

## EFL learners' learning of English verb argument structure

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### Introduction

The category of Verb Argument Structure has been a controversial issue in language learning and there have been many different views about the relationship between VAS, language learning and teaching.

In syntax, an argument is defined as 'a noun phrase bearing a specific grammatical or semantic relation to a verb and whose overt or implied presence is required for well-formedness in structures containing that verb' (Trask 1993: 20).

There are some rules about VAS which are stable such as the rule which posits that all verbs in a language must be used in at least one argument structure; there is no controversy about these stable rules, but there are some rules which are unstable and most of the controversies and differences of perspectives among researchers and TESOL experts are rooted in these unstable rules. For example, most verbs may appear in two or more structures according to the different positions they are applied. Thus, many researchers have argued that the lexical entry for each verb in the mental lexicon must specify which argument structures a verb permits in the form of sub-categorization frames (e.g. Baker, 1979, Oehrle, 1976).

Others have argued that sub-categorization frames are unnecessary because so much of a verb's argument structure can be derived from its meaning (e.g. Levin 1993, Pinker 1989). Thus, if one can appropriately identify the relevant meaning of a given verb, one can determine the argument structure of that verb. Still other researchers have argued that not verb meanings but rather construction meanings are the essential starting point for understanding argument structure (e.g. Fillmore *et al.* 1988, Goldberg 1995).

This is a simple point of discourse pertaining to VAS which can be construed as controversial; there are lots of cases like this in VAS. Even though this category (VSA) is not as old as other issues in TESOL, it still receives a great deal of significance, and plays a vital role in ELT. It is still growing and experts are trying to cope with its deficiencies in order to obtain the aforementioned goal. This perspective is novel because its cornerstones and foundation are not so old when compared with other issues in TESOL. The core of VAS is prevalently utilized around Construction Grammar and marginally used with Dependency Grammar view points. These subjects are still at a point of rapid evolution and require a more comprehensive future study. It goes without saying that there are some dubieties present but all of these speculated uncertainties or flaws can be overcome or removed with further scrutiny of these novel territories. These two view points toward language are potentially capable of answering many questions which help us near finding a solution for the challenges of learning a second language. Both of these viewpoints, Construction Grammar and Dependency grammar, are stipulated as the pivotal role of **verb** which shows itself on the category of Verb Argument Structure (VAS).

### **Statement of the problem**

Language experts consistently put stress on the issue that one of the most important difficulties of EFL learners is that they do not know how to match the syntactic and semantic aspects of English. This problem represents itself in **verb argument structure**. Knowing how to accommodate these two language perspectives of the target language in a proper form has a significant role in successful language learning. Language instructors are usually faced with the question of what the effective way of teaching verb argument structure as well as other skills of language is (Goldberg 1995).

A number of studies (e.g. Levin, 1993; Mc-Carthy and Korhonen, 1998; Trask 1993; Stevenson and Merlo, 1999, Goldberg 1995; Lapata, 1999; Lapata and Brew, 1999) have investigated the manner of acquisition, application, learning and teaching of Verb Argument Structure in different natural and educational contexts.

Although VAS has been pondered during the past 2 decades in English, there is a limited research concerning the exact nature of the relationship between VAS and language learning in English for Persian learners. Thus, it is felt that Iranian EFL learners need to be provided with a proper knowledge of VAS.

The major goal of the present study; therefore, is to help resolve part of the existing controversy in the field. The present study attempts to investigate the extent to which Iranian EFL learners have problems with learning the argument structure of a certain verb. Since VAS is construed as a matter of prediction, it could be contributing to inaccurate prediction of verbs from both syntactic and semantic with reference to Iranian EFL learners. This study will be done with the aim of investigating the effective ways of learning and teaching verb argument structure and seeking out how it is possible to help the Iranian EFL students learn English verb argument structure in a more efficient way. By means of delineating which verbs are to appear in which argument structures, students can sort out verb argument structures more accurately.

### **Significance of the study**

Knowledge of the relationship between VAS and second language learning will help teachers reconsider their views about traditional instruction, testing and curriculum. Researchers have long debated on the processes by which verb argument structure is learned by L2 learners or what its role is in learning L2 e.g. Cook 1976, Osgood 1981, Pinker, 1989, Goldberg, & Wilson 1989, 1997). Much of this research has focused on languages like English, which is learned by foreigners, but there were rare cases about the process, manner of learning of Verb Argument Structure (VSA) by Iranian learners. And as a result of that it seems there is lack of research on this issue in Iran.

TESOL specialists emphasized the role of verb argument structure in teaching and learning foreign languages, because it is the boundary between semantic and syntax in any language. However, there has been a great debate on the most effective way to develop learners' knowledge verb argument structure (Pinker 1989). The purpose of the study is to discover underlying problems of Iranian EFL learners in learning of English verb argument structure. This study investigates and compares the affects of the modes of developing Iranian learners' knowledge of verb argument structure and seeks to assist the Iranian EFL students to learn English verb argument structure in a more simple and proper way .

Thus, the present study investigates the extent to which VAS is a predictor of accurate applying of language from both syntactic and semantic respects among the Iranian EFL learners.

### Research questions and research hypotheses

The present study is an attempt to answer the following questions:

1. Do Iranian EFL learners learn English verbs by focusing on the meaning of the verbs per se?
2. Does the argument structure of the verbs matter in Iranian EFL learners' learning of English verbs?

It is worth noting that theories of verb argument acquisition, learning, and teaching are still very much changing and evolving since the early days of developmental psycholinguistics in the 1960's; this has been gathered through a mountain of cross-linguistic research since the 1970's. Some researchers have tried to answer the questions which are related to this realm. But there is still a long way to go in order to fully understand and solve verb argument structure problems and uncertainties or deficiencies like problems of verb argument acquisition, learning, or verb realization in the speech of children and adults.

Among those who worked outstandingly on this domain are L. Bloom (1993), Hirsh-Pasek and Golinkoff (1996), Berman's (1986, 1988, 1998), Karmiloff-Smith (1986), and Pinker (1984), Jackendoff (1972), Grimshaw 1980, Fillmore (1977), Levin (1985), Trask (1989), Lakoff (1975). In line with previous developmental analyses, and most particularly Adele E. Goldberg (1995), accounts of constructive, cognitive and linguistic development in such a manner that we can dare say *verb argument structure* study reached its zenith by Goldberg's contribution. Therefore this study mainly works off the basis of Goldberg's findings and theories.

Shanley Allen (2008) states that Argument is a contribution to linguistics at the interface between lexical syntax and lexical semantics. In other words, Argument is commonly described as an intermediate between semantic *role structure* and syntactic *function structure*. Semantic roles have a great deal of information that has little to do with the syntax, but argument concentrates on information relevant to syntax; but this does not mean that they do not affect each other.

In order to make it clear we can pay attention to this following sample. In passivization: *a player shoot the ball* and *the ball was shot by a player* have different surface to syntactic grammatical relations, but the same argument structure. Although these two sentences have different grammatical structures, this difference helps us to obtain the correct meaning of these sentences.

Sometimes argument structure can be identified with **theta-grid** (which will be discussed below in detail). Argument structures are interesting for both linguists who have focused on the nature and form of linguistic representations and as well as TESOL experts who study the acquisition and language use and try to solve the problems and answer the questions which are related to language learning.

While the concept of argument is being fully clarified, it is better to proceed to **verb argument structure**. Despite the different views among linguists about VAS, it is generally accepted that a **verb argument** is a phrase that occurs in a syntactic relationship with the verb in a clause in any languages. In English, the **subject** and the **direct object** are the two most significant arguments, which are called **core arguments**.

### Argument Structure Theories

Normally it is believed that Arguments are structured hierarchically and they are not an ordered list which is put together haphazardly. That is, each argument has a pecking order level,

and analogized with others. This is also known as the thematic hierarchy where the thematic roles are used.

Thematic Hierarchy:

- a. <Agent, Location/Source/Goal, Theme> (Jackendoff 1972)
- b. <Agent, Experiencer, Location/Source/Goal, Theme> (Grimshaw 1990)
- c. <Agent, Theme, Goal, Obliques> (Larson 1988)
- d. <Agent, Theme, Goal/Benefactive/Location> (Baker 1989)

Some linguists like Grimshaw (1990) and Li (1990) assume that the status of arguments is relative. According to them by the **relative theory** of argument structure, the status of an argument is determined when compared with other arguments. Following this theory, Grimshaw (1990) defines external argument as the most notable argument in the thematic tier and aspectual tier. However, this theory is still open to question. One serious problem with the relative theory is that it cannot determine the argument status of a single argument, in such a manner that whether it is the most or least determinant in a sentence since it needs to be compared with previous sentences' arguments.

On the other hand, in the **absolute theory** of argument structure, the status of arguments is not relative, but absolute. That is, an argument has its own value without being compared with others. So when there is a single argument, it has its own hierarchical importance.

### Argument Structure types

There are different classifications toward Argument Structure types. But today only the first 3 classes are remained as the focal point for linguists.

Davidson (1967) classified Arguments in the following way:

1. obligatory argument and optional argument
2. external argument and internal argument
3. direct argument and indirect argument
4. suppressed argument
5. deleted argument
6. event argument

In most cases Arguments are **obligatory**, but there are some arguments which are **optional**. Arguments are linked to, some **syntactic positions**. Some arguments are always apprehended on the subject position and some on the **object** position. According to this syntactic apprehension, argument types can be categorized as external argument and internal argument. External argument is an argument which is realized outside the maximal projection of the predicate, whereas internal argument is one realized inside the maximal projection of the predicate (Williams 1980, Chomsky 1981). Moloji (2000) suggests that, in spite of the prevalent opinions of the linguistic community, argument structure is in fact structured: it encodes pivotal relations among arguments that reflect both their *thematic* and their *aspectual* properties. These relations support the theory of external arguments with distant consequences for the syntactic behavior of predicates and the nature of cross-categorical variation in argument structure.

The other types of arguments are direct argument and indirect argument. This distinction is based on the existence of prepositions; if an argument is realized with a preposition, it is an indirect argument, and if an argument is realized without a preposition, it is a direct argument (Marantz 1984).

### Argument Structure in the Verb Phrase (VP)

The verb is the **head** of the VP, that is to say the verb is the most prominent segment of a sentence that justifies the need of any other element in the VP. Conforming with each type of event that verbs related to, different classes of verbs occurred.

Verbs can refer to actions (such as *beat*) or states (such as *sit*), processes (such as *grow*), achievements (such as *reach*), etc. Each event posits the presence of role players. Therefore linguists say that the verb assigns **roles** (called thematic roles, or theta-roles) to its **arguments** (the role players). According to the type of event referred to, the verb is combined with a number of arguments (including complements and the subject) that goes from zero to three (rarely four). According to baker (1989) for each verb the information specified in the lexicon includes the following:

- a) the type of verb,
- b) the thematic roles that are assigned to its arguments,
- c) what is the hierarchy of the arguments (with the associated theta-role),
- d) whether they assign case to one or more arguments.

It is important when learning a foreign language to note that whenever the verb's meaning like the type of event they refer to and as a result of that the theta-roles assigned by it would be corresponding or similar to L1 and L2, the hierarchy of the arguments may be very divergent.

Traditional grammar categories verbs in conformity with the number of arguments they pick out. Moreover, traditional grammar adverted to arguments with the role that they play in the sentence, such as subject, object, and indirect object. Generally traditional grammar, classified verbs to intransitive verbs (with one argument, remarkably the subject), transitive verbs with two arguments (subject and object), ditransitive verbs with three arguments (subject, direct object, indirect object). In order to facilitate the understanding of these verb types, explanations of Baker (1989) are used here.

### Construction grammar and verb argument structure

Construction Grammar argues that all grammatical phenomena can be understood as learned pairings of form-meaning mappings (from morphemes, words, and idioms, to partially lexically filled and fully general phrasal patterns) and their associated semantic or discourse functions: "the network of constructions captures our grammatical knowledge (Goldberg, 2006, p. 18).

Such viewpoints, which extensively leave a direct impression on the study of child language acquisition, have modified generative suppositions of innate language acquisition devices, the continuity hypothesis, and top-down, and rule governed processing thoroughly. Thus data-driven process culminated again by Construction Grammar.

According to Ellis & Cadierno,( 2009) the usual determinants in the learning of constructions as form-meaning pairs verb argument structure encompass:

- (1) input frequency (type token frequency, Zipfian distribution, recency),
- 2) form (salience and perception),
- (3) function (prototypicality of meaning, importance of form for message comprehension, redundancy),
- (4) interactions between these (contingency of form-function mapping)

Goldberg, Casenhiser & Sethuraman (2004) indicated that in the realm of child language acquisition, for different types of verb-argument constructions (VACs), there is a deep

predisposition for one verb to appear with very high frequency to other verbs which meticulously reflect what they see and hear as the mothers' speech to these children.

Goldberg et al. (2004) demonstrate that Zipf's law is relevant in the case of VACs as well, and they demonstrate that this elevates acquisition: tokens of one specific verb provide most of the cases of each specific argument frame; this path breaking verb also is the one with the prototypical meaning from which the construction is derived (Ninio, 1999).

### English Argument Structure Constructions

Ditransitive: (Subj) V Obj1 Obj2	X CAUSES Y to RECEIVE Z
Caused-Motion: (Subj) V Obj Obliquepath	X CAUSES Y to MOVE Z
Resultative: (Subj) V Obj Pred	X CAUSES Y to BECOME Z
Transitive: (Subj) V Obj	X ACTS on Y; X EXPERIENCES Y
Removal: (Subj) V Obj Obliquesource	X CAUSES Y to MOVE from Z
Way construction: (Subj) V [possi way] Obliquepath	X CREATES PATH & MOVES Zpath

Nowadays, there is an increasing tendency among linguists toward separating a verb's "core" lexical semantics from the semantics associated with the grammatical structures in which a verb can appear (Goldberg, 1992, 1995; Jackendoff, 1997; Rappaport Hovav & Levin, 1998).

Constructions prepare both the main verbs with which they normally arise, and the main verbs that are low-frequency associates. This support of semantic priming reveals a narrow relatedness between syntax and semantics in the realm of argument structure. That is, argument structure constructions are associated with meanings.

Briefly "Construction grammar" views argument structures as constructions, where the meaning of a sentence determined not only by the verb itself but also by the essential meaning of the specific syntactic context. Of course it is noteworthy that the argument structure in which the verb occurs has a decisive role in determining the meaning of a sentence in any language.

From this point of view, the grammar of a language is a combination of taxonomic networks of approximate group of constructions, which are founded on the alike rules, in like manner of those of the conceptual categories that are familiar to us from cognitive linguistics, like inheritance, prototypicality, extensions, and multiple parenting.

### Shift towards usage-based model

Any construction grammarians supported one of these four models but since the late 1990s there has been an alteration towards selecting usage-based model as the most favored model among others. This movement gave rise to the growth of a number of **corpus**-based methodologies of constructional analysis. The most significant among them is **Collostructional analysis**. **Collostructional analysis** is related to groups of **methods** developed by Stefan Th. Gries (University of California, Santa Barbara) and Anatol Stefanowitsch (University of Bremen). It is intended to estimate the extent of attraction or repulsion that words expose to constructions (Goldberg's Construction Grammar).

### General Purpose Verbs and Constructional Meaning

The meanings of the most frequent verbs used in particular argument structure constructions bear a striking resemblance to the meanings independently posited for those argument structure constructions (Goldberg, 1995). The technical term for these most frequent verbs is "**General purpose**" verbs. Clark (1978) holds that "General purpose" verbs, including *put*, *go*, *do*, *make*, *etc* are among the first and most common verbs not only in English but also in many languages. The point here is that the prevalence of General purpose verb's meaning and their vastly regular

and early presence in child's discourse draw our attention to the point that perhaps General purpose verb's meaning help children in generalizing patterns from the input. There have been some conjectures about the manner of the association between definite verbs and argument structure patterns in years gone by chief researchers in linguistics and language acquisition. As a result of that some of the researchers hypothesized that Children are sensitive to the meanings of early General purpose verb because of the related semantic knowledge. The proof for this claim Children draw distinction among several inflectional morphemes while they using them.

One of the Goldberg's hypothesis is that when some specific verbs appears in specific constructions repeatedly, it allows children to detect correlation between the meaning of a specific verb in a constructional pattern and the pattern itself, they began to perceive an association between meaning and form.

The corpus data indicate that one verb can explain most of the tokens for all of the constructions. However, we have to bear in mind that the presence of a high frequency token, does not mean that it can make the acquisition of constructional meaning easier.

### **Dependency Grammar**

Dependency Grammar has largely developed as a form for syntactic representation used by traditional grammarians, especially in Europe. In a way that it developed in France and Germany to a large extent, and in Classical and Slavic domains mildly (Mel'čuk, 1988).

One can dare said that this grammatical practice came to its climax by the seminal work of Tesnière (1953), in such a manner that language experts believed that his works must be considered as the inception of the *modern* theoretical tradition of dependency grammar. This tradition is consist of a great number of different groups of grammatical presumptions, hypotheses and formalisms that may have a series of fundamental premises about syntactic structure with other grammatical traditions in common.

According to this grammatical practice, **syntactic structures** are formed from lexical elements connected together by binary asymmetrical relations between words of the sentences, which in technical term they are called *dependencies*.

The proponents of DG believed that there must be some differentiation among dissimilar types of dependency relations. According to Mel'čuk (1988), the word forms of a sentence can be linked by three types of dependencies: *morphological*, *syntactic* and *semantic*.

In another classification, Nikula (1986), by following the former studies of Bloomfield, (1933) categorized syntactic dependency to *endocentric* (construction made of an obligatory head and one or more dependents) and *exocentric* (construction consists of two or more parts, whereby the one or the other of the parts cannot be viewed as providing the bulk of the semantic content of the whole.)

The dissimilarity between endocentric and exocentric constructions is applicable to the heart of *head-complement* and *head-modifier* (or *head adjunct*) interconnections found in the large number of current syntactic theories as well, in a way that head complement relations are exocentric while head-modifier relations are endocentric.

The differentiation between complements and modifiers is best described through valency. The whole theory of dependency grammar revolves around this term. The concept of valency as cited before is connected to the semantic predicate argument structure correlated with definite classes of lexemes, specifically verbs. A brief description of this notion is that the verb applies some prerequisites on its syntactic dependents that indicate how that certain verb must be construed while functioning as a semantic predicate.

From VAS point of view, Dependents in the Dependency Grammar can be classified into two groups. On the one hand, there are groups of Dependents that are in agreement with arguments of the predicate that can be obligatory or optional in surface syntax but can only occur **once** with each predicate. On the other hand, Dependents that are not in agreement with arguments can have more than one manifestation with a single predicate and is likely to be optional. However,

Conventionally, the *valency frame* of the verb, is supposed to hold argument dependents but in an investigation Sgall, et al (1986) demonstrate that some family of Dependency Grammar, might allow obligatory non-arguments to be comprised as well.

In Dependency Grammars the **head verb** of the sentences plays a key role in the interpretation and comprehension of verb in a sentence, to the extent that [Tesnière \(1953\)](#) drew a parallel between a head of sentences and the brain in the human body. At the bottom of line, in order to differentiate between dependents that are more or less approximately associated to the semantic interpretation of the head, the terms *valency-bound* and *valency-free* is employed which shows the degree of influence of head on the interpretation of each sentence.

The proponents of Dependency Grammar mentioned some privileges over phrase structure representations like conciseness, intuitive appeal, and closeness to semantic representations particularly this **predicate-argument structure**.

Of course, it is noteworthy that Dependency Grammar has some terms which are similar with other language theories but with different names. For example in another designation, Dependency grammars occasionally name arguments as *actants*, following [Tesnière \(1959\)](#).

The last point is that Dependency Grammar framework does not want to be appropriate or put stress on just one language. It tries to generalize its rules, in such a manner that Dependency Grammar wants to meet the needs of all language learners and be answerable to any questions of not a particular language but all languages. Since the concept of Dependency **Unification Grammar** (DUG) is formed. (DUG) has been executed as a framework for parsing all natural languages which characterizes the **argument structure** as a level of syntactic description. Normally, in an argument structure there is no gradation according to the participant roles. Quite the opposite, the subject is regarded to be an argument of the verb as anything else (e.g. objects). From this perspective, particular patterns are attributed to the verbs to deal with Control and extraposition structures that bring about these structures. Based on this theory, there is a rule processor which develops and generates supplementary according to the ones which existed in the lexicon.

## Participants

Eighty students of intermediate level were chosen randomly as the participants of this study. They were studying English (Top-notch 2A) in Jahade Daneshgahi language institute in Karaj. They have studied English for more than one year and all have covered the same course books in the same institute. They were all males, ranging in age from 16 to 25. A Grammar sub-test of Michigan Test of English Language Proficiency (MTELP) was administered to select a homogenized group of participants. The initial number of the participants was then reduced to 50; 30 of the participants were excluded since their proficiency level did not correspond to that



of the other participants. Therefore, the final number of participants who actively participated in this study was 50.

### **Instruments**

In the present study, the following instruments were utilized to collect data:

#### **Grammar sub-test of Michigan Test of English Language Proficiency (MTELP)**

A Grammar sub-test of Michigan Test of English Language Proficiency (MTELP) was administered to the Participants, In order to determine the participants' level of grammar knowledge. This grammar subtest included 35 multiple choice items which was used to not only specify their level of proficiency but also to form a homogenize group. (See Appendix A).

#### **Goldbergian Verb Argument Structure Test**

As it was mentioned before, the main body of this study is based on Goldbergian construction grammar, therefore in order to see that whether we meet the same results as Goldberg published, the similar frame work is used for testing the quality of Iranian EFL learners' learning of English verb argument structure in this study. This test was designed in such a manner that, the main English Argument Structure Constructions tested indirectly. This self-made test comprised 80 sentences which all designed in accordance with Adele E. Goldberg's theory of English Argument Structure Constructions (2006, p.73). These 80 sentences divided into 20 primaries or it is better to say true sentences which are combinations of five high token frequency verbs (get, take, open, throw, slice) in English and 60 other sentences which all incorrect whether semantically or syntactically. Of course in a different scope, because as cited at the beginning of this study, the category of verb argument is the boundary between semantics and syntax, consequently it is possible to test both of these facets simultaneously.

By different scope, it is meant that all of the participants provided by a questionnaire comprised 80 sentences. Beside each sentence, there are 6 choices which are ranged from Very well structured to Very poor structured. Participants must choose the choice which is more approximate to correct position of the given sentence.

The inaccurate sentences which in technical term called as Filers, was employed to realize how Iranian EFL learners discriminate between correct and incorrect sentences from both semantic or syntactic perspectives (See Appendix B).

### **Procedure**

Initially, the participants of the study were selected from Jahade Daneshgahi language institute in Karaj. In order to have a homogenized group of participants, a Grammar sub-test of (MTELP) was administered to the participants. The initial number of participants was 80 but after holding the Grammar sub-test of (MTELP), and scoring the papers and computing the mean and standard deviation, for the purpose of selecting a homogeneous group of participants, those whose score was less than one standard deviation away (above or below) of the mean were selected as the sample of the present study. Thirty participants were excluded due to either a high or a low proficiency level; therefore, only fifty of the participants remained as the final sample of the study.

After fixing the proficiency level of the participants, the Goldbergian Verb Argument Structure Test was administered to specify the participants' understanding or it is better to say comprehension of Verb Argument Structure. The participants were required to select one of the six choices which were ranged from *Very well structured* to *Very poor structured*. As it was mentioned before, participants were asked to choose the choice which is more approximate to

correct position of the any given sentence. The time allocated for the first Grammar test was 30 minutes and for the Goldbergian one was 60 minutes.

The purpose of these tests was to measure participants' grammar knowledge and to understand the manner and quality of recognizing argument structure patterns by the Iranian EFL learners. Finally, test sheets (Goldbergian test) were scored by the researcher and the collected data were submitted to SPSS-based statistical analysis.

### Data Analysis

After administering the tests and the questionnaire, in order to test the research hypotheses and answer the research questions, a repeated measures ANOVA was run. In the following chapter, the results of the analysis will be presented.

Twenty English sentences were used, obtained by crossing five verbs with four constructions. Each sentence was printed in the center of an index card. The verbs were throw, open, slice, get, and take. The constructions were: ditransitive, caused motion, resultative, and transitive, as shown in Table 1. No content words other than the verb were repeated throughout the stimuli set. The names were of the same gender. The stimuli are provided in the Appendix.

**Table1**  
The verbs and constructions used in the study

Verb	Construction			
	Transitive	Ditransitive	Caused motion	Resultative
Throw	Anita threw the hammer.	Chris threw Linda the pencil.	Pat threw the keys onto the roof.	Lyn threw the box apart.
Get	Michelle got the book.	Beth got Liz an invitation.	Laura got the ball into the net.	Dana got the mattress inflated.
Slice	Barbara sliced the bread.	Jennifer sliced Terry an apple.	Meg sliced the ham onto the plate.	Nancy sliced the tire open.
Take	Audrey took the watch.	Paula took Sue a message.	Kim took the rose into the house.	Rachel took the wall down.

### The first research question

The first research question raised in this study was as follows:

1. Do Iranian EFL learners learn English verbs by focusing on the meaning of the verbs per se?

The following table presents the descriptive statistics of the participants' performance on the five verb types and the four constructions. The table shows the mean scores of the participants' performance on understanding the sentences containing a specific verb regardless of the particular construction in which the verb was used. As the table shows, the mean score for the sentences containing the verb *get* was 2.68, which is the lowest and the mean score for the sentences containing the verb *open* was 3.078 which is the highest.

**Table2**  
Descriptive statistics for the participants' understanding the sentences containing the same verb

**Estimates**

Measure: MEASURE\_1

VERBTYPE	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	2.686	.082	2.521	2.852
2	2.873	.110	2.652	3.093
3	3.078	.092	2.893	3.264
4	2.740	.107	2.526	2.955
5	2.799	.083	2.633	2.965

In order to determine whether the verb itself has any effect on the comprehension of the sentences, a repeated measures ANOVA was run. The results presented in the following table shows that the effect of the verb type was not significant ( $p = .712$ )

**Table 3**

**Tests of Within-Subjects Contrasts**

Measure:MEASURE\_1

Source	verb	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Verb	Linear	.708	1	.708	.138	.712	.003
	Quadratic	37.211	1	37.211	5.963	.018	.107
	Cubic	11.625	1	11.625	3.107	.084	.059
	Order 4	26.400	1	26.400	3.704	.060	.069
Error(verb)	Linear	256.592	50	5.132			
	Quadratic	312.003	50	6.240			
	Cubic	187.075	50	3.741			
	Order 4	356.385	50	7.128			

Table 4 shows the difference between pairs of verb types.

**Table 4**

**Pairwise Comparisons**

Measure: MEASURE\_1

(I) VERBTYPE	(J) VERBTYPE	Mean Difference (I-J)	Std. Error	Sig. <sup>a</sup>	95% Confidence Interval for Difference <sup>a</sup>	
					Lower Bound	Upper Bound
1	1					
	2	-.186	.112	.101	-.410	.038
	3	-.392*	.102	.000	-.598	-.187
	4	-.054	.120	.655	-.295	.187
	5	-.113	.113	.325	-.341	.115
2	1	.186	.112	.101	-.038	.410
	2					
	3	-.206	.115	.080	-.437	.025
	4	.132	.094	.167	-.057	.322
	5	.074	.131	.577	-.190	.337
3	1	.392*	.102	.000	.187	.598
	2	.206	.115	.080	-.025	.437
	3					
	4	.338*	.121	.007	.096	.581
	5	.279*	.120	.024	.039	.520
4	1	.054	.120	.655	-.187	.295
	2	-.132	.094	.167	-.322	.057
	3	-.338*	.121	.007	-.581	-.096
	4					
	5	-.059	.134	.662	-.327	.210
5	1	.113	.113	.325	-.115	.341
	2	-.074	.131	.577	-.337	.190
	3	-.279*	.120	.024	-.520	-.039
	4	.059	.134	.662	-.210	.327
	5					

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

<sup>a</sup>. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

**The second research question**

The second research question raised in the study was:

Does the argument structure of the verbs matter in Iranian EFL learners' learning of English verbs?

The following table presents the descriptive statistics of the participants' performance on the four constructions. Table3 shows the mean scores of the participants' performance on understanding the sentences containing a specific verb participating in a particular construction. As the table shows, the mean score for the sentences containing transitive constructions was 9.39, which is the lowest and the mean score for resultative sentences was 16.86 which is the highest.

**Table 5**  
**Descriptive Statistics of the 4 constructions**

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Transitive	51	5.00	20.00	479.00	9.3922	3.77401
Ditransitive	51	9.00	23.00	841.00	16.4902	3.56299
Caused motion	51	8.00	25.00	712.00	13.9608	3.19975
Resultative	51	10.00	22.00	860.00	16.8627	2.60015

In order to determine whether the construction has any effect on the comprehension of the sentences, a repeated measures ANOVA was run. The results presented in the following table shows that the effect of the construction type was significant ( $p = .000$ )

**Table 6**  
**Tests of Within-Subjects Contrasts**

Measure: MEASURE\_1

Source	structure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
structure	Linear	1008.035	1	1008.035	124.614	.000	.714
	Quadratic	224.490	1	224.490	28.416	.000	.362
	Cubic	578.259	1	578.259	62.414	.000	.555
Error(structure)	Linear	404.465	50	8.089			
	Quadratic	395.010	50	7.900			
	Cubic	463.241	50	9.265			

Table7 shows the difference between pairs of construction types.

**Table7**

Pairwise Comparisons

Measure: MEASURE\_1

(I) STRUCTUR	(J) STRUCTUR	Mean Difference (I-J)	Std. Error	Sig. <sup>a</sup>	95% Confidence Interval for Difference <sup>a</sup>	
					Lower Bound	Upper Bound
1	1					
	2	-1.420*	.130	.000	-1.680	-1.159
	3	-.914*	.108	.000	-1.131	-.697
	4	-1.494*	.115	.000	-1.725	-1.263
2	1	1.420*	.130	.000	1.159	1.680
	2					
	3	.506*	.118	.000	.268	.743
	4	-.075	.115	.521	-.306	.157
3	1	.914*	.108	.000	.697	1.131
	2	-.506*	.118	.000	-.743	-.268
	3					
	4	-.580*	.101	.000	-.784	-.377
4	1	1.494*	.115	.000	1.263	1.725
	2	.075	.115	.521	-.157	.306
	3	.580*	.101	.000	.377	.784
	4					

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

<sup>a</sup>. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

## Discussion

The present study attempted to investigate the effects and quality of Argument structure of the verb on verb's learnability by male intermediate level Iranian EFL learners. Some of the findings of the present study are in line with a number of previous studies (Trask 1989; Fillmore 1977; Bybee 2010; Dąbrowska 2004; Diessel 2004; Goldberg 2006; Tomasello 2003; Palmer, 2007; Chen, 2005) which support the present findings holding that it is absolutely essential to teach argument structure of the verb to Iranian EFL learners when they are taught verbs and everything related to it. At the same time, the results of the present study are different from some other studies (Chomsky, 1980, 1988; Pinker, 1994; O'Grady 1997; Jackendoff, 2005) which found no significant relationship between the of input (VAS) and learning abstract syntactic structures like verbs.

The research questions of this study dealt with whether there is any necessity to teach argument structure of the verb to Iranian EFL learners or not. Based on the data analyses presented in Chapter 4, the null hypotheses were rejected. Therefore, the findings of the study showed that it is absolutely essential to teach argument structure of the verb to Iranian EFL learners when they are taught verbs and everything related to it. The findings of the present study are in line with a number of other studies of **usage-based** researchers such as Bybee 2010;

Dąbrowska 2004; Diessel 2004; Goldberg 2006; Tomasello 2003; Palmer, 2007; Chen, 2005, suggesting that It is necessary to teach argument structure of the verb to learners.

This study supports Eysmont (2010) and other usage-based researchers' who claim that the learning of verb-argument structures highly depends on the knowledge of semantics which is acquired generally by analogy with other verbs of the same semantics (motion, speech, perception, etc.) (Gropen, Pinker, Hollander & Goldberg 1991; Tseitlin 2009).

It also shows that semantic part of the verb is discerned easier than syntactic rules of VAS, even in relation to simple sentence structure, This result seems to be quite understandable and predictable, as the semantics of verbs and especially their syntactic parts of argument structures represent the structures of real events and their perception does not require any specific language skills. Since the participants of our study did not use any language skill like reading or speaking in perceiving VAS of the given sentence.

As a matter of fact, the findings of the present study are in direct contrast with findings of the proponents of **Generative grammar** and its modern derivatives (Chomsky, 1980, 1988; Pinker, 1994; O'Grady 1997). Since this theory is mainly based on the notion that the input (verb) is not rich enough for the relevant generalizations to be learned; this is the well-known "**poverty-of-the-stimulus**" argument (Chomsky, 1980,). This theory considers grammar learning similar to a software package. In a way that everything is there, and the learner easily chooses the parameters that are fitting for his surroundings. In this way the teaching of argument structure of a verb of that given verb is useless which is absolutely in contrast with our findings, and a large number of **usage-based** researchers have found fault in this approach for its fundamental doubtfulness. (Deacon, 1997; Elman et al., 1996; Sampson, 1997).

This study also confirms Shanley Allen (2008) states that Semantic Roles in sentences have a great deal of information that has little to do with the syntax, but argument concentrates on information relevant to syntax;

The findings of the present study are also in agreement with the proponents of **absolute theory** of argument structure such as Adele E. Goldberg (1995), who believed that the status of arguments is not relative, but absolute. That is, an argument has its own value without being compared with others. So when there is a single argument, it has its own hierarchical importance, since in this study groups of sentences are used which has no connection to each other apparently, but participants could distinguish between grammatically correct and incorrect sentences in a way that verb argument of each sentence was differed from others.

The findings of the present study does not confirm Pinker (1989) suggestion that verb's learning only occurred when the learners form the canonical mapping between thematic roles and syntactic functions. In such a manner that when learners learn a verb they knew know how many arguments the predicate has and what their thematic roles are. Nevertheless in our study, a number of utilized sentences were grammatically incorrect, but the participants not only distinguished the inaccurate sentence but also they discerned the level of inaccuracy of that sentence too. So this is an indisputable evidence that the canonical mapping between thematic roles and syntactic functions is not a key factor for learning a verb. Since as other studies revealed and this study proved that as well, in some languages the patient is linked to subject and the agent is linked to the object (Dixon, 1972; Marantz, 1984; cited by Bowerman, 1990). Therefore the trend of verb learning is not always in this way, and argument structure of a verb must be taught in advance to grantee thorough verb learning. Of course the erroneusness of

Pinker's suggestion (1989) rooted in Nativist theory. Because according to Nativist theory the key role of **input** (VAS) is underestimated and mostly the concept of **Language Faculty**, which fixes the form and meaning of the language sentences, receives a great deal of attention.

From another vantage point of view, obtained results support Clark (1978) and Goldberg, (1995), who suggests that "General purpose" verbs, including *put, go, do, make, etc* are among the first and most common verbs that learners learn and their meaning help learners in generalizing patterns from the input., since in our study participants discerned "General purpose" better than other verbs.

Moreover, the findings of the present study partially corroborate those of Goldberg (2000). Goldberg's hypothesis that when some specific verbs appears in specific constructions repeatedly, it allows children to detect correlation between the meaning of a specific verb in a constructional pattern and the pattern itself, they began to perceive an association between meaning and form. The number of correct and wrong choices that participants select proved this hypothesis.

It is worthy to note that learners' gender and their proficiency levels may be possible reasons for differences in the results of this study. In the present study, the participants were male intermediate Iranian EFL learners and gender and age were not taken into consideration. However, the above mentioned areas of conflict are probably indicative of the need for further research.

### **Conclusion**

The present study was an attempt to investigate the effects and necessity of argument structure of the verb for Iranian EFL learners. With respect to the first research question, the requisiteness of teaching argument structure of the verb to Iranian EFL learners was checked and the analysis of the related data resulted in significant findings and indicated there was a positive relationship between argument structure of the verb and participants' verb learning.

As to the second research question, the effect of Argument structure of the verb on the learnability of the verb was investigated and the results obtained from the study showed that the argument structure of the verb affect the learnability of the verb. The more teachers worked on the argument structure of the verb and they familiarized learners with the principles and regulations of the verb argument structure, the more proficiency and productivity acquired.

It can be concluded that since the subject of VAS in Iranian context is proceeded lately in comparison with other subjects of TESOL; longer instruction periods, a great number of participants, and various VAS related materials, activities and tests are required to be applied in order to investigate if VAS can cause different results in comparison to mere verb instruction in a greater scope and or not.

It can be claimed that familiarity with the subject of VAS provided opportunity for learners to comprehend the texts more successfully. Since according to Dependency Grammar theory, the core of the sentence is the verb, unlike to Generative Grammar which considers the subject of the sentence as the most important component of the sentence. In this way, if learner apprehend the verb better by having the experience of VAS, that would be helpful to grasp whole the text.

### **Pedagogical Implications**

The findings of the present study may provide some pedagogical implications for EFL teachers, learners, researchers, syllabus designers, material developers, and language testing specialists. The findings of this study show how important the role of verb argument structure in teaching and learning foreign languages is. Because as it is mentioned at the beginning of the



present study, it is the boundary between semantic and syntax in any language. However, there has been a great debate on the most effective way to develop learners' knowledge of verb argument structure (Pinker 1989) and it will be continued. This study investigates and compares the effects, quality and the manner of developing Iranian learners' knowledge of verb argument structure and to help the Iranian EFL learners to learn English verb argument structure in a more simple and proper way .

The result of this study can be used to discover underlying problems of Iranian EFL learners in learning of English verb argument structure.

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