Syntactic Structure of Tree diagram as a Method of Teaching Translating English Sentences into Arabic

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التركيب النحوي لمخطط الشجرة كوسيلة تعليم ترجمة الجمل الإنجليزية إلى العربية

شادن شامل عبدالله

كلية اللغات ، كلية النسور الجامعية ، بغداد / العراق

الملخص:

يمكن تعريف الترجمة كمفهوم واسع بطرق مختلفة من قبل منظرين مختلفين ؛ الترجمة من لغة إلى أخرى ليست مهمة سهلة بسبب الاختلافات الثقافية. لا تقتصر الترجمة اليوم على دخول الكلية للتخرج والحصول على شهادة في الترجمة. ولكن يكفي أن يكون لديك معرفة باللغتين والقدرة اللغوية للترجمة. ممارسة الترجمة كمهنة تختلف عن تدريسها. وقد أوضحت الدراسة الحالية المقصود بتدريس الترجمة وخصائص التدريس وتقدم طريقة تدريس هي الأولى في هذا المجال.

الكلمات المفتاحية: البنية ، مخطط الشجرة ، تعليم الترجمة

Abstract

Translation as a broad notion can be defined in various ways by different theorists; to translate from one language into another is not an easy task due to the cultural differences. Today translation is not restricted to entering the college to graduate and get a degree in translation. But it is enough to have knowledge of both languages and linguistic ability of translation. To practice translation as a profession is different from teaching it. The present study has explained what is meant by teaching translation, the characteristics of teaching and offers a method of teaching which is the first in this regard.

Keywords: Structure, Tree-Diagram, Teaching Translation

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1- Introduction

Tree Diagram is used in generative grammar as a means of displaying the internal hierarchical structure of sentences. It is advantage that lies in showing the syntactic relationships between sentences units, moreover functional relations are obviously described by this technique. The study aims at providing the reader with a technique for teaching the translation of simple and complex sentences for the first classes of Translation Departments in Iraq, analyzing the syntactic structure of constituents in a hierarchical way called tree-diagram, giving proper translations and considering tree-diagram by teachers as a teaching method of translating sentences. It is hypothesized that first-year class students of Translation Departments are expected to make syntactic mistakes when rendering simple and complex sentences from English into Arabic. It is also hypothesized that the adoption of the Tree-diagram technique can solve part of the problems facing those students with regard to translation teaching. To verify the hypotheses, a questionnaire has been made for a number of first-year class students at the Department of Translation / College of Arts of Al-Mustansiriyah University where ten students have been chosen randomly to translate three simple sentences and three complex ones.

2- X-bar Theory

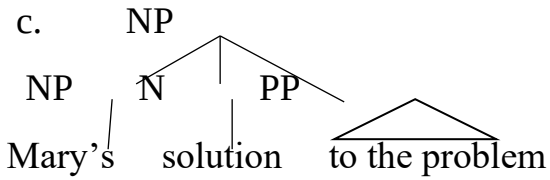
One of the theories of Generative Grammar is X-bar theory where it attempts to identify the syntactic features of a sentence.

In X-bar terminology, the obligatory constituent of maximal projection is called the head. If the structural representation of every category includes a maximal projection, then every maximal projection will include the category (i.e. head) of which it is the maximal projection. PS rules do not account for sub-categorsation and non –subcategorisation in relation to the head. For example, the PS (Phrase Structure) rule that generates the NP (1a) has the form (1b) and the tree (1c) below: (Ouhalla,1999:114)

1- a. Mary’s solution to the problem.

b. NP → NP N PP

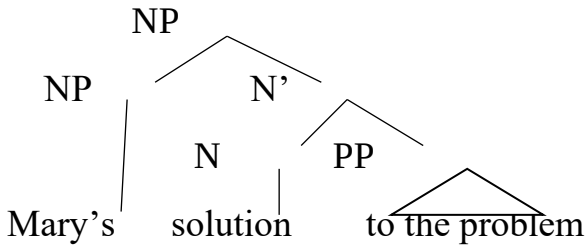
c.



Both PP (which is Complement) and the NP (Subject) are sisters to the head and therefore to each other. This is unacceptable, because it undermines the claim that grammatical functions are structurally based. Subjects and Complements should have different structural or grammatical relations with respect to the head. It seems that the structural relation, which the Subject has with the head, needs to be modified.

This modified schema is called (X') stand for X-Bar, which will include the head and its complement. Now, the structure of (1) will make a distinction between the Subject of NP and the Complement of N and the result is (2) below: (Chomsky, 1970:115)

2-



The schema of the above example will be like the following:

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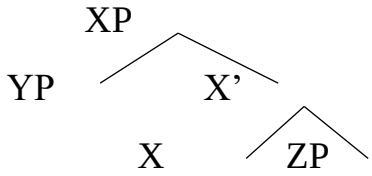


The representation above (3) is the abstract structure which generates X,Y and Z

X = N (solution)

X' = N' (solution to the problem)

XP = NP (Mary's solution to the problem)

YP = NP (Mary's)

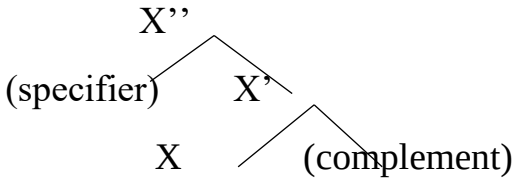
ZP = PP (to the problem)

On the other hand, (Radford, 1988:167) explains that an intermediate category between word-level and phrase-level is needed. There are nominal

constituents larger than the *noun* but smaller than a *full noun phrase*; the same is applied for verbal, adjectival and so on. It is called category variable and the symbol is (X), which stand for any category of N, V, Adj , etc.

To generalize the statement is to say that all phrases have the schematic structure indicated below: (ibid: 229)

4-

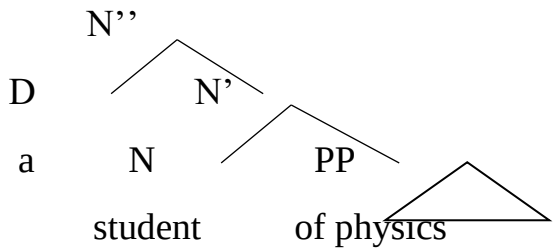


Specifier and Complement are not categorical, but rather represent grammatical functions, so they have similar status to Subject and Object, for example:

5- John is [a student of physics]. (Jackendoff,1977:226)

The representation of the above example will be specified below:

6-



A student of physics is a NP and (a) is determiner which functions as the specifier of the student. The word (determiner) is used to designate the category which (a) belongs to (Radford, 1988: 229).

In the generalized schema (4) above, the word-level category (X) is said to be the (Immediate) Head of the X-bar constituent containing X and it's Complement. This X-bar is itself the (Immediate) head of the X-double-bar constituent containing it and the specifier phrase (Radford, 1988: 230).

Jackendoff (1977:153) says that the name "X-bar theory" comes from the original mechanism for indicating intermediate categories. N' was written $\bar{N}$ with a bar over the letter. This over bar is the origin of the "bar" in the name of the theory. "X" is a variable that stands for any category (N, Adj, V, P, etc.).

Since over bars are hard to type, even with Unicode fonts, most people use a prime (') or apostrophe (‘) for the intermediate level and write the phrasal level as NP (or more rarely, N'').

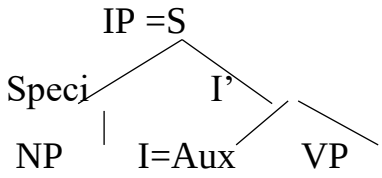
3- X-bar Theory and non-Lexical Categories

It is also important to mention the non-lexical categories which are also called functional categories like Determiner (D), Inflection (I) and Complementizer(C). They form the so-called closed classes of words. Their membership, unlike the lexical categories, is to a greater or lesser extent stable and unchanging in language. (Greenbaum & Quirk, 1997: 15-16).

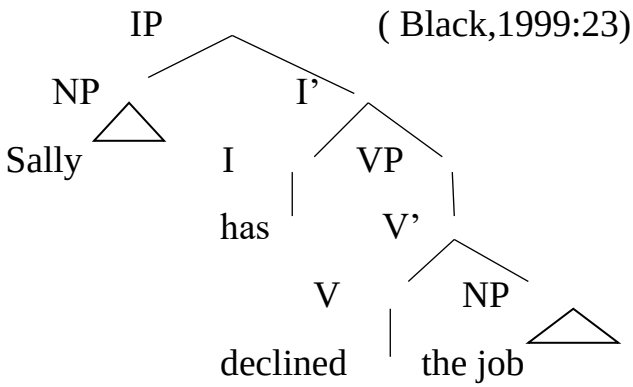
The structure of IP has replaced the category (S); it specifies that *Aux* is the suitable one where NP and VP are phrasal categories and therefore, neither one of them is likely to be the head. They are likely to be Specifier and Complement. It is used to refer to node in the structure of S and its full form refer to the verbs *be* and *have*, to avoid the confusion created by the term Aux, the term *Inflection* will be used instead, which is a shortened to *Infl* or just (I) (Ouhalla, 1999:123).

Given that clauses are categorized as finite or non-finite is easy to conclude that (I) represents the head of the clause. The structure below has (I) is the head and (IP) its maximal projection. VP is the Complement of (I). The NP subject is the Specifier of (IP): (ibid:124). Sentence (8) is an example of the (7) schema.

7-



8-



(Black,1999:23)

In the tree of (IP), (I) will not be filled by lexical word, thus it does not have any lexical entry. It always takes VP as it’s complement. (Black,1999:11).

Furthermore, Ouhalla, (1999:128) encoded the feature (+/ −) to determine either the verb is finite or nonfinite.

(+ finite) is understood by agreement and tense.

(− finite) is understood by to-infinitive, ing-participle and ed-participle.

On the other hand, Cook&Newson (2007: 105) mentions another functional element to be analyzed with X-bar theory is the Determiner. DP hypothesis claims that the determiner is the head of the nominal phrase not the noun. The noun will become the complement of the determiner. DP is necessary to accommodate what are traditionally called the post-determiners-determiner like elements which typically come after standard determiners. For example:

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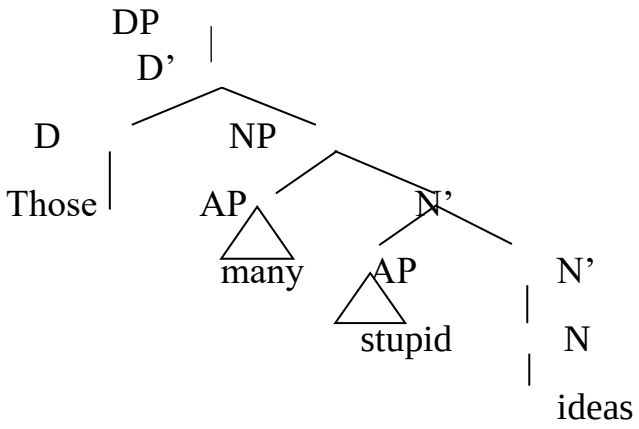
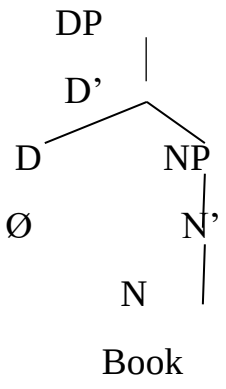


When there is only on word in (DP) category and take the (N) position, (Carnie, 2006:210) suggests that (D) or bare nouns (D) is present but null and has the phonological representation of (Ø). Like in the following example:

10-



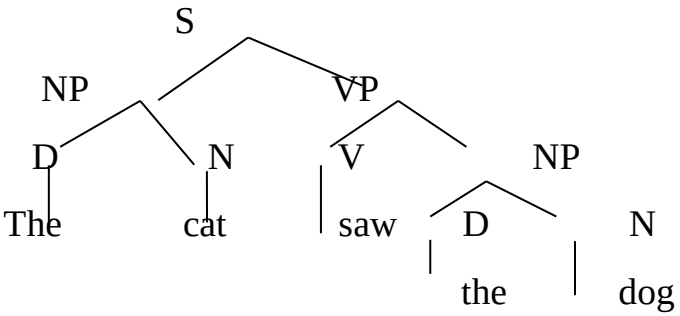
4- Tree Structure

Drawing trees look simple and interesting when it is demonstrated; however, when it is performed, it is not an enjoyable process at all. Thus, they are fundamental skill to be learned and mastered in the study of syntax (Fang,2012:3).

According to Crystal (2008, 494-495) the term *Tree* is a two-dimensional diagram used in generative grammar as a convenient means of displaying the internal hierarchical structure of sentences as generated by a set of rules. Consider the simple example below to represent the structure of tree diagram.

11- The cat saw the dog.

12-



The tree above shows that the top of the tree (S) is called “Root” which produced two large lines (NP,VP) called “Branches”. The end of the branch is called “Node”, nodes are labeled N, V, NP, PP, A, etc. There are three types of nodes, the node at the top of the tree is called “Root Node” , nodes at the bottom of the tree is called “Terminal Nodes” and nodes which are labeled NP, VP, PP, AP, etc. are called “Nonterminal nodes” . Linguists describe this system of internal relationships as "family tree". If two categories derive from a single node, they are said to be sisters and daughters of the mother node from which they derive. It can be specified as Phrase-Markers in which they show how a phrase or sentence is built up out of constituents of various types (Radford, 2009:58).

The advantage of tree diagram is to see the syntactic relationships between sentence units through. First, it specifies certain facts about constituency that are (words and phrases from which sentences are constructed), for example, *Cat* in (11) above is a proper constituent of the sentence. Second, functional relations are obviously described by this technique. For example, the subject of the sentence can be identified as the NP daughter of the sentence node,

and the object as the NP daughter of the VP and sister of the main verb (Finch, 2005:119).

5- Structural Relations

It is useful to develop some terminology to describe the syntactic relations between constituents since these relations turn out to be central to syntactic description. Essentially, a P-marker or Tree is a graph comprising a set of points (labelled nodes), connected by branches (Radford, 2009:59). Different types of structural relations can be formed:

5-1 Dominance , to say that one node (X) dominates another node (Y) is simply means that (X) occurs higher up in the tree than (Y), however, A node is *immediately dominate* another if it is the next highest node up in the tree and connected to the other by a single branch (Radford, 1988:110).

5-2 Precedence, one node precedes another if it occurs to the left of the other node (ibid).

5-3 Immediate Constituent , dominance and immediate dominance can be used to define two important terms, Constituent and Immediate Constituent in the following way:

- A set of nodes form a constituent iff they are exhaustively dominated by a common node (i.e. iff they all branch out of a single node and if there are no other nodes branching out of the same single node).

- X is a Constituent of Y iff is dominated by Y.

X is an Immediate Constituent of Y iff X is Immediately Dominated by Y (Carnie, 2006:110).

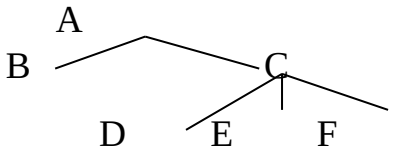
5-4 C-command is defined as A node c-commands its sisters and all the daughters (and granddaughters and great-granddaughters, etc.) of its sisters, it's of two types:

- *Symmetric c-command*: A symmetrically c-commands B, if A c-commands

B and B c-commands A. This relation holds only between sisters.

- *Asymmetric c-command*: A asymmetrically c-commands B if A c-commands B but B does not c-command A. This relation holds between an aunt and her nieces (Barker et el,1990:111-112). The example below is an illustration of all the symbols mentioned in the types of structural relations above where these symbols are used instead of NP, VP, AP, etc..

13-



6- Teaching Translation

Translation is a broad notion which can be defined in various ways by different theorists, such as Nida and Taber (1969), who pointed out that, "Translation consists of reproducing in the receptor language the closet natural equivalent of the source language message, first in terms of meaning and secondly in terms of style" (Shuttleworth,1997:182).

Fry (2003: 121) states that teaching is a profession that can yield something amazing when the right ideas and beliefs are implemented in the classroom. It is believed that the purpose of teaching is not to teach students how to memorize facts, or how to know all the correct answers. The purpose of teaching lies in getting students to truly understand the concepts being examined. Delisle (1980: 54) illustrates what a subtle form of torture teaching translation is: "teaching translation is an arduous job that mortifies you, puts you in a state of despair at times, but also an enriching and indispensable work, that demands honesty and modesty. " Teaching translation to students who are learning the target language at the same time necessitates taking into account two major issues: first of all, the fact that learning how to cope with translation related problems is not exactly the same as learning the language itself, although they go hand-in-hand. Second, it is vital to decide which teaching translation method is better to be used along with the method adopted for translation (Larson, 1986: 67).

7- Types of Sentences

Sentence has been defined by different scientists; some deem it from point of view of phonetics, others from semantics. Brinton (2000:191) says that a *sentence* is the immediate integral unit of speech built up of words according to definite syntactic pattern and distinguished by a contextually relevant communicative purpose. There are four types of them: simple, compound, complex and compound-complex, however, the researcher will specify two of them in the analysis of Tree Diagram, which are simple and complex. Certain structures of the two types will be explained in the analysis because the adopted criterion of drawing tree diagram demands that the sentences start with (NP) functioning as Subject. For the analysis, the researcher adopts the X-bar theory, functional category IP and DP instead of NP. A questionnaire of six sentences, three simple and three complex, has been carried out for students of Translation Department, first grade, at Al-Mustansiriya University.

7-1 Simple Sentences

The simple sentence contains at least one subject and one verb and can stand alone as an independent clause (Allen& Widdowson,1975:45).

All the constituents of sentences will be treed; however, the structural relations will tackle only the problems that students face in translation. Some categories have been given a triangle to avoid repetition and some of the labels have been numbered in order to identify the structural relations.

1- Cornelia has finally brought out her new book.

The sentence above contains a phrasal verb (brought out); the phrasal verbs like (blow up, give in, etc) may confuse the student and results in different meanings. (Greenbaum & Nelson, 2002:64-65).

The translations are as follows:

1-واخيرا اشترت كونيليا كتابها الجديد

2-كورنيليا واخيرا احضرت كتابها الجديد

3-واخيرا قامت كورنيليا بشراء كتابها الجديد

4-كورنيليا اخيرا جلبت كتابها الجديد

5-اخيرا قامت كورنيليا بانهاء كتابها.

6-اخيرا قامت كورنيليا بانهاء كتابها الجديد

7-اخيرا احضرت كورنيليا كتابها الجديد

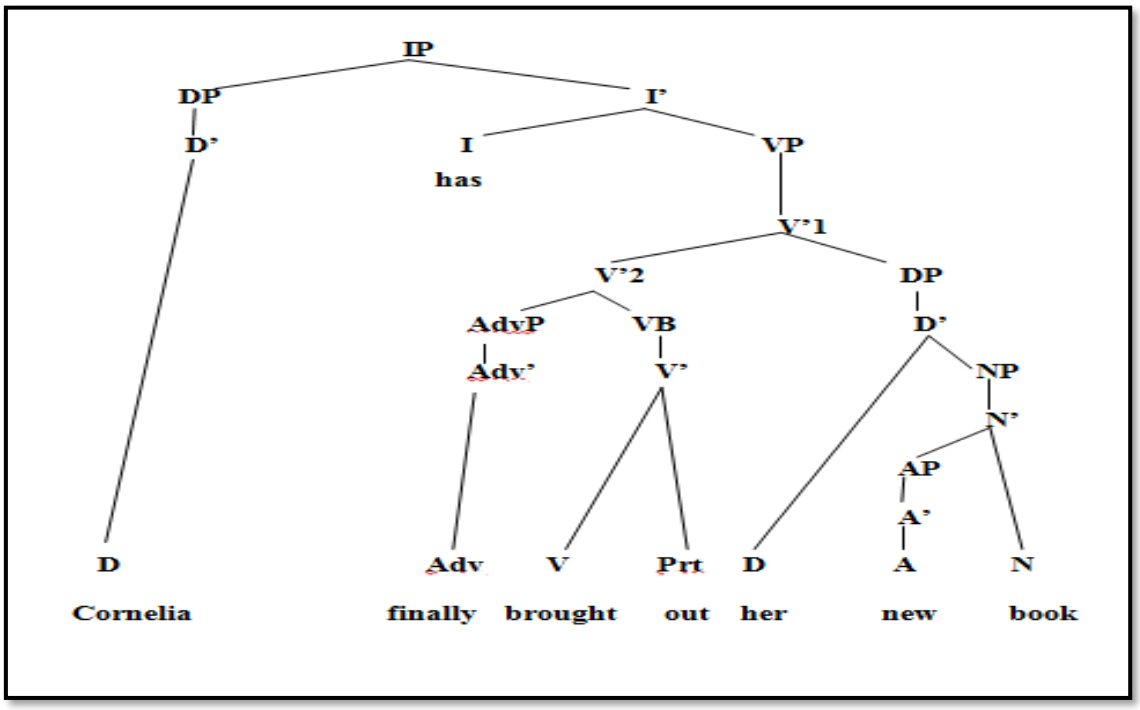
8-اخيرا احضرت كورنيليا كتابها الجديد

9-اخيرا اصدرت كورنيليا كتابها الجديد

10-كورنيليا اخيرا ابرزت كتابها الجديد

“Brought out” is a phrasal verb which behaves as a single unit. The student will only translate according to the basic meaning of “brought” and he/she may not recognize that “out” forms a constituent with the verb “brought”. That is what students (1, 2, 3, 4, 5, 6, 7, 8 and 10) do in their rendering into Arabic language.

The representation of the tree diagram in figure (1) below will specify how the phrasal verb is represented and the structural relation between them.



In the figure,VP is branched into V’, the intermediate category, and then into two nodes V’ and DP. Besides, (I) has been labeled with (Aux) (has), since it is the position that specifies the tense agreement.

- The (V') 1is branched into another V'2 which is necessary to specify that has two branches AdvP , VB.
- (V'2) immediately dominates it's daughters AdvP, VB
- AdvP , VB are sisters to each other and daughters of (V'2).
- (V'1) dominates (V'2) and (DP), but not immediately dominates (AdvP, VB).

Through tree diagram, it can be demonstrated how the phrasal verbs is grouped together and branched from a single node. Phrasal verb (brought out) means "published" and only student (9) has managed to render the sentence correctly.

2- A desert receives less than twenty-five centimeters of rainfall every year. (Sharpe,2004:136).

The sentence above illustrates a structure of certain words that are combined together to form one single unit. It consists of NP that functions as complement of the verb (receives). The following translations are carried out by the students, except student (1) did not render the sentence.

-2الصحراء تستقبل اقل من 25 سنتيمتر كمعدل لهطول الامطار

-3يتساقط المطر في الصحراء سنويا بكمية اقل من 25 سنتميترا.

-4يتساقط المطر في الصحراء بمعدل اقل من 25 سم كل سنة

-5تستوعب الصحراء من كميات الامطار ما يعادل اقل من خمسة وعشرون سم كل سنة.

-6الصحراء تستوعب على الاقل 25 سنتيمتر تتساقط الامطار كل سنة

-7تستقبل الصحراء اقل من خمسة وعشرين سنتيمترا من المطر كل عام

-8المناطق الصحراوية تتلقى امطار اقل من 25 سنتيمتر من معدله كل سنة

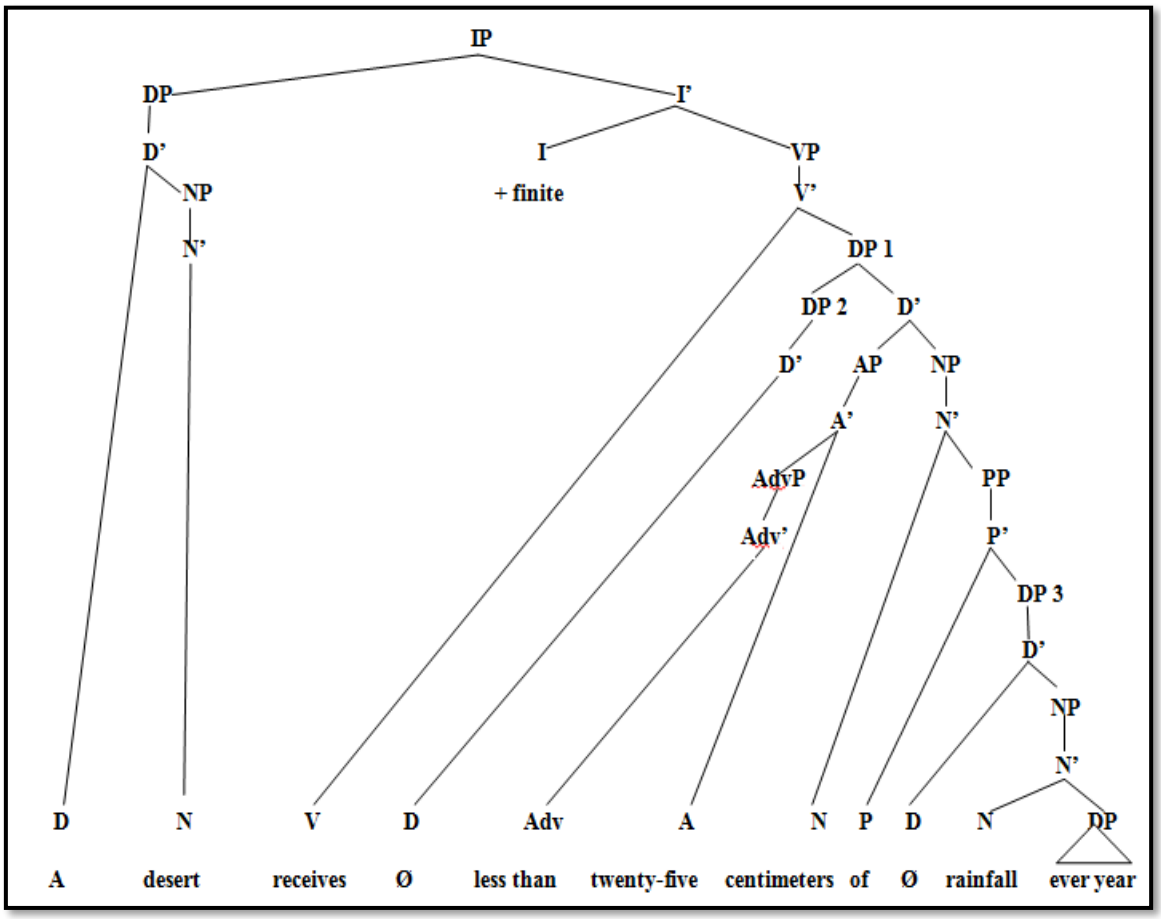
-9تتساقط الامطار في الصحراء بنسبة اقل من خمسة وعشرون سم كل سنة

-10صحراء يتلقى اقل من خمسة وعشرين سم من هطول الامطار كل عام

The word (rainfall) is a NP which is one word with certain meaning, however, a student may think that (fall) here should translated as main verb of the sentence and misses the main verb (receives). Students (3, 4, and 9) have rendered (rainfall) into (يتساقط المطر). However, student (6) has understood the structure of ST but he/she is confused by the words (rainfall)

and (receives). This confusion has led to improper rendering. Some students may add words in translation which are not necessary, as in rendering of student (8) who adds the word (المناطق) that has no equivalent in the English sentence.

The figure (2) below explains the syntactic relations between the constituents and how (rainfall) is represented in the tree.



Since DP has only one head, it is necessary to branch the DP into another DP2 that characterize with the symbol (Ø). The node (Adv) is characterized as (intensifier adverb) of the post-modifier (twenty-five).

- (Rainfall) is represented in the diagram as head (N) that is branched from NP and in turn from the mother node (DP'3).
- (Of rainfall) is (PP) that functions as complement of the N (centimeters).
- Both (AP and NP) nodes are immediately dominated by D' then to DP1which is daughter to VP.

It seems from the analysis that students should try to analyze the strings of words into their immediate constituents to understand that some words like (rainfall) is forming one single unit with one certain meaning. However, students (2, 5 and 7) are succeeded in their translations. Besides, student (10) has translated the sentence literally but it is considered correct.

3- The production of different kinds of artificial materials is essential to the conservation of our natural resources. (Sharpe, 2004:179).

The sentence above contains modifiers before a noun specified as (determiners or adjectives) or after the noun like complements of the (NP).

The following translations are carried out by the students of the above sentence, except students (1and 9) where they did not perform the translation.

2-انتاج مختلف انواع المواد الصناعية هو ضروري من اجل المحافظة على مصادر الطبيعية

3- انتاج مختلف المواد الصناعية هو شئ اساسي لحفظ الطبيعة وكذلك لمصادرنا الطبيعية.

4- الانتاج للانواع المختلفة من صناعة المواد هو ضروري لحماية مصادرنا الطبيعية

5- تختلف انواع الانتاج من مواد مصنعة او اولية للمحافظة على مصادرنا الطبيعية.

6- ان انتاج الانواع المختلفة من المصادر المصنعة للمحافظة على المصادر الاولية

7- انتاج انواع مختلفة من المواد الصناعية اساسي لحماية مصادرنا الطبيعية

8- انتاج اصناف مختلفة من المواد الصناعية ضروري لمداولة المصادر الطبيعية

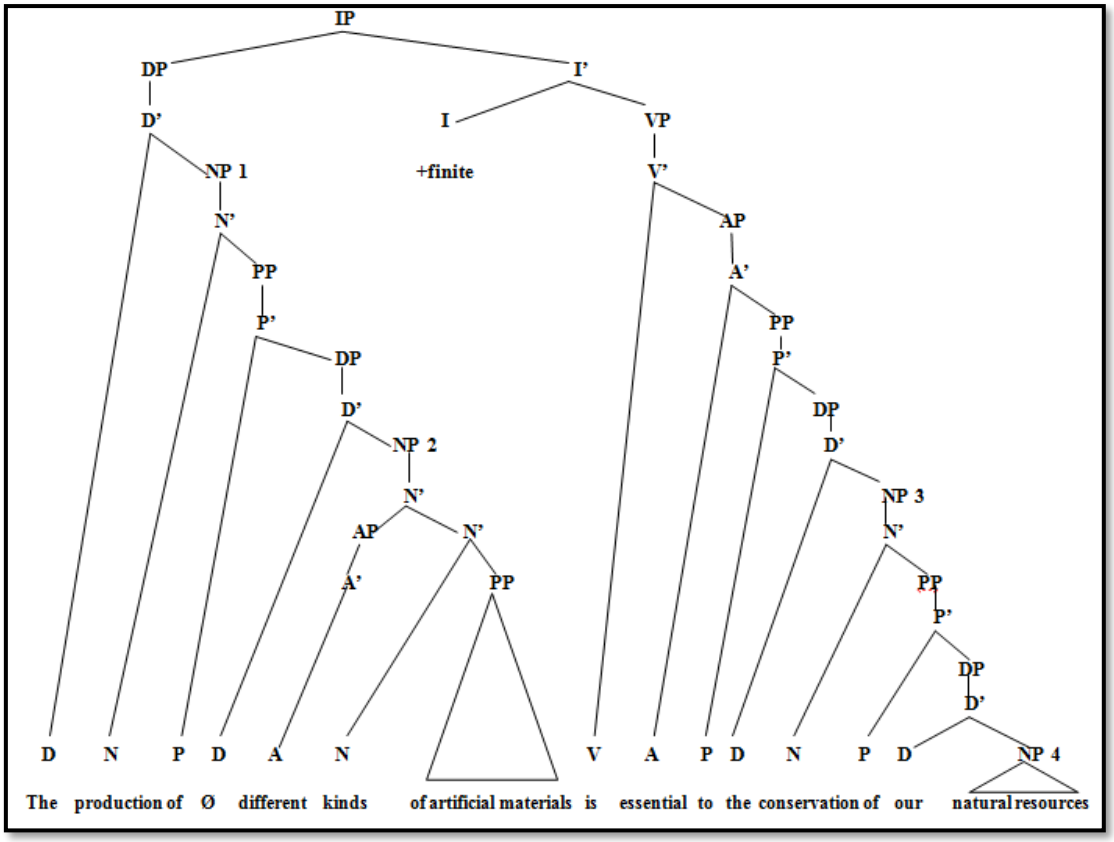
10- انتاج انواع مختلفة من الاصطناعي لابد من الحفاظ على مواردنا الطبيعية

Students (3 and 8) are confused by the structure (conservation of natural resources). Thus, they have inadequately rendered the sentence.

However, some students like (6,5 and 10) missed some words in translation either they do not know how to translate them or they forgot them, like the adjective (essential) and the noun (materials) which is not translated by student (10). On the other hand, student (2) has managed the translation except that the modifier (our) represented as Determiner in the tree, is not rendered which is important to specify which kind of resources to be conserved. Thus, the translation is not correct. On the other hand, the correct translations can be considered by students (4 and 7). The suggested translation is specified as follows.

انتاج مختلف انواع المواد الاصطناعية يعد امرا اساسيا للمحافظة على مصادرنا الطبيعية

The figure (3) below will specify all the constituents of the sentence and the structural relation between them.



The tree diagram above illustrates the connection between constituents (Modifiers and Complements of Noun Phrases).

- NP1 has branched into (N'), intermediate category, then to nodes (N+PP) which are immediately dominated by (NP1).
- NP2 has no determiner but Adjective as modifier categorized (AP). It is branched into its daughters (AP+N').
- NP3 has nodes (N+PP) and the (D) (the) is specified as the head of DP but functions as modifier of NP3
- NP4 is represented in a triangle because its structure is repeated in the tree.

7-2 Complex Sentences

Complex sentence contains one dependent clause and one or more independent clauses.The same process of analyzing all the constituents into their syntactic structures through tree diagram will be performed also for complex sentences.

1- Planting trees is a custom that many people engage in to celebrate Arbor Day. (Sharpe,2004:144).

The sentence contains two clauses. One is introduced by (planting) ing-participle acting as noun modifier of (trees) and the second clause is that-clause or CP which functions as complement of the object (custom), it is non-finite clause that has a phrasal verb and to-infinitive phrase which functions as (object) of that-clause. The sentence has been translated into the following:

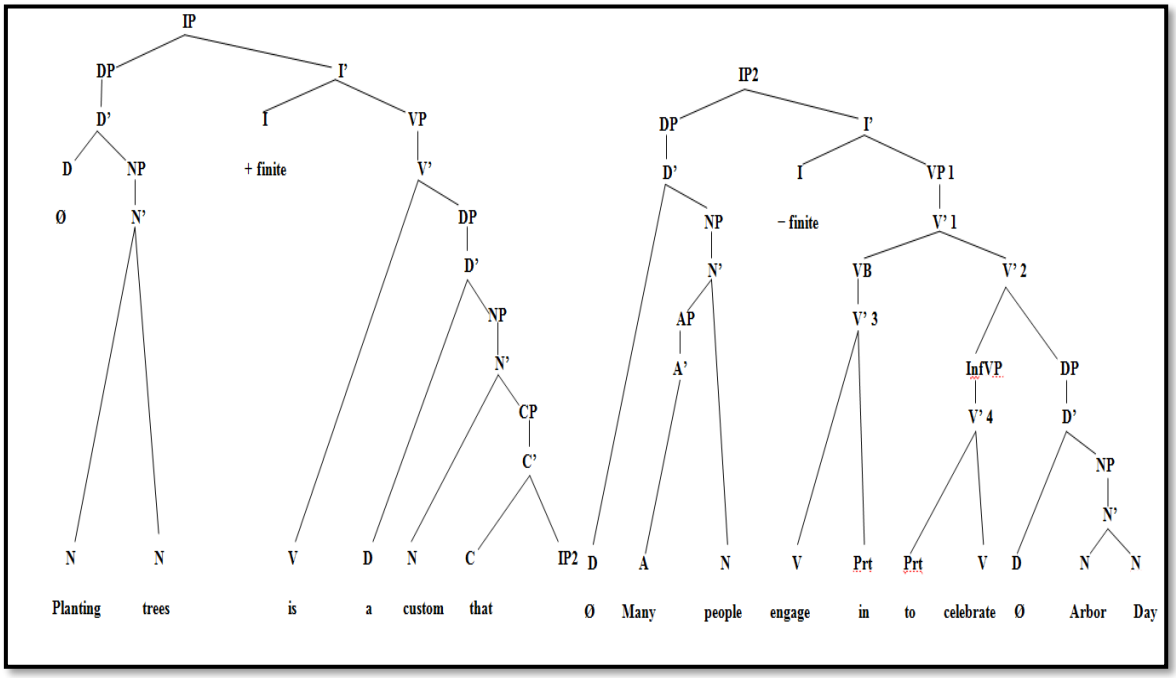
1- زراعة الاشجار مخصصة لكثير من الناس الذين اشتركو في احتفال يوم الشجرة.
2- زراعة الاشجار هو عادة الكثير من الناس في يوم الشجر العالمي.
3- زرع الاشجار هو تقليد دخل فيه العديد من الناس واحتفلوا به هو يوم الشجرة
4- زرع الاشجار هو عادة الكثير من الناس اشعال النار احتفالا بيوم الشجرة
5- ان الاشجار المزروعة تعرف بانجذاب الناس اليها في عيد الشجرة
6- زراعة الاشجار تعرف بانها ينجذب اليها الناس في اعياد الشجرة والميلاد
7- زراعة الاشجار هي عادة ادخلها الناس للاحتفال بيوم الشجرة
8- زراعة الاشجار هي العادة التي كثير من الناس متعلقة بااحتفال يوم الشجرة
9- يحتفل الكثير من الناس عادة بعيد الشجرة
10-زراعة الاشجار هو مخصص ان الكثير من الناس الدخول في الاحتفال يوم الشجرة

The students, in this structure, have not realized that the sentence is made of two clauses and in turn they cannot make a connection between them in translation, like students (2 and 9) which they understand the meaning of the sentence but did not manage the structure. However, students (5, 6, and 10) did not succeed in conveying the content of the ST. Student (1) has understood the content of the sentence but failed to translate the noun (custom).

Students (3 and 4) have rendered the noun (planting) into verb (زرع) where they think it is a form of ing-participle verb. Besides, student (4) adds the words (اشعال النار) which have no equivalent in the ST. Students (7 and 8) have succeeded in managing the translation of the sentence. However, the suggested translation is outlined below.

تعد زراعة الاشجار عرفا يشارك به العديد من الناس للاحتفال بعيد الشجرة

Through tree diagram, the students can specify the structure of the two clauses. Figure (4) below:



The structural relations of the constituents are as follows:

- VP1 is branched into intermediate category V'1, then to its daughter nodes (VB2+ VP3).
- VB branched into V'2 and then nodes (V+Prt), they are sisters to each other and both are immediately dominated by (VB) and in turn dominated by the mother node (VP1).
- The other daughter VP3 (infinitive) is branched into nodes (V'4 +DP)
- VP1 is asymmetrically c-commands the nodes VB+ VP3 and all their granddaughters.
- VB is symmetrically c-commands VP3

The relation that holds between sisters is called (Symmetrically) whereas the one that holds between aunt and nieces is called (Asymmetrically).

It was necessary to branch VP1 into another VP3 to explain that (Inf VP) form immediate constituent with the NP (Arbor Day).

2- The key officials who testified before the Senate committee responded evasively (Sharpe,2004: 187).

The above sentence contains two clauses, superordinate clause and relative clause. The relative one starts with the relative pronoun (who) and it functions as post-modifier of the (S). Relative clauses are one of the major categories of *subordinate clauses.* One of its characteristics is indicating concord with its antecedent and it can function as (S, O, C, A), this kind is called internal relation. (Quirk et el,1985:1244-1245).

The translations below are carried by students (2, 6, 7, 8 and 9) but the other students (3, 10, 1, 4 and 5) did not perform it.

2- المسؤولون الرئيسين الذين ادلوا بشهاداتهم قبل لجنة مجلس الشيوخ تهربا

6- المفتاح المرخص الذي يستخدم قبل مجلس الشيوخ

7- الرؤوساء الرئيسيين الذين شهدوا قبل ان يقوم مجلس الشيوخ بالرد تهربا

8- المفتاح الرئيسي الذي شوهد قبل مجلس الشيوخ يتحمل مسؤولية التهريب

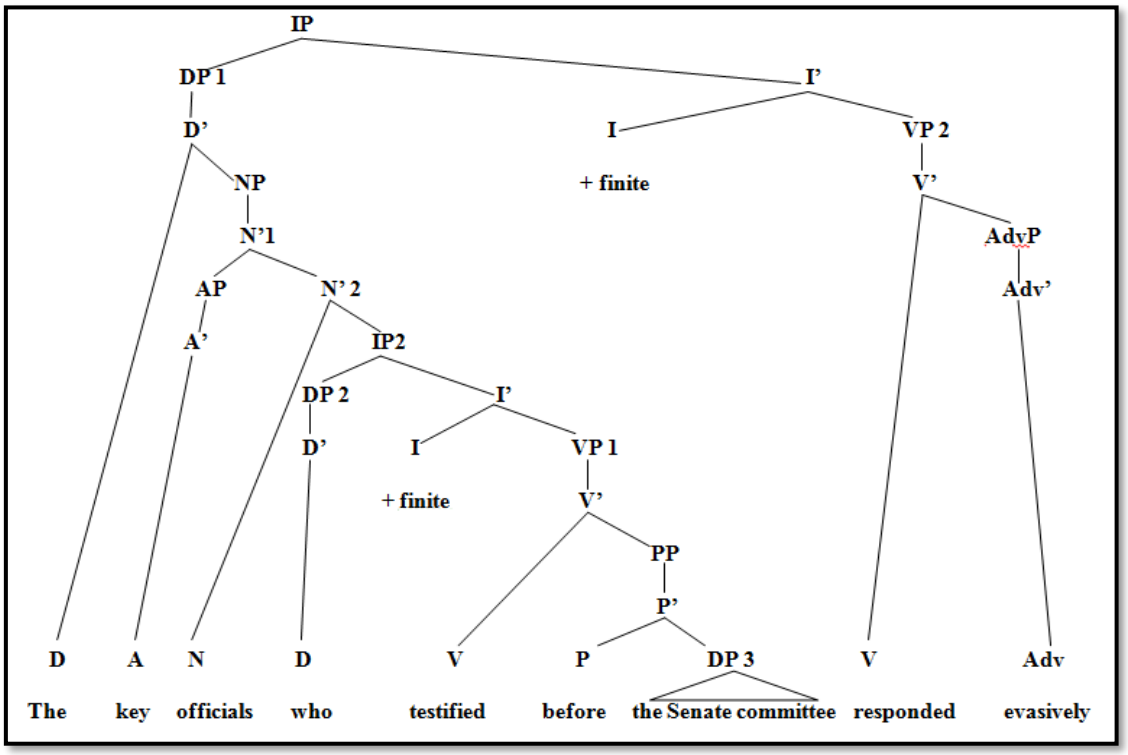
9- مسؤولين المفاتيح شاهدوا المجلس هو المسؤول عن ارتكاب التهرب

Students (2 and 7) have perceived the content but did not succeed in transmitting the appropriate structure. However, students (6, 9, and 8) did not realize the meaning of the English sentence.

It appeared that the structure of the English sentence has caused a trouble for some students. They did not recognize that (testified) is a verb that belongs to the relative clause and the main verb is (responded) which completes the meaning of the sentence. Thus, the aforementioned students did not succeed in translating the sentence. However, the suggested translation can be considered as follows.

المسؤولون الاساسيون الذين ادلوا بشهاداتهم امام مجلس الشيوخ اجابوا بغموض

The figure (5) below illustrates the structure of the two clauses in the form of Tree Diagram:



In the figure above, the relative pronoun of (IP2) has been categorized under (D) because (who) stands for the proper noun (officials). The two clauses display tense concord that happened to be in the simple past and is represented as +finite.

- N'2 has been branched into nodes(N + IP2), they are sisters to each other, since (IP2) is embedded relative clause acting as post-modifier of the NP
- DP3 has been given triangle to avoid repetition, since this structure will also branch into the nodes D+NP
- Two VPs, VP1 that is specified under IP2 and VP2 node that is branched under IP.
- VP1 has two daughters (V+PP) and it immediately dominates and asymmetrically c-command them.
- The daughters of VP2 are the nodes (V+AdvP).

3- The first electric lamp had two carbon rods from which vapor served to conduct the current across the gap. (Sharpe, 2004:291).

The relative pronoun (which) comes as "adverb" and it is a complement of a preposition (from). This type of structure is used predominantly in formal English. (Quirk et al, 1985:1252). The following translations are made by students (2, 3, 4, 5, 6, 7, 8, and 9). However, students (1 and 10) did not conduct the translation.

2- اول مصباح كهربائي يحوي جذرين من الكاربون

3- اول مصباح كهربائي كان يحتوي على قضبان كاربونية حيث كان البخار يستخدم لاستقطاب التيار باتجاه الفجوة

4- اول مصباح كهربائي كان يحتوي على قضبان كاربونية وكان البخار موضوعا لايصال الضوء لاستقطاب التيار نحو الفجوة

5- اول مصباح كهربائي احتوى على اثنين من الاعواد الكاربونية التي تستهلك البخار ليسير بها التيار الكهربائي

6-اول مصباح كهربائي يحتوي على اثنين ذرات كاربون للقيادة

7- اول مصباح كهربائي كان يمتلك اثنان من قضبان الكاربون من الذي يقوم البخار باستقطاب التيار حول الفتحة

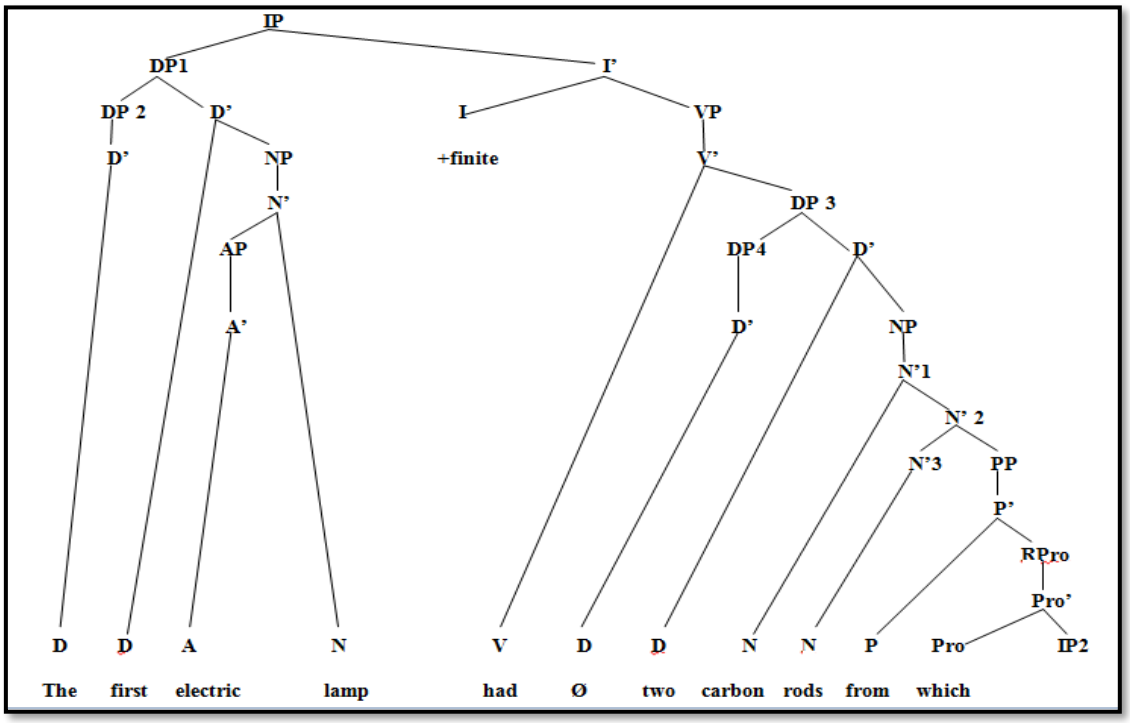
8- المصباح الكهربائي الاول الذي يتكون من قضيبين من الكاربون يحلل من الخادم البخاري الى سلوكيات التيار خلال الفجوة

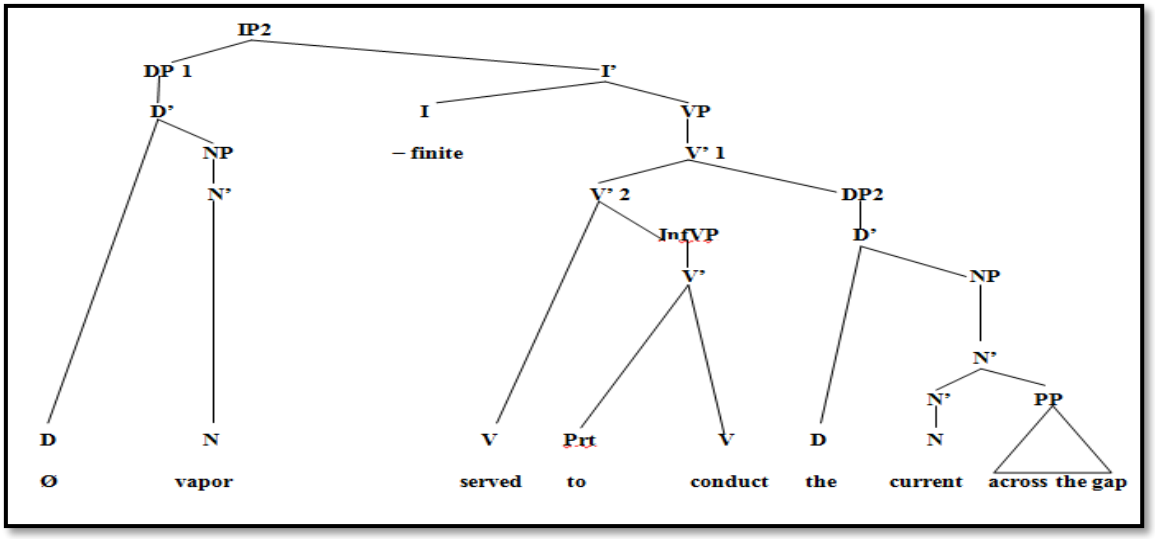
9-المصباح الكهربائي الاول يحتوي عمودين كاربون وبخارهما مخدوم بتيار يمر بفتحة

Students (2 and 6) have only managed to translate the first clause. However, student (9) did not make a connection between the constituents and translated the sentence literally. The problem mostly lies with the structure of (vapor served to conduct); (to conduct) is to-infinitive verb phrase that functions as Object of the relative clause. This appeared in translation of students (4, 5, and 8). However, student (4) understands the content of the ST but he/she adds words like (الضوء) and

(موضوعا) which are improper since they are not exist in the original sentence.

The figure (6 and 7) below explains the structure of the two clauses and the structural relations between the constituents.





- In the first clause, DP has branched into (DP2 +D'), since there are two
- determiners, the head determiner (the) and (first) as post-determiner.
- N'3 has given a (bar) to specify that its sister Adjunct which labeled as (PP) both are daughters to N'2.
- Since (from) is a preposition, N'2 has branched to (PP) then (relative pronoun). Thus, "from" and "which" compose a constituent that stands as sisters to each other in the tree.
- Both (RPr + P) are immediately dominated by (P') then to mother node PP
- VP has branched into (V'1), then (V'2 +DP2) which are sister to each other and daughters of VP
- V'2 subcategorized into nodes (V + InfVP). They are branched from a single node since they form a constituent.

On the other hand, students (3 and 7) have perceived the intended meaning and succeeded in conducting the translation. Moreover, the suggested translation can be specified as follows:

كان اول مصباح كهربائي يحتوي قضيبان من الكاربون حيث يعمل البخار من خلالهما على ايصال التيار عبر الفجوة.

Conclusion

Most of first-year class students make syntactic mistakes when they render simple and complex sentences into Arabic. This proves that hypothesis one has been validated. The Tree-diagram technique that has been adopted in this study played an important role in solving part of the problems facing those students with regard to Translation Teaching. This has also verified hypothesis two. X-bar theory describes three levels of structure: (XP → NP VP …., Specifier Modifier, (X') with head (X) and Complements). It also intends to specify sentences with non-lexical or functional categories like (CP, TP, IP and DP); each one has its own rules to branch sentences into their immediate constituents. Translation is the gateway for understanding other societies. However, to teach is rather difficult process from translating, teaching translation is still a subject that has not gained much attention.

Though it may seem effortless, translation of simple sentences may be difficult for students like phrasal verbs, modifiers before the nouns and after them. Unlike Simple sentences, complex sentences are difficult and consist of two clauses: one is the independent clause and another one which may be embedded or subordinate to the superordinate. Students faced problems when there are two structures of verb phrases like in the relative clause that is embedded as post-modifier of the NP and the to-infinitive phrase, students in these structures cannot differentiate between main verbs and minor ones. The sentences are analyzed into their syntactic constituents with the technique of tree-diagram. The top of the tree were categorized with (IP) and it is branched into the nodes (DP+I'). The tree has specified the structural connection between the constituents in the sentences.

Tree diagram can help students to organize their ideas because the components or constituents of the sentence are well-connected and well-arranged. However, the analysis is short and concise. The study considers the first in regarding tree diagram as teaching method of translation.

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