

# A Generative Perspective of Kurdish EFL Learners' Problems in Argument Structure: A Syntactic-Semantic Analysis

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## ABSTRACT

This study investigates the problems of Kurdish learners of English as a foreign language (EFL) in two Kurdistan universities. The study aims to uncover both syntactic and semantic challenges, in relation to argument structure, that EFL learners face. The study also wants to reveal if there is any difference between the proficiency levels of the groups in the targeted universities. The thesis adopts a mixed-methods approach, as it contains both quantitative and qualitative data. The participants of the study are from two universities in Kurdistan Region of Iraq, namely Raparin and Salahaddin universities. Two effective tools have been used to collect the data. First, a written test to collect the quantitative data; second, a spoken think-aloud protocol for the qualitative data collection. The main results of this study indicate that EFL learners face critical problems in argument structure and the groups exhibit different levels of proficiency. The participants' ability in semantics was generally better than in syntax. Despite this fact, they faced challenges in both sub-skills of argument structure. The study concluded that EFL learners in the two universities encounter serious problems with the assignment of the theme thematic relation. The participants also faced critical problems with di-transitive verbs like spare and place.

KEY WORDS: Argument Structure, Generative, Thematic Relations, Transitivity, EFL.

## 1. INTRODUCTION<sup>1</sup>

Argument structure, which is also called valency, is one of the important subjects in generative grammar. It deals with the structure and meaning of sentences; that is, it has two sub-skills of syntax and semantics. It deals with how different predicates interact with their arguments, such as subjects (external arguments) and objects (internal arguments) and other elements like adjuncts to construct well-formed sentences and convey specific meaning(s) appropriately and efficiently (Carnie, 2013; Siemund & Hole, 2006).

In the argument structure analysis, components of the sentence can be classified into two main classes according to their functions in the sentence. These two types are the obligatory and optional elements (Grimshaw, 1990; Hinzen & Sheehan, 2013).

Obligatory elements refer to those components in the sentence that directly participate in the action or event described in the sentence. According to this analysis,

without having the obligatory components in a sentence, the sentence will collapse in both linguistic aspects of meaning and structure (Carnie, 2013; Radford, 2024). The first part of the obligatory elements is the predicate or the verb. According to the lexicalist point of view, the predicate is the sentence's most important element. Any normal sentence cannot stand grammatically and semantically without a verb (Carnie, 2011; Duguine et al., 2010; Miyagawa, 2012), for example:

1. They ignored her. (b) \*They her
2. He hates syntax. (b) \*He syntax

The second part of the obligatory elements in a sentence concerning argument structure analysis is called arguments of the predicate. Arguments appear in two positions depending on their functions. The first type of argument is called the external argument. This argument sits in the subject position in the sentence, that is, it takes the function of the subject in a given sentence. The second type of argument is called the internal argument. These arguments appear in the object position(s), either direct

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or indirect object (Randall, 2010; Williams, 2015):

3. He slept.
4. Calvin ate the stinky tuna.
5. Paul put the book on the table.

As for the optional elements, which are also called adjuncts, they provide extra information as the sentence can stand syntactically and semantically correct without these adjuncts. They may show the place, time, or the way something is done or happens (Baker, 2015; Radford, 2002; Williams, 2015), as in the following examples:

6. Calvin ate the tuna with a fork in the kitchen.
7. Last year, He completed the house on Friday.

Another crucial phenomenon in relation to the topic is the principle of transitivity which refers to the nature of predicates in allowing internal arguments. In the English language, the subject position is obligatory to be occupied, even if empty elements fill it. In generative grammar, the notion of external argument is used instead of the subject. Concerning the object position in English, depending on the nature of the verb, a sentence can contain either zero, one, or two objects. This distribution of internal arguments depends on the principle of transitivity (Boeckx, 2006; Bowerman & Brown, 2008; Dixon & Aikhenvald, 2000; Harley, 2011; Kulikov et al., 2006; Næss, 2007; Odero & Sande, 2017).

The sentence elements such as arguments and adjuncts bear some specific thematic/semantic relations. Linguists list different numbers and types of thematic relations for the arguments and adjuncts in English, like agent, theme, experiencer, beneficiary, instrument, location, goal, and source (See Carnie, 2013; Fernandes et al., 2006; Li & Zhang, 2023; Zhang, 2005).

There exist some problems that EFL learners encounter in dealing with argument structure. They may face difficulties in the level of syntax, semantics, or both. The syntactic challenges include problems in choosing appropriate types of phrases (NPs, CPs, and PPs) or problems relating to the number of arguments, especially internal arguments that can be used with specific predicates. At the semantics level, there may be problems like assigning appropriate thematic relations to the arguments or adjuncts in a given sentence. This study aims to identify the challenges that two groups of EFL learners encounter in composing and understanding the argument structure. It also aims to identify both syntactic and semantic challenges that EFL learners encounter in relation to argument structure. Concerning the semantics sub-skill, on the one hand, the study aims to uncover the learners' problems in assigning thematic relations. On the other hand, the study aims to reveal challenges in constructing grammatical sentences through the use of specific verbs, at the syntactic sub-skill. This research tries to answer the following research questions to understand the phenomenon under investigation.

1. To what degree do Kurdish EFL learners face

challenges in assigning specific thematic relations?

2. What are the main syntactic challenges, on argument structure, that the two groups of EFL learners encounter?

3. Is there a significant difference between the two groups of Kurdish EFL learners in the overall performance of argument structure?

This study forms the following hypotheses to investigate the EFL learners' problems in relation to argument structure to prove either the null hypothesis or the research hypothesis, i.e. the research hypotheses may be wrong and the null hypothesis, which contradicts the research hypothesis, may be proven true (see Litosseliti, 2010):

1. One group of participants face more challenges in assigning thematic relations than the other group.
2. A group of participants is better at the syntactic constructions of argument structure.
3. The first group will perform better than the second group in argument structure.

As can be seen in the literature review section, there has been no research so far targeting Kurdish EFL learners' problems with respect to argument structure. Hence, there is a gap which needs to be filled in the field. The current research has been carried out to fill this gap in the literature.

## 2. LITERATURE REVIEW

Reviewing the literature of any topic under investigation is crucial, especially to find out if there are any gaps that need to be filled and to have a solid theoretical background.

Liu (2024) explains lexical information and its role in composing grammatical and meaningful sentences. It is concerned with spoken and written forms of language to investigate English argument structure learning among Chinese EFL learners. It is claimed that argument structure for Chinese EFL learners is difficult due to first language interference. The article describes verbs of one, two, and three valency. It focuses on valency patterns of consider, believe, think, and prefer. The results show that verbs of two valency are mostly used. The study also emphasizes the importance of exposure in argument structure learning. One of the study's strong points is using qualitative and quantitative data to show verb valency in English and Chinese. The results also show significant differences between English and Chinese argument structures.

Another study was carried out by Hasan (2023). This study gives a good description of thematic relations like agent, theme, etc. It also explains the concept of arguments and their relation to predicates and thematic roles. The study also explains the valency patterns and the principle of transitivity. Theta grids are also explained

in this article. The article also shows how subjects and objects are distributed in the sentence for specific predicates like cry, eat and give.

Qi and Wang (2021) also conducted a study in the field of argument structure. The study uses a quantitative spoken English corpus and a type of natural processing tool to investigate verb valency changes in English. The results show that the verbs of valency two (bivalent verbs) have the most occurrences among valency patterns. The study also explains the thematic relations of the arguments. It also differentiates between four valency types (zero, one, two, and three) of valiant verbs. The study only depends on spoken language, which may not be applied to written texts or other contexts.

Liu and Du (2019) did another study. The study explains the main sentence components which are the predicate and arguments. It describes types of verbs based on valency as (monovalent, divalent, trivalent, and tetravalent) but cannot prove the tetravalent type, as some of the counted complements are adjuncts (not complements). The main focus of the study is on the argument structure of the verb appoint. Depending on the collected data, the results show that the most common argument structure for the verb is subject+ appoint+ object, although the verb has other structures in active and passive sentences.

Kann et al. (2019) carried out a study covering some aspects of argument structure like arguments, predicates, types of verbs based on transitivity, and some thematic relations. The article also explains other semantic aspects of the argument structure like participants and their roles in the sentence. The study explores whether artificial neural networks (ANNs) resemble humans or not. The main focus of this article is on the alternations in argument structure. The results show that ANNs can work like humans to some extent but face struggles in argument alternations of some verbs and some constructions.

Viau and Bunger (2016) conducted another study. The study introduces argument structure, event structure, and some terms that these two subjects cover. It explains predicates, arguments, semantic relations, event participants, and some other issues. It also describes both lexicalist and constructionist approaches to argument structure. The main focus of the study is on argument structure acquisition in different ages like infancy, under three years old, and five years old. The strong point of the study is its hierarchical explanation of argument structure acquisition in these different ages. It explains how children's ability develops in argument structure from easy and simple to complex structures.

Orru (2016) did a study on the notions of verbs and arguments. It also differentiates between external and internal arguments and the valency of predicates. It explains three types of valency in Isekiri which are

monadic predicates, dyadic predicates, and triadic predicates. The study explains that the forms of verbs in Isekiri are different from English and not as straightforward as in English. Some forms of the verbs can only be identified in the context in Isekiri; therefore, context is crucial to determine some forms of verbs.

Boas (2014) conducted a study on phrasal and lexical approaches to argument structure. According to this study, lexical entries (lexical information of verbs) and phrasal rules participate in argument structure composition; therefore, it is suggested that the best way for argument structure analysis is to combine both lexical and constructional approaches in the sense that they complete each other. To support this view, Boas (2014) stands against both phrasal and lexical linguists in the point that they should not focus only on one of the approaches and he gives evidence to justify his point of view.

After observing the literature of argument structure, a gap can be noticed which needs to be filled by doing research. So far, no research has been carried out targeting the problems that Kurdish EFL learners encounter with respect to argument structure. On this basis, the current study aims at filling this gap in the literature.

### 3. METHODOLOGY

#### 3.1 Research Tools

A mixed-methods approach has been adopted in the study. The quantitative data were collected through a written test tool, which consisted of two questions. The first question was dedicated to the semantics; the second question collected the syntactic data; and each question was out of eight marks. A spoken think-aloud protocol tool was used to get the qualitative data. A pilot test was used to pretest the written test and face validity was achieved from several experts.

#### 3.2 Participants

The participants of the study were two groups of fourth-year students from Salahaddin university-Erbil and university of Raparin. Each group had thirty-three participants and ten from each group participated in the think-aloud protocol.

#### 3.3 Data Collection

In order to have a deep understanding of EFL learners' problems in argument structure and to answer the research questions of this study, it was decided to use a mixed methods approach. At first, the quantitative data were collected through a language test from two groups of sixty-six participants (each group was thirty-three fourth-year students at the colleges of education). After collecting the quantitative data in each college, ten

participants were randomly chosen to conduct a think-aloud protocol to get the qualitative data. By combining these two types of data, the study could get a good understanding of the problems that EFL learners encounter in argument structure in terms of syntax and semantics.

### 3.4 Data Analysis

For the quantitative analysis, the SPSS program (version 26) and independent t-tests were used. Concerning the proficiency levels for the achieved scores, the Bloom's Taxonomy was used as a basis when needed in some points of analysis to show a clearer image. According to Bloom's criteria, when the scores are transformed into percentages or one hundred marks, there are three main levels of proficiency: scores below 60 marks are labeled as low levels, scores between 60-79 are labeled as moderate, and scores above 80 are labeled as high levels of proficiency (See Yadzir et al., 2021). For the qualitative analysis, the main themes were taken into account and analyses accordingly.

## 4. RESULTS

### 4.1 Quantitative Results

#### 4.1.1 Students' Argument Structure Errors in the Written Test

This part is dedicated to presenting a detailed analysis of the participants' test errors. It starts with illustrating the most common syntactic and semantic problems the participants faced in the test.

##### 1. Syntax Errors- First Group

To assess the syntax of argument structure, the participants were required to make sentences using eight given verbs: spare, place, smile, snow, hit, give, tell, and know. The verbs were chosen as covering the three main types of intransitive, mono-transitive, and di-transitive verbs.

Twenty participants failed to construct a grammatical sentence using the predicate spare and nineteen failed to use the verb place to construct a grammatical sentence. As a result, these two verbs were the most challenging predicates for the first group of participants. Fourteen incorrect answers were given to the verb smile. The participants' performance concerning the other predicates was better, as illustrated below:

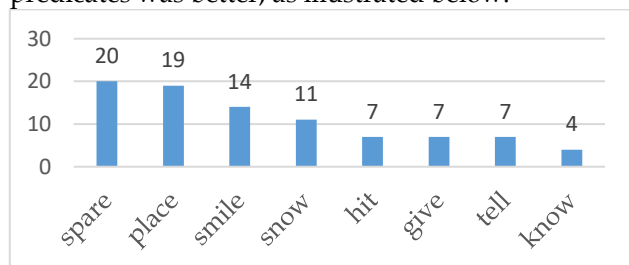


Figure 1: Frequency of syntax errors (first group)

### 2. Semantics Errors- First Group

In the semantic part of the test, the participants were required to choose appropriate semantic relations to the underlined phrases in the given sentences. There were eight sentences with eight underlined phrases and eight semantic relations were given above the sentences. The participants were also asked to choose more than one semantic relation for any phrase that may bear more than one semantic relation, if they could.

The most problematic semantic relation for the first group was *theme*. Seventeen out of thirty-three participants had chosen the incorrect semantic relation for the phrase *the cake* in the sentence *Paul ate the cake*, which is *theme*. The next observable problem was with *experiencer* semantic relation. Fifteen participants failed to choose the correct semantic relation to the phrase *Ali* in the sentence *Ali likes tea*, which bears *experiencer* thematic relation. The written test performance of participants was better for the rest of the semantic relations:

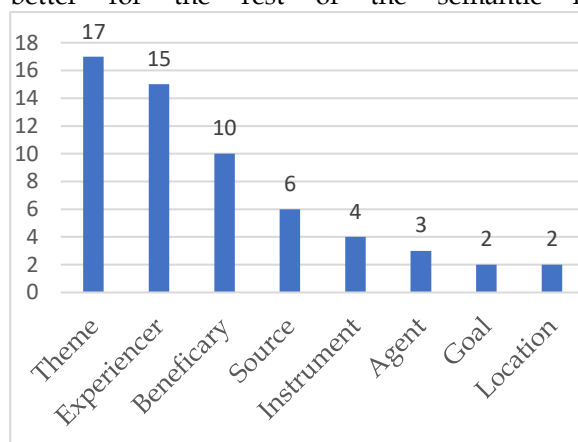


Figure 2: Frequency of semantics errors (first group)

### 3. Syntax Errors- Second Group

The predicates *spare* and *place* were the hardest verbs for this group. About ninety percent of the students failed to give a correct example for the first predicate. Twenty-seven students could not give a grammatical sentence for the other predicate. Another challenging verb was *snow*. Twenty-three participants failed to use it to construct a well-formed sentence. Concerning the predicate *smile*, there were fourteen false answers.

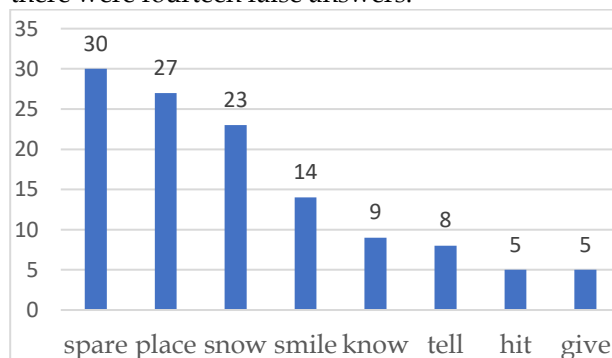


Figure 3: Frequency of syntax errors (second group)

4. Semantics Errors- Second Group

The theme thematic relation comprises most of the errors in the semantic assessment. Thirty students failed to choose it. Twenty-three participants could not pick the correct beneficiary semantic relation, which is about seventy percent of the study's participants. The third problematic thematic relation for the second group was experiencer. Nineteen students answered the item incorrectly.

Concerning agent semantic relation, eighteen students failed to choose the correct option. The next problem about semantic relations is related to source; about fifty percent failed to have a correct answer here. For other thematic relations, the students performed better:

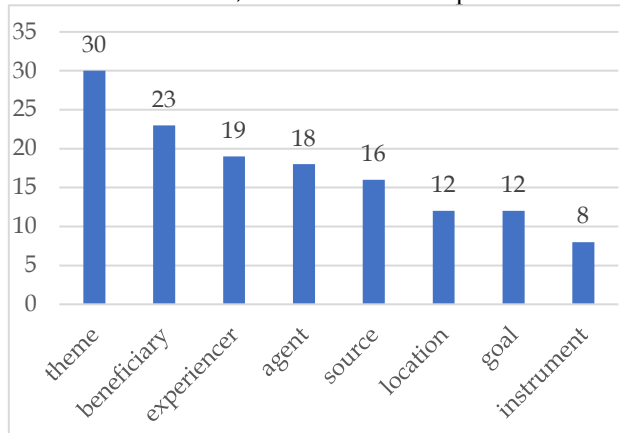


Figure 4: Frequency of semantics errors (second group)

4.1.2 T-Test Results

This part compares the two groups' awareness concerning argument structure. It includes a detailed analysis to understand EFL learners' ability and problems in argument structure in the two aforementioned universities. SPSS program and independent t-tests were used to compare the syntax, semantics, and overall results.

1. Comparison of Syntax Results

The first part of this section is to compare how the two groups performed in the syntax of argument structure. The following tables show statistical values about the ability of the two groups in constructing well-formed sentences using the given verbs.

Table 1

Descriptive statistics for syntax results

Participants	N.	Mean	Std. Deviation	Std. Error Mean
Group One	33	5.2727	1.62544	0.28295
Group Two	33	4.2424	1.62077	0.28214

The achieved mean value of the first group is 5.2727, while the mean value of the second group is 4.2424. The standard deviations of the two groups are close. Group one has a standard deviation of 1.62544, and for the second group is 1.62077. These statistical values indicate that even though the first group outperformed the second group on average, the two groups show similar

variability in individual performance, as clustering results around the means are close.

Table 2

Independent-Samples t-Test of syntax results

Statistics	Value
t-value	2.578
Degrees of Freedom	64
p-value	= 0.012

The t-value is above two (2.578). The t-value illustrates that the difference is significant. The p-value in the independent t-test was 0.012. This is smaller than 0.05, supporting a significant difference between the awareness of the two groups.

2. Comparison of Semantics Results

This part shows both groups' awareness in the semantic assessment, which is about thematic relations.

Table 3

Descriptive statistics for semantics results

Participants	N.	Mean	Std. Deviation	Std. Error Mean
Group One	33	6.2121	1.13901	0.19828
Group Two	33	4.2424	1.73260	0.30161

The mean value of the first group is 6.2121, and for the second group is 4.2424 out of eight marks. If we change the results to one hundred marks, we realize that the mean difference is about twenty-five, which is a big difference.

The standard deviation value of the second group is smaller (1.13901), which suggests that the results of this group are more clustered around the mean value. The standard deviation of the second group is 1.73260.

Table 4

Independent-Samples t-Test of semantics results

Statistics	Value
t-value	5.457
Degrees of Freedom	64
p-value	< 0.001

The t-values are about how the standard errors of the compared groups are a part. According to the table above, the results of the independent-samples t-test gave a t-value of 5.457. When the t-value is larger than 2, according to statistical analysis, the results show a significant difference.

The last point of the semantic performance comparison is about the independent t-test results for the statistical p-value. The p-values show the probability of the results occurring by chance. When the results are below 0.05, the

results are statistically significant and there is a lower degree of occurrence by chance. As the p-value is smaller than 0.001 ( $< 0.001$ ), the statistical results have a clear significance.

### 3. Comparison of Overall Results

This part shows each group's awareness of argument structure by combining both parts or sub-skills of syntax and semantics.

Table 5  
Descriptive statistics for overall results

Participants	N.	Mean	Std. Deviation	Std. Error Mean
Group One	33	11.4848	2.12311	0.36959
Group Two	33	8.2424	2.58639	0.45023

The mean score of the first group is 11.4848 out of 16. The second group's mean is 8.2424. These values tell us that the first group's overall performance in argument structure is greater than the second group's. The standard deviation for the first group is 2.12311 and for the second group is 2.58639.

Table 6  
Independent-Samples t-Test of overall results

Statistics	Value
t-value	5.566
Degrees of Freedom	64
p-value	$< 0.001$

The t-value of the independent t-test is 5.566. It is bigger than two, suggesting that the results show a significant difference between the awareness of the two groups in the overall assessment of argument structure. As seen, the p-value of the independent t-test is smaller than 0.001 ( $< 0.001$ ).

### 4.2 Qualitative Results

The second data type was qualitative; therefore, it needed a qualitative analysis. The think-aloud protocol collected the qualitative data. It could reveal various challenges among EFL learners in both parts of argument structure.

Concerning the syntactic part in the think-aloud protocol, the first group did not perform well, and their reactions were less satisfactory. They faced various problems in the syntax of argument structure. The most common problems were challenges with the principle of transitivity, argument numbers of different predicates, and differentiating between arguments and adjuncts.

The participants could not give enough and correct explanations about the sentences they had made, depending on the given predicates in the written test. Some of the students did not have a good background in the principle of transitivity. Some students could not even decide on the transitivity nature of some easy verbs like

snow and smile, although they had answered correctly in the written test.

Syntax was as challenging as semantics for the second group. The most common challenges related to the principle of transitivity, misusing the given verbs and using them as nouns or adjectives, argument numbers, and differentiating between arguments and adjuncts.

The students faced critical problems with the principle of transitivity. Most of the students asked about the types of verbs based on the principle of transitivity. Most of them could not explain their answers in the written test about the transitivity of the given verbs without giving initial explanations. Among the given verbs, describing the verb snow as a mono-transitive was the most recurrent answer among the students. Most of the students also described the verbs place and spare as mono-transitive verbs, instead of di-transitive verbs. Although most of the students among the ten participants who took the think-aloud protocol had given correct examples for these two predicates, they described these two verbs as mono-transitive verbs that need only one object.

As for the semantics of argument structure, taking both groups together into consideration, the most problematic semantic relation in the think-aloud protocol was theme. Only one participant could give a short explanation about the theme semantic relation saying that in the sentence Paul ate the cake; the cake is a theme because it was eaten or affected by Paul. Others could not explain why the phrase is theme.

Concerning the experiencer semantic relation, there were different explanations. Some of them were true and some others could not explain the reason behind choosing this semantic relation. Among the correct answers, two students could explain their thoughts well stating that Ali experienced something; that is why the phrase's semantic relation is the experiencer. It is worth mentioning that their awareness for the rest of thematic relations was better, especially for the location thematic relation.

### 5. DISCUSSION

Levin and Hovav (2005) give a good theoretical account of thematic relations and some related issues. One of the important points of Levin and Hovav (2005) is their explanation about how subjects are not sometimes agent and objects are not theme. They refer to various languages with this phenomenon to support their claim. One of these languages with a wide range of different thematic relations for subjects is English. They give examples like, This room sleeps five people. They conclude that agent is always subjects, as the thematic hierarchy indicated in the second chapter of the thesis, but the subject position can also be occupied by other different thematic relations, when the agent cannot be assigned. Concerning the object role, it can be occupied by more than one thematic relation, like the subject. As a

result, linking thematic relations to the subject or object roles could be problematic or misleading (see also Ansori et al., 2022).

Different research exists on the challenges of EFL learners with thematic relations in the practical setting. Research in different places may show different results for the challenges that EFL learners encounter. These different results may arise due to different cultures, education systems, and university curricula. Research by Nafi'ah et al. (2025) explains EFL learners' challenges in a university in Indonesia. It states that the most problematic thematic relation among EFL learners at Tadulako University is the experiencer, based on their results. Their results also illustrate that the location and agent thematic relations were the least challenging.

There are similarities between the above research and the results of this thesis, especially about the location thematic relation, which was not observed to be problematic. Although the experiencer thematic relation is one of the problematic thematic relations in this study, it is not the most challenging thematic relation. The results also show other issues. These results can both answer the first research question and support the first hypothesis, which is: One group of participants face more challenges in assigning thematic relations than the other group. Based on the results, the first research question and hypothesis could be explained and investigated.

The above-mentioned tables and figures include various statistics, numbers, and values. Both groups of participants faced critical challenges in assigning the thematic relations of theme and experiencer, as their frequency of errors is high, and their assessments fall below a moderate level of proficiency. The second group faces challenges in assigning more thematic relations. The semantics sub-skill mean value for the second group is fifty-three, indicating a low level of proficiency. This implies that they face critical challenges in the overall thematic relation assignment. If we look at the frequency of the errors in the aforementioned figure, the issue becomes clearer. The group has a low level of proficiency for five thematic relations (theme, beneficiary, experiencer, agent, and source). Thus, although both groups of EFL learners face critical challenges in assigning specific thematic relations like theme and experiencer, there is a crucial difference between the degree of challenges. The second group encountered problems to a greater extent compared to the first group.

Concerning the statistical and independent t-test results, they support proving and confirming the first hypothesis. The mean value of the first group (6.2121) is higher than that of the second group (4.2424). The t-value is 5.457 and the p-value is  $< 0.001$ . These values show a significant difference between the two groups' performance, especially since the p-value is much smaller than 0.05. As a result, the second group has more

problems than the first group concerning thematic relation assignment. Thus, the first hypothesis is confirmed.

The qualitative data supports the above discussion as well. As explained in the results' section, only one student among the students of the two groups could explain the theme thematic relation. Both groups' performance for the experiencer thematic relation was not good as well. Concerning the comparison between the two groups in the qualitative assessment, the first group in the think-aloud protocol were able to express their cognitive abilities, concerning thematic relations, better than the second group. Their expressions and explanations were more elaborate and convincing than that of the second group. To conclude this issue, both groups of EFL learners in two different universities in Kurdistan Region of Iraq face critical challenges with the assignment of some thematic relations. The degree of the challenges may vary from one university to another. For the first group of this study from university A, theme and experiencer thematic relations were most problematic. For the second group from university B, five thematic relations were challenging, which are mentioned above.

Concerning the second research question focusing on problems of EFL learners in the syntax of argument structure, there are different results according to different research in different settings. According to Kim and Shin's (2024) study results, L2 learners face less difficulty when constructing sentences with more frequent verbs than those that are less frequently used. Another study by Akbarnezhad et al. (2020) indicates that di-transitive constructions are the most problematic for Iranian EFL learners. Their results are similar to the results achieved in the current study, as explained below. Another study by Nafi'ah et al. (2025) shows different results for the syntax sub-skill from the results of the current study, although there are similarities for the semantic sub-skill. The research shows that the most challenging structures among EFL learners at Tadulako University are verbs with two arguments (mono-transitive verbs).

The results imply some points for discussion. First, di-transitive verbs (verbs with three arguments) are the most challenging verbs for sentence construction by the two groups of EFL learners in the targeted universities. The above-mentioned figures imply that both groups face critical problems with both di-transitive verbs of spare and place. The results for both verbs indicate a low level of proficiency by both groups of participants, as the frequency of errors for both verbs is higher than fifty-five percent. This high frequency of errors differentiates the di-transitive challenges from the challenges for other categories of verbs. Second, the results also illustrate that intransitive verbs are more problematic than mono-transitive verbs, as noted in the figures. Third, the figures also suggest that more familiar verbs are less challenging,

although they may be di-transitive ones. The verbs give and tell, which are di-transitive verbs, were less problematic, as compared to spare and place.

The study's results can also determine the status of the second hypothesis. To prove this hypothesis, we can test the SPSS statistics and the independent t-test values. At first, the mean value of the first group for the syntactic assessment is 65.90, with a moderate level of proficiency. It is higher than the mean value of the second group's syntax, which is 53.03, with a low level of proficiency. These statistics support the second hypothesis, but the hypothesis needs other clear statistics of the independent t-test to be confirmed.

Depending on Table 2, the t-value of the independent t-test is 2.578, which supports the second hypothesis again. The p-value of the independent t-test is 0.012, which is smaller than 0.05. The p-value and other numerical values above all prove and confirm the second hypothesis, especially the p-value, which confirms that the differences between the values of the two groups are significant. As a result, the first group outperformed the second group in the sentence construction.

The qualitative data can also be used to talk more about the second research question and the second hypothesis. Based on the qualitative data, both groups performed badly in the principle of transitivity. Most of the students in both groups failed to explain the given predicates in the think-aloud protocol. A few students could give satisfactory explanations about the transitivity of the predicates in the think-aloud protocol. Other students either explained the transitivity of the verbs incorrectly, despite correct answers in the written test, or failed to give convincing explanations. Finally, it can be discussed that both groups of EFL learners in Kurdistan universities face challenges with di-transitive verbs more than with other verbs. Despite these challenges, there is a significant difference in proficiency levels between learners in the two universities in constructing well-formed sentences, based on the statistical values.

Now, turning to the last research question, previous studies showed that various thematic relations and verb types may be challenging for EFL learners in various environments. A study by Nafi'ah et al. (2025) shows EFL learners' challenges in a university in Indonesia, as explained in the previous sections (the semantic relation of experiencer and mono-transitive constructions were most challenging).

Concerning the last discussions about the overall performance of the participants in this study to answer the last research question, there are some vital illustrations. The results show that the level of proficiency of the first group is moderate, while the second group has a low level of proficiency in the overall argument structure performance. To discuss how these levels affect the answer to the last research question and

support the last hypothesis, which is written below, the statistical values and t-test results may help. The tables in the previous section will aid in answering the mentioned research question and its hypothesis.

Table 6 indicates the frequency of test results for the overall awareness of argument structure by the two groups. They give the first hint to support the fact that there is a significant difference between the awareness of the two groups because the tables show that the first group's scores were better than the second group's. Furthermore, if we go back to the statistics in the previous section, like the frequency of errors, mean, and independent t-test values in the syntax and semantics of argument structure, the first group were better in both sub-skills of argument structure, especially in the written test.

The last obvious point to answer the last research question is through looking at Table 5. Depending on this table, the mean value of the first group for the overall performance in argument structure is 11.4848, which is larger than the second group's mean value (8.2424). Those numbers and explanations above all support that there should be a significant difference between the proficiency levels of the two groups in argument structure: the first group has a higher level of proficiency, as compared to the second group.

Concerning the approval or refutation of the last hypothesis, the study's statistics can again decide on it. All of the above statistics, which are not necessary to repeat, support the last hypothesis. Independent t-test results, about the overall performance of argument structure, will aid in having a concrete answer to this hypothesis. With reference to Table 6, about the argument structure performance of the two groups, the t-value of the independent t-test is 5.566 and the p-value is  $< 0.001$ . The t-value supports both the last research question and the last hypothesis again. Finally, the p-value is much smaller than 0.05, which also confirms the last hypothesis. As a result, the first group's performance was significantly better than the second group's performance in argument structure, which supports the last hypothesis.

The last point for discussing the last research question and hypothesis is through the qualitative data. The qualitative data greatly supports the better performance of the first group over the second group in the research question on semantics, as a sub-skill of argument structure. Concerning the sub-skill of syntax, both groups' performance was close, but the second group was better in the quantitative data; therefore, it can be concluded that the overall discussion of the qualitative data supports the answer to the last research question and hypothesis.

## 6. CONCLUSION

Several concluding points were achieved in doing the research. Based on the results of the study, it can be concluded that there are critical challenges for Kurdish EFL learners with respect to argument structure. Syntactic problems were more critical than semantic ones. In the semantics of argument structure, the most problematic thematic relation was theme. A large number of participants in both groups failed to assign this thematic relation to the arguments. Concerning syntactic challenges, the most challenging part was with the verbs having three arguments (di-transitive verbs). Most participants had critical challenges with the di-transitive verbs *sare* and *place*. Another concluding point is about the levels of proficiency. There is an observable difference between the levels of proficiency of the two groups. Group one outperformed group two, especially in the semantic assessment of argument structure. Based on this, we can predict that there is a proficiency level difference between EFL learners of the two universities. It is recommended that Iraqi Kurdistan universities pay greater attention to argument structure in syntax and semantics courses to help EFL learners decrease their problems in constructing well-formed sentences.

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