

**اثر استخدام استراتيجية جراحة بناء الجملة على  
تحصيل طلبة المدارس الإعدادية في النحو والاحتفاظ**

**The Effect of Using Syntax Surgery  
Strategy on English Grammar Achievement  
and Retention of Preparatory School  
Students**

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### المخلص:

تهدف الدراسة الحالية الى ايجاد اثر استراتيجيية جراحة بناء الجملة على تحصيل طلبة المدارس الاعدادية في النحو والاحتفاظ. اشتمل مجتمع الدراسة على طلبة المدارس الاعدادية في العراق للعام الدراسي ٢٠١٨ / ٢٠١٩. تكونت عينة الدراسة من ٨٤ طالبا في مدرسة الزبير بن العوام الاعدادية في مدينة سامراء. توزع الطلبة على مجموعتين المجموعة التجريبية والمجموعة الضابطة. كلا المجموعتين ادت الاختبار القبلي لغرض المساواة. تم تدريس المجموعتين من قبل الباحث نفسه حيث درست المجموعة الضابطة باتباع الطريقة التقليدية والمجموعة التجريبية باتباع استراتيجيية جراحة بناء الجملة. تم بناء اختبار تحصيلي بعدي واختبار الاحتفاظ وبينت النتائج الاثر الايجابي لاستعمال استراتيجيية جراحة بناء الجملة على تحصيل الطلبة في النحو والاحتفاظ. انتهت الدراسة باستنتاجات وتوصيات.

### Abstract

The objective of the present study is to find the effect of the Syntax Surgery Strategy on preparatory school students' achievement in English grammar and retention. The population of this study is Iraqi fifth-class students in preparatory schools in the 2018/2019 academic year. The sample of this study consists of (84) male students at Al-Zubiar Bin Al-Awwam Preparatory School in the city of Samarra. The students are distributed into two classes; each class contains (42) students. Class (A) is the control group, and class (B) is the experimental group. Both groups pass a pre-test for equalization. Then, the two groups are taught by the same teacher; the control group is taught using the used way, while the experimental group is taught by using the Syntax Surgery strategy. An achievement post-test and retention test have been constructed. The results were calculated, and they show the positive effect of using the Syntax Surgery strategy on students' grammar and retention. Finally, conclusions and recommendations were presented.



## INTRODUCTION

### 1. The Problem of the Study.

English grammar teaching begins from primary school and continues unabated through secondary school, college, and even higher studies, and yet the students graduate knowing very little about grammar. There is no other single subject in the curriculum that students study as long. After all these years of instruction, the students are expected to be experts in grammar. The idea that grammar is too complicated is not correct. So, one should begin to suspect that the grammar instruction approaches that teachers utilize year after year in their teaching are not very effective (Williams, 2012: 18)

Paris and Yussof (2012: 213-221) state that students very often consider grammar classes complicated and scary, and board games are important to eliminate the fear and create excitement in these lessons. When teachers use the right approaches in teaching grammar, that will benefit the students in different ways. So, it is important to concentrate on form as well as function, which will enable students to use the language fluently and accurately.

The greatest problem that teachers of English face while teaching in Iraqi secondary schools is that students in all classes, from first to sixth, fail in questions related to tense correction, rearrangement, or verb conjugation even though time expressions are supplied, i.e. (now, yesterday, tomorrow, just, already,..etc.). Clear instructions are given in the questions, like (change to present continuous), and most grammatical paradigms are rehearsed every school year. It is believed that it is related to the conventional methods that teachers follow in teaching grammar.

In Iraq, English is taught as a foreign language. According to the curriculum staff in the Ministry of Education, English is a compulsory subject, starting from the fourth primary class and continuing through secondary school and university. This means that the English language is consequently important for keeping up with the world's development. We know that the four language skills, listening, speaking, reading, and writing, should be achieved in teaching English to increase students' ability to use the language. Grammar mastery is essential for the ability in all four skills. If students know very little about grammar, they will inevitably fail to understand what they hear, and fail to write and read, and consequently fail to speak by using the correct form of the language. Accordingly, another problem is that students focus only on passing the final examinations rather than on learning the language skills.



## 2. Importance of Grammar Learning

Learning grammar can enhance the learner's proficiency and accuracy in using the language and facilitates the mastery of its syntactic system; thus, it helps the development of fluency ( Hinkel, Fotos, 2002: 10 ). Nassaji and Fotos (2011: 2 ) also assert the importance of grammar saying "It was believed that language was mainly composed of grammar rules and that knowing those rules would be sufficient for learners to acquire the language." They (Ibid:1) also said that grammar is fundamental to language learning, and without the acquisition of grammar, learning does not exist.

## 3. Errors in Language Use by Arabic Learners

Students of English in Arab countries face many problems in writing and speaking in the English language. That may be due to the interference of Arabic in the use of English, for example, the verb to be is not found in Arabic, so the Arabic sentence ( hiya talibah) can be literally translated to (\*she student). This mistranslation also lacks the indefinite article because it is also not found in Arabic.

Rabab'ah (2002: 180-184 as cited in Ismail. 2024) mentions some studies about students at Arab universities in different countries and the kind of difficulty they have. In Jordan, for example, researchers found that EFL students make serious lexical mistakes when they communicate in English. Also, in Sudan, according to Kambal (1980: cited in Rabab'ah 2005:182), university students commit major syntactic errors in verb phrases and noun phrases; three major errors are reported: tense, subject-verb agreement, and verb formation, i.e., the perfect tense confusion, verb to be confusion. In Egypt, the majority of problems learners face are those concerning pronunciation, like intonation and stress. In Yemen, applicants are accepted into English departments of Yemeni universities despite their low proficiency levels in English.

This weakness in English among EFL Arab students is attributed to the lack of a target language environment, lack of motivation on the part of the students, and the curricula and teaching methodology.

A study made by Hamza (2011: 11) on Iraqi first-year students in history and Arabic departments about their errors in using definite and indefinite articles resulted in an error percentage rated between 60% and 85%. Articles misuse is attributed to interference with students' native language (Arabic) because Arabic does not have the indefinite article (a / an).

## 4. The Concept of Syntax Surgery.

Syntax surgery is a visual and physical learning strategy. It helps students see the relationships between the elements of a sentence that may be difficult to understand or confusing. The strategy involves writing a



problematic sentence on a strip of paper, cutting it, rearranging it, and correcting it so that it will be more understandable ( Herrell and Jordan 2012: 132).

### **5. The Importance of Using Syntax Surgery.**

As mentioned earlier, Syntax Surgery allows students to observe the parts of a sentence move to form the correct structure. It provides a visual analysis of syntax. This strategy can benefit from the old Chinese proverb by the Confucian philosopher Xun Kuang, who said: "Tell me and I forget, teach me and I may remember , involve me and I learn"([www.quora.com](http://www.quora.com)). Syntax surgery includes the last two parts; that is, students see the parts of sentences move and take the right place so they remember. Then, they do the surgery themselves by cutting the sentence strips and arranging the sentences so they understand and learn. In this way, the students use more than one sense during learning, which allows learning to last longer.

An American educator named Edgar Dale claims that in a duration of two weeks, we can remember 10% of what we read, 20% of what we hear, 30% of what we see, 50% of what we hear and see, 70% of what we say and write, and 90% of what we actually participate in. (<https://www.quora.com/Where-and-when-did-Benjamin-Franklin-say-tell-me-and-I-forget-...>).

Adrian et. al. (2012: 116) mention other advantages of Syntax Surgery strategy, those are, helping students to be more confident when they use English. Students' memories are supported because several avenues are used to reinforce grammar achievement, also students can hear and see the differences between English and their native language, and separate the thoughts in complex sentences.

### **6. The Steps of Syntax Surgery Strategy.**

Teachers should grade their instruction into steps in order to be easily learned and understood by students. Any teaching strategy requires passing through different steps, from preparations to application. According to Herrell and Jordan (2012), syntax surgery lesson is conducted through the following steps :

**1• Identify a problematic sentence**—In this step, the teacher identifies a sentence that is causing difficulty. It may be a sentence that the student has spoken where the home language word order conflicts with the English word order, or it may be a complex sentence encountered in reading that is confusing.

**2• Write the sentence and initiate the “surgery.”**—In the second step, the teacher writes the sentence on a sentence strip and reads the sentence aloud with the student or students involved in the speaking or reading activity. For example, if the sentence that is written by the student says, “*I have a scarf blue,*” take a pair of scissors and cut the sentence apart in the



place or places of difficulty. “*I have a scarf blue*” would be cut before the words *scarf* and *blue*.

**3• Rearrange the words**—The third step would be to rearrange the words in a pocket chart in the correct English sequence. Place “I have a blue scarf” on the chart and say, “This is the way we say it in English,” then the student is asked to read the corrected sentence along with the teacher and then the teacher explains the difference in the word order as simply as possible.

**4• Practice more sentences with the same pattern**—The teacher then writes a few more sentences with the same word pattern on sentence strips and ask the students to read them along with him/her for additional practice.

**5• Time the lessons**—The teacher should not use this lesson in a way that interrupts communication with the student, i.e. it shouldn't take the most lesson time and neglect other activities. The teacher should respond to students and model the correct English syntax and give instructions to several students at a time.

## **7. Previous Studies.**

There are few studies concerning syntax surgery strategy, among these is the following study:

Damai (2018) has conducted a study in Sumatra, Indonesia, using Syntax Surgery strategy—he used the word 'technique' instead of 'strategy'. The dependent variable of the study was reading comprehension in descriptive text. The study sample consisted of (75) students: (56) females and (19) males in tenth grade in Gajah Mada Pandar Lampung. The students were distributed into two classes, one is control class (38) and the other is experimental(37). Damai used pre-test and post-test as the study instruments. In the pre-test, experimental group got a score mean of (58.10), whereas control group's was (53.55). After treatment, the mean of the experimental group was (78.24), and that of the control group was (68.68). After analyzing the data collected from the pre-test and post-test, the writer found a clear difference in the results in favour of the experimental group and that the Syntax Surgery Strategy is an effective pedagogical technique.

According to the results stated above, the Syntax Surgery Strategy is expected to achieve better results if it is used to teach grammar because this strategy best suits the subject of syntax and grammar instruction. One can observe from the name of this strategy that it originated basically to analyze the element of syntax since syntax means the way in which words are arranged together to form correct sentences in a specific language. Some related studies concerning grammar achievement and retention are also surveyed in this study:

A study by Abu Moumer (2017 ) in Gaza, Palestine. Rana, the writer, wants to check grammar learning by using the Mastery Learning Model.



The writer selects (69) students to represent the study sample. She distributes the students as follows: (36) in the experimental group and (33) in the control group. They are in 10<sup>th</sup> grade and aged between (15—16) years, which is nearly the same age as the sample students of the present study. The writer uses pre-test and post-tests as a technique for collecting data. In the pre-test, the two groups are equivalent. The highest score is (30), and the result after treatment and post-test is that the mean of the control group is (19.39), whereas the mean of the experimental group is (24.69). This means that there is a significant difference between the two groups concerning English grammar achievement.

Another study was conducted by Al Qudah and Damra (2012: 302) in Amman-Jordan to investigate the effect of students' native language on English grammar achievement of ninth-stage EFL students in the academic year 2010-2011. The sample of the study consists of (80) secondary school female students distributed into two groups, control and experimental. The instrument used was a grammar achievement pre-test to see if there was any difference in students' levels, and the two groups were equivalent. Then, after the experiment was conducted, students were post-tested.

The result was that after the post-test, the mean of the control group was (16.0), while the mean of the experimental group was (21.25). This means that students who were taught English grammar using Arabic (students' native language) achieved the rules better than those taught without using the native language.

Concerning grammar retention, there is a study by Hassani, Rahmani, and Fard (2014: 234-238) done in Iran, which concentrated on the recall and retention of English grammar rules as the dependent variable of the study. The writers used songs as an independent variable and tried to find the effect of songs on grammar retention. The participants in this study were 40 male students of the English language teaching institute in Hamadan, Iran. The ages 17—22 were randomly divided into two groups; each group included 20 students in a musical-mode group and a nonmusical-mode group, as the writers name them. Students were pre-tested by a proficiency test to select homogeneous groups, which had a reliability of 0.79 on KR-21; the mean was (19.90) for musical and (18.00) for nonmusical. It contained 50 multiple-choice and vocabulary items. The teaching duration was one month, and then students passed a post-test of 30 items. Then, they compare the pre-test and post-test to find the effectiveness of songs. Finally, by applying the t-test, the writers found that music class showed higher scores. After comparing the results, the experimental group got a mean of (27.00) whereas the control groups was (22.30); after running the t-test, the writers found that there was a significant effect in the favor of the experimental group.





## **8. Experimental Design.**

This empirical study contains one independent variable and two dependent variables. The independent variable is the Syntax Surgery Strategy, which is applied to the experimental group to show the influence of syntax surgery on students' grammar achievement and retention.

The dependent variables of the study are (a) the students' achievement of English grammar and (b) the retention of the grammar tenses they have achieved at the end of the experience.

## **9. Participants.**

The population of the study includes students of all the fifth preparatory classes in the city of Samarra' in the academic year 2018-2019. The sample chosen for this study consists of (84) male students aged (16-20) years old, and they come from the same cultural community; they represent two fifth preparatory classes (42 students each) from the scientific branch in Al-Zubair Bin Al-Awwam preparatory school.

## **10. Instrumentation.**

A number of instruments are used in this study, which are designed or selected to collect information about students' achievement and retention in English grammar. These instruments are:

## **11. Pre-test.**

The pre-test is the first step in the whole research. It was carried out in the first meeting for the control and experimental groups on the first day of experiment application to determine their levels in English and measure the difference between the two groups for homogeneity. The test includes four questions. Question one contains twenty items, and the other questions contain ten items each.

## **12. Topics/ Grammar Tenses.**

The study topics are the grammar tenses selected from English for Iraq, 5th preparatory (book 11), units 2 and 3. The topics deal with past simple and continuous, question tags, zero and first conditionals, offering to help, present perfect simple and continuous, adjectives order, predictions, deductions, compound nouns, and irregular verbs.

## **13. Post-test.**

The post-test is the same as the pre-test, and it is given to both control and experimental groups at the end of the experience. The purpose of the post-test is to measure the difference in performance between the two groups after treatment, to find out which group got better scores, and consequently to know whether there is a statistically significant effect of using syntax surgery strategy on students' achievement in English grammar.



#### **14. Delayed Post-test ( Retention Test ).**

The delayed post-test consists of the same questions as the pre- and post-tests. It is given to the experimental group only and is applied eleven days after the post-test. The purpose of this test is to determine whether the students have retained what they have been taught.

This study uses visual aids to teach grammar tenses to the experimental group only. The visual aids used are a pocket chart, paper strips, a pair of scissors, and some coloured markers.

#### **15. Application of the Tests.**

In conducting this research, which was already planned, some steps are followed to apply the experience; they are :

1-In the first meeting on Sunday, 2<sup>nd</sup> December 2018, the pre-test was given to both control and experimental groups in order to know the students' levels in English.

The test consists of four questions: in question 1, there are 20 items on different grammar subjects; in question 2, there are 10 multiple-choice items; in question 3, there are 10 matching items; and in question 4, students must give past tense and past participle for 10 irregular verbs.

2-After a pre-test was given to all ( 84) students, the requirements of this study determined which class is the control group and which one is the experimental. Then teaching started, with classes meeting for 45 minutes, four times a week. The control group is taught using the conventional strategy used by most Iraqi teachers, i.e. deductive, inductive, or a mixture of both. With the experimental group, the Syntax Surgery Strategy is used.

3-When teaching ends, students are given the post-test on 6 January 2019 to check for a significant effect of the Syntax Surgery Strategy on their achievement.

4-Eleven days after the post-test is given, on 17<sup>th</sup> January 2019, a delayed post-test is given to experimental group in order to check to what extent the students can retain the grammar rules they have been taught.

#### **16. The Results of Achievement Post-test.**

When the experiment ends and data are collected , SPSS (Statistical Program for Social Science), independent sample t-test is used to calculate the results.

The hypotheses of this study are:

H<sup>1</sup> : there is a statistically significant effect of using syntax surgery strategy on preparatory school students' achievement and retention in English grammar.

H<sup>o</sup> : there is no statistically significant effect of using syntax surgery strategy on preparatory school students' achievement and retention in English grammar.

The criteria of acceptance or rejection of the hypotheses are:

H<sup>o</sup> is accepted if *Sig.*(P value) >  $\alpha = 0.05$



$H^1$  is accepted if Sig. (P value)  $< \alpha = 0.05$

The following table clearly shows results of independent sample t-test for the pre-test:

Table (1) : Results of Independent Sample T-test for the Pre-test

Group	N	mean	Variance	Calculated t-value	Tabulated t-value
Experimental	42	21.93	13.65	0.0634	2.02
Control	42	20.20	10.94		

Based on the previous table, it is clear that the calculated t-value (0.0634) is smaller than the tabulated t-value (2.02). So that  $H^0$  is accepted and  $H^1$  is rejected. It can be concluded that the two groups levels are approximants and the sample is homogeneous.

The results of the post-test are computed by using SPSS program, independent sample t-test is used to test the hypotheses of this study. The results of post-test are shown in the following table:

Table (2) : Results of Independent Sample T-test for the Post-test

Group	N	mean	Variance	Calculated t-value	Tabulated t-value
Experimental	42	52.48	17.40	2.856	2.02
Control	42	42.02	17.17		

According to the results shown in table (4.18), the t-value that is calculated (2.856) is bigger than the tabulated t-value (2.02). This means that there is a statistically significant difference in the favor of the experimental group. Thus, the hypothesis  $H^1$  is accepted, and the hypothesis  $H^0$  is rejected.

In order to measure the grammar achievement and the differences between pre and post-test results, and consequently to know the effectiveness of syntax surgery strategy, the SPSS program is used, and a paired sample t-test is applied to the results of the pre-test and post-test of the experimental group. The results of paired sample t-test are shown clearly in table (3) below:



*Table (3) Difference Between Pre-test and Post-test Mean Scores of Experimental Group*

Test	mean	Deviation	Differences mean	Differences deviation	t-value
<b>Pre-test</b>	21.93	13.35	30.95	6.67	29.73
<b>Post-test</b>	52.48	17.40			

The statistics show that the strategy used in this study is highly effective since the calculated t-value (29.73) is bigger than the tabulated t-value (2.02).

### 17. The Results of Retention Test.

The results of delayed post-test reveal a slight loss of information in a duration of eleven days after treatment and post-test. By using the SPSS program and paired sample t-test, the statistics show that there is no statistically significant difference between the mean scores of the post-test and delayed post-test of the experimental group. That is because students need more information with the passage of time. The results also show that the information loss is acceptable since the variance values of both tests are almost identical. However, the loss of information is minor as compared with the duration of time between the two tests. Table (4) shows clearly the results of delayed post-test:

*Table (4) deference between post-test and delayed post-test mean scores of experimental group*

Test	N	Mean	Variance	Calculated t-value	Tabulated t-value
<b>Post-test</b>	42	52.48	17.40	0.5192	2.02
<b>Delayed post-test</b>		50.52	17.20		

### 18. Findings.

Based on the results analyzed above, this study has found a number of findings which are listed as follows:

- 1- There is no statistically significant difference at (Sig. <  $\alpha = 0.05$ ) in the mean scores of the experimental group and control group in the results of the pre-test.
- 2- There is a statistically significant difference at (Sig. <  $\alpha = 0.05$ ) in the mean scores of the experimental group, which is taught by using the Syntax Surgery Strategy, and the mean scores of a control group, which is taught by the traditional method in the results, of the post-test for the favor of the experimental group.



- 3-The grammatical paradigms in which fifth preparatory class students' achievement has improved more than others are: compound nouns, some irregular verbs, past tense, predictions, synonyms, deductions, present simple, question tags, prepositional adjectives and zero/first conditionals.
- 4-This study reveals that, after treatment, the mean scores of the experimental group taught using the Syntax Surgery strategy are higher than the mean scores of the control group taught using the traditional method.
- 5-Students' achievement increases considerably due to the use of Syntax Surgery Strategy.
- 6-Students who are taught by using Syntax Surgery Strategy can retain grammar rules for longer time.

### **19. Conclusions.**

On the light of the findings, the present study concludes that using Syntax Surgery strategy to teach grammar to preparatory school students has a positive effect on their achievement and retention of grammar rules. When students see and manually practice the word order of the elements of English syntax, they are more likely to recall them when they are required to use them in the future.

Teachers who teach English in environments where no English is used face great difficulties in making their students keep what they have been taught. Strategies that involve more than one sense in learning are generally more effective than those methods in which a student uses one sense. Syntax Surgery strategy is one of the teaching methods that requires the student to see, hear, say and manually participate in the learning task.

The present study also concludes, through surveying literature, that Syntax Surgery strategy is suitable for different academic levels of EFL students including primary, secondary, preparatory and college students.

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