced learners in the high proficiency group performed very well on grammatical figure class, such that the majority of them obtained complete score in this class. However, what significantly differentiated this group from low and mid-proficiency groups was their progress in the correct recognition of ungrammatical ground and alternating ground subclasses. This shows that as the proficiency level is increased, the learners not only can better recognize the ungrammatical structures as ungrammatical, but also they can recognize the two variants of alternating verbs as possible variants in English. This indicates that there is a direct relation between the proficiency level of Iranian EFL learners and the acquisition order of these English locative contexts. In other words, alternating and ungrammatical contexts compared with the grammatical, non-alternating contexts need to wait for l2 learners' higher levels of proficiency for their acquisition.

For a non-native speaker, L2 grammatical structures seem to be less marked than the ungrammatical ones and they usually have greater tendency towards the less marked ones; that is, toward the grammatical structures. This is more evident in the case of low proficiency learners. However, as the proficiency level is increased, the learners obtain greater ability in correctly recognizing ungrammatical structures as ungrammatical.

Comparing the results obtained from the production and the grammaticality judgment task revealed that although in the grammaticality judgment task, the learners in the high proficiency group show significant progress, especially in correct recognition of alternating and ungrammatical frames, in the production task, the learners even at high levels of proficiency are not so skilled in producing alternating forms.

EFL teachers' awareness of the relationship between EFL learners' proficiency level and the acquisition (comprehension and production) of the argument structures and syntax-semantics correspondences in L2

helps the teachers to adjust and accommodate their level of instruction and their expectations of their students in acquiring such correspondences with the students' proficiency level, especially at the production level. EFL teachers who are aware of such L1 and L2 syntax-semantics correspondences can design appropriate exercises and innovative teaching and learning techniques proportionate to the proficiency level of the learners to help them succeed in learning these argument structures especially the ones that are peripheral language elements and represent cross-linguistic differences and can, consequently, be the potential source of problem for EFL learners. Teachers with this kind of detailed knowledge and awareness can design better classroom syllabus to instruct each argument structure and its sub-contexts at the most appropriate time, depending on which stage of development (proficiency level) their EFL learners are in the course of acquisition of the target structure.

The higher ability of the participants in the comprehension and correct judgment of locative constructions compared with their ability in the production of locatives seems to be just like L1 acquisition. In the course of L1 acquisition, comprehension precedes production, and requires positive evidence to trigger language acquisition device (LAD). In L2 acquisition, production also requires both positive and negative evidence. The difference between L1 and L2, however, is that in L1 the child needs just positive evidence to acquire the language he is exposed to; while, in the case of L2, an l2 learner cannot acquire a second language at the level of production without negative evidence, no matter how proficient he is.

The results of the present research study on the acquisition of English locative verbs by Iranian EFL learners seem to be well-suited for investigating the role of L1 transfer in the acquisition of locative constructions since the syntactic structure and grammatical properties of locative verbs are distinct in English and Persian.

The analysis of produced sentences revealed that Persian speakers totally have a greater tendency to use figure-only constructions, compared with ground constructions to the extent that even in the case of alternating ground verbs they just produced the figure frame of the alternating ground verb. One possible explanation for such tendency is

the existence of construal, which is the way we look at and understand the world around us. Construal can be defined as a mechanism used to explain how or why a person thinks the way they do (Ross, 1987). Construals are closely interrelated with prominence. In the case of locative constructions, when one considers the motion of an object to be prominent, it is a different construal from the time when one considers the state change to be more prominent. For example, the verb 'pour' is considered as a figure-only verb in English, while this same verb is categorized as a ground-only verb in Persian. It seems that the categorization of verbs into figure or ground like any other language category is both rule-governed and language-specific. By making the FL learners, especially at high proficiency level, aware of such construals in L1 and L2, EFL teachers can help L2 learners to better acquire such argument structures.

Levin and Rappaport (1995) presented an example of English-Italian pair Blush-Arrossive in this regard, stating that in English the same happening is construed as a process, but in Italian as a change of state, so that English and Italian verbs do not present the same identical description of a single happening. This is the same in the case of locative constructions in the sense that in one language the locative verb presents an event that is construed as change of state, while in another language, the same locative verb presents the same happening as manner of motion. Levin and Rappaport (1995) concluded that the existence of alternate construals involving different grammatically relevant aspects of meaning leads to near-synonyms within or across languages with different argument realization options.

It seems that in the case of the acquisition of English locative constructions by Persian EFL learners, both parameter setting and parameter resetting processes are at work. As far as locative construction is concerned, there are two related differences between the L1 (Persian) and the L2 (English) that the L2 learner must discover: I) some of the locative verbs do alternate in English II) a verb that is figure-oriented non-alternating in Persian may be ground oriented in English or vice-versa.

Stated as the first difference, some locatives do alternate in English,

but do not alternate in Persian. It can be called alternation parameter with two values: Positive value: alternate those locative verbs that denote both state change and object motion (English), and Negative value: do not alternate any locative verb unless specified otherwise (Persian). In this regard, English is a bigger language than Persian since for each alternating verb in English' we have two possible structures through changing the object position while in Persian there is not such a possibility. In other words, Persian seems to be a more restricted language than English. With regard to the locative verbs, English is the superset and Persian is the subset language. Iranian EFL learners, who learn English as their L2, begin with the initial unmarked subset value in Persian and then reset it as superset value. They need positive evidence to help them reset the value at the superset and learn that the verbs that signify both state change and object motion do alternate. Generally, Iranian Persian speakers practice language as a subset language unless specified otherwise .i.e., unless there is positive evidence on the value resulting in the superset language. One point that needs, however, to be taken into consideration is that not all English locative verbs alternate. Negative evidence is required to indicate to the learner the impossibility of alternation of certain verbs in English. The second difference between L1 (Persian) and L2 (English) regarding locative constructions is that a verb that is figure-oriented non-alternating in Persian may be ground oriented in English or vice-versa. That is here that negative evidence comes to the scene to play its role. The learners need negative evidence to learn the existing controversies between figure and ground-oriented verbs in English and Persian. In other words, parameter resetting of this kind requires negative evidence.

Teachers, who are aware of such concepts as subset and superset language and parameter setting and resetting, can provide their learners with the required amount of positive or negative evidence for each argument structure, depending on whether the acquisition of the L2 target structure requires parameter setting or resetting and whether the target language is the subset or superset language regarding the peculiar argument structure that is to be taught. In the case of parameter setting, the teachers can provide their learners with abundant amount of

input involving instances of the intended argument structure in various ways. L2 learners should be exposed to the use of these constructions in different oral and written contexts to help them make correct syntax-semantics correspondences. In the case of parameter resetting, however, they may also need to use the negative evidence.

6. Conclusion

The obtained results showed that in the absence of form-focused in-struction, the proficiency level greatly influenced EFL learners' recogni-tion and grammaticality judgment of these constructions. In the case of the production task, as the results revealed, there was not much differ-ence between the three groups with respect to producing and using non-alternating figure and non-alternating ground. The members of all three groups performed rather well in producing non-alternating frames. How-ever, in the case of alternating frames (alternating figure and alternating ground) the third, high-proficiency group proved to be more skilled. An important point to be noticed here is that although the difference among the involved groups regarding the production of the alternating forms has been shown to be significant, the comparison of the means shows that the means are very close to each other, indicating that even Iranian EFL learners at high levels of proficiency are not so much capable of producing alternating forms.

The results of the study revealed the great effect and trace of Learn-ers'L1 (Persian) on the use and acceptability judgment of English loca-tive constructions. This influence showed itself mainly in two aspects. First, Iranian Persian speakers are mainly figure-oriented, having great ten-dency to present locative constructions in their figure-oriented form. The evaluation of sentences produced in the production task showed that in the case of both alternating figure and alternating ground verbs, the participants in majority of cases produced the figure form of the alter-nating verb. Second, except for some instances of alternation used by the high-proficiency group, other participants produced only one form of the locative alternations in the production task and judged as correct only one instance of the alternators.

References

Al-Wahaib, M. (2004). *The acquisition of English locative alternation by Jordanian EFL learners.* Unpublished master's thesis, University of Jordan, Amman.

Bley-Vroman, R. and Joo, H. (2001). The acquisition and interpretation of English locative constructions by native speakers of Korean. *Studies in Second Language Acquisition, 23* (2), 207-219.

Bley-Vroman, R. and Yoshinaga, N. (1992). Broad and narrow constraints on the English dative alternation. Some fundamental differences between native speakers and foreign language learners. *University of Hawai'i Working Papers in ESL, 11* (1), 157-199.

Choi, M. H. and Lakshmanan, U. (2002). Holism and locative argument structure in Korean-English bilingual grammars. In B.Skarabela, S. Fish, & A. H. J. Do (Eds), *Proceedings of the 26th Annual Boston University Conference on Language Development,* 95-106. MA: Cascadilla Press.

Inagaki, S. (1997). Japanese and Chinese learners' acquisition of the narrow range rules for the dative alternation in English. *Language Learning, 47* (4), 637-669.

Joo, H. R. (2003). Second language learnability and the acquisition of the argument structure of English locative verbs by Korean speakers. *Second Language Research, 19* (4), 305-328.

Juffs, A. (1996). *Learnability and the lexicon: Theories and second language acquisition research.* Philadelphia: John Benjamins.

Karimi, S. (2003). *Word order and scrambling.* Oxford/Berlin: Blackwell Publishers.

Lee, J. S. (2009). The acquisition of English locative constructions by native speakers of Korean: Pragmatic competence or syntactic incompetence? *Indiana Undergraduate Journal of Cognitive Science, 4,* 3-16.

Kim, M., Landau, B., and Phillips, C. (1999). Cross-linguistic differences in children's syntax for locative verbs. *Proceedings of the 23rd annual Boston University conference on language development,* 337-348. Somerville, MA: Cascadilla Press.

Levin, B. and Rappaport, M. (2005). *Argument realization.* Cambridge: Cambridge University Press.

Olbishevska, O. (2005). Locative Alternation in Slavic: The Role of Prefixes. In M. Junker, M. McGinnis, & Y. Roberge (Eds.). *Proceedings of the 2004 Annual Conference of the Canadian Linguistic Association,* (CLA).

Pinker, S. (1989). *Learnability and cognition: The acquisition of argument structure.* Cambridge, MA: MIT Press.

Rappaport, M. and Levin, B. (1998). What to do with theta-roles. In W. Wilkins (ed.), *Syntax and semantics: Thematic relations,* (pp.7-36). San Diego, Calif.: Academic Press.

Rezai, M. J. and Avand, S. (2008). The acquisition of English locative constructions by Persian speakers: Syntax-semantic interface. *Iranian EFL Journal, 3* (1), 255-274.

Wolfe-Quintero, K. E. (1992). *The representation and acquisition of the lexical structure of English dative verbs: Experimental studies of native English speakers and Japanese and Chinese adult learners of English.* Unpublished doctoral dissertation, University of Hawai'i, HI.