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used with them.

This finding can be supported by Sabah (1994) who states that scientific stream students are more mature and motivated. Also, they achieve better than literary stream students do since their streaming into scientific education depends on their high averages.

Results of the post- test total mark show a statistically significant difference at ($\alpha \leq 0.05$) between scientific and literary stream students taught passive voice inductively or deductively. This result indicates that scientific stream students (taught passive voice inductively or deductively) are better in their achievement in passive voice than the literary stream ones. One reason could be that the scientific stream students are much more interested in studying in general and in learning languages in particular. Moreover, they deal with their school subjects with great concentration since they demand that.

9. Recommendations

In light of the results, the study recommends the following:

1. It is necessary for teachers to vary their techniques and ways of teaching according to their students' interests and achievement levels with more emphasis on using the inductive way of teaching grammar.

2. Teachers who teach students in the literary stream are advised to encourage their students to be more interested in learning English language. They should also help them enjoy learning the English language and take part in classroom activities by using different methods which may cater for their individual differences.

3. Newly appointed teachers are encouraged to attend different intensive training courses held by the Ministry of Education in order to be aware of the various modern ways of teaching English. They are also encouraged to apply modern ways of teaching in their classes since this is one of the aims of the Educational Reform for Knowledge Economy.

4. Researchers should conduct other studies in other regions and on other areas of syntax in order to obtain a more comprehensive idea about which way of teaching is more influential in teaching grammar in Saudi Arabia.

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5. Table 12 shows a statistically significant difference at (α ≤ 0.05) between the mean scores of scientific and literary stream students in both groups (inductive and deductive). This difference shows that scientific stream students gain better marks than the literary stream ones since their mean scores are higher.
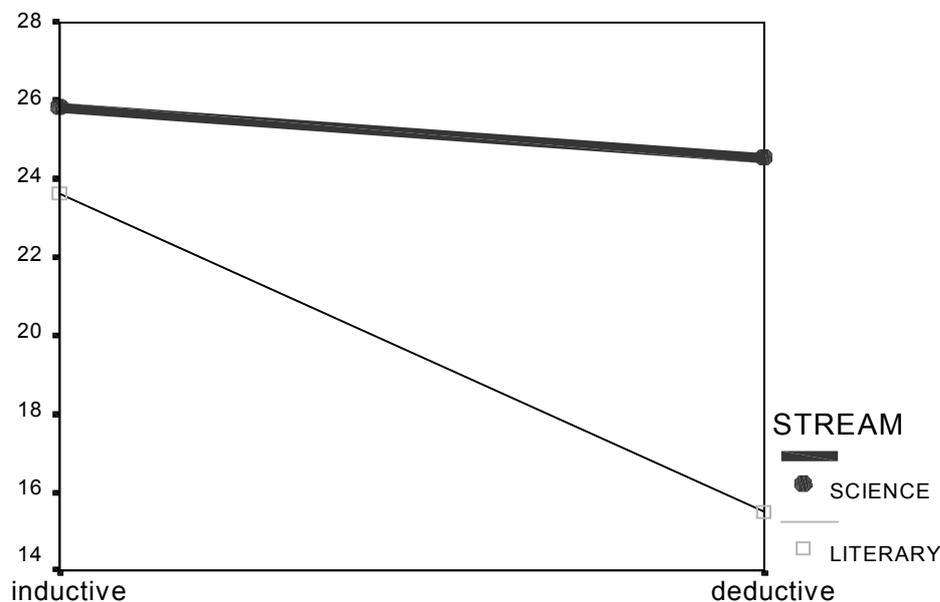
Figure (3): Method of Instruction and Stream Interaction of the Post - Test Total Mark.

GROUP

Figure 3 displays that the scientific stream students in the inductive and deductive groups have achieved better than literary stream ones. Moreover, it shows that the literary stream students in the inductive group are also better than those in the deductive one.

8. Discussion of the Study Results

The present study aims at finding out the effectiveness of the two ways of teaching passive voice in the English language to non-native speakers. The two methods used in this study are deductive and inductive. The study also attempts to find out if there is a relationship between students' achievement in passive voice in the English language and their school stream. Finally, the study tries to find out if there is an interaction between ways of teaching, students and their schooling stream. Thus, the results of the post-test total mark will be discussed separately.

Concerning the first question of this study which addresses if there are any statistically significant differences at (α ≤ 0.05) in the students' achievement according to ways of instruction, results show a significant difference in favour of the inductive way of teaching. This result can be explained by the fact that the Ministry of Education held many training courses for English language teachers in order to acquaint them with up - to - date or contemporary methods of teaching English language. I think that these training courses have changed the atmosphere of the class to become more suitable for students to induce the grammatical rules from relevant activities and exercises.

As regards the third question, which seeks to identify whether there are any statistically significant differences at (α ≤ 0.05) in the students' achievement mean scores according to stream of study, results show a significant difference in favour of the scientific stream. This means that scientific stream students have gained higher marks than literary stream ones do regardless of the way of teaching

It is apparent from table 10 that there is a statistically significant difference at (α ≤ 0.05) between students` achievement mean scores according to the method of teaching (inductive and deductive). This difference is in favour of the inductive method.

Table (11): ANCOVA Results of the Interaction in Question Number Three in the Post- Test

	MS	F – value	Sig.
Method& stream	.42	.34	.55

Table 11 shows no statistically significant differences at (α ≤ 0.05) between students' mean scores according to the interaction between any of the variables.
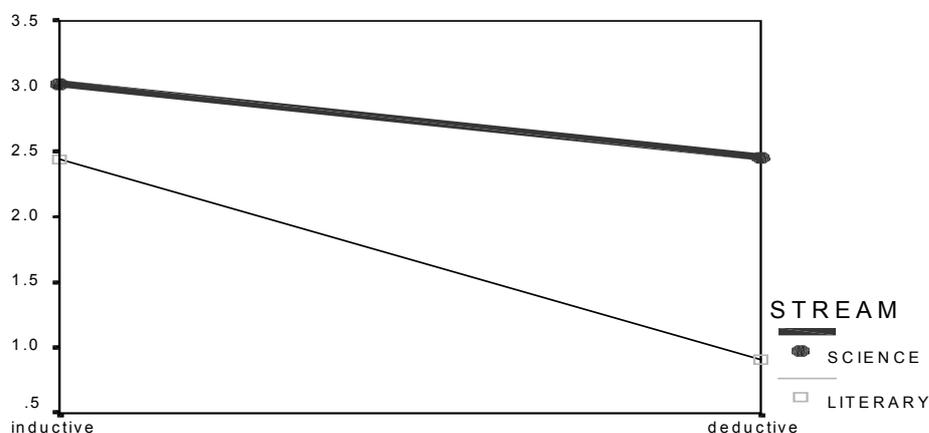
Figure (2): Results of Scientific Inductive and Deductive Groups.

GROUP

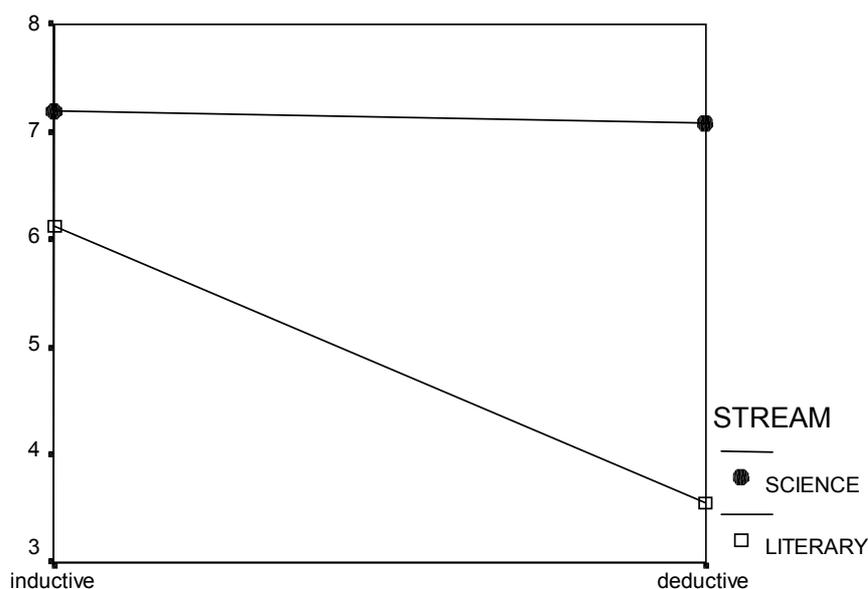Figure 2 shows that the scientific stream students in the inductive and deductive groups get higher marks than those in the literary stream. Moreover, the literary stream students in the inductive group are better than those in the deductive one.

Table (12): ANCOVA Results of the Method of Teaching and Stream Interaction of the Total Mark

Method of Teaching	Stream	Mean	SD	F - value	Sig.
Inductive	**Scientific**	25.76	7.27	44.11	.00*
	Literary	14.83	7.37		
Deductive	**Scientific**	28.80	7.25	30.80	.00*
	Literary	20.15	6.68		

Table 9 shows a statistically significant difference at ($\alpha \leq 0.05$) between scientific and literary students' achievement mean scores who are taught passive voice inductively and deductively. This difference is in favour of scientific stream students.

Figure (1): Method of Teaching and Stream Interaction of Question Number Two in the Post – Test

GROUP

Figure 1 displays that the scientific stream students in the inductive and deductive groups have achieved better than literary stream ones. In addition, the literary stream students in the inductive group get higher marks than those in the deductive one. So, there is a statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement mean scores according to the method of teaching and stream and to the interaction between them.

7.2.3. Results of Question Three

Table (10): ANCOVA Results of Question Number Three in the Post – Test

		Mean	SD	F - value	Sig.
Method	**Inductive**	3.39	1.14	14.70	.00*
	Deductive	2.76	1.29		
Stream	**Scientific**	3.40	.94	2.86	.09
	Literary	2.75	1.44		

Table 6 above shows a statistically significant difference at (α ≤ 0.05) between the mean scores of the scientific and literary stream students in favour of the scientific stream ones. However, the table shows no statistically significant differences at (α ≤ 0.05) between the mean scores of students according to method.

Table (7): ANCOVA Results of the Interactions in Question Number One in the Post- Test

	MS	F – value	Sig.
Method & stream	11.8	2.1	.14
Method, sex & stream	15.8	2.8	.09

Table 7 shows no statistically significant differences at (α ≤ 0.05) between students' achievement mean scores according to the interaction between the variables.

7.2.2. Results of Question Two

Table (8) ANCOVA Results of Question Number Two in the Post- Test

		Mean	SD	F - value	Sig.
Method	**Inductive**	6.56	3.23	9.05	.00*
	Deductive	5.41	3.80		
Stream	**Scientific**	7.64	3.39	13.06	.00*
	Literary	4.34	2.92		

Table 8 shows a statistically significant difference at (α ≤ 0.05) between the mean scores of the deductive and inductive methods. This difference is in favour of the inductive. Furthermore, it shows a statistically significant difference (α ≤ 0.05) between the achievement mean scores of the scientific and literary streams in favour of the scientific.

The interaction between the two variables was tested statistically. It was found that there was a statistically significant difference at (α ≤ 0.05) in the achievement mean scores according to the interaction between the method of teaching and stream. Table 9 illustrates the results of the analysis.

Table (9): ANCOVA Results of the Method of Teaching and Stream Interaction in Question Number Two in the Post - Test

Method	Stream	Mean	SD	F – value	Sig.
Inductive	Scientific	7.73	3.22	11.78	.00*
	Literary	5.40	2.83		
Deductive	Scientific	7.55	3.59	36.84	.00*
	Literary	3.28	2.64		

Continued Table (4)

	Method of Teaching	M	SD	T - value	Sig.
Q4	Inductive	0.06	0.4		
	Deductive	0.01	0.1	1.39	0.165
Q5	Inductive	0.35	0.87		
	Deductive	0.22	0.72	1.05	0.282
Total Mark	Inductive	9.05	5.1		
	Deductive	9.07	4.7	0.903	0.368

Table 4 shows no statistically significant differences at ($\alpha \leq 0.05$) in students' achievement in each of the five questions and in the total mark. This implies that the students have almost the same level of knowledge of passive voice in the English Language.

After conducting the experiment using the inductive and deductive ways of instruction in the two major groups, a comparison was made between the mean scores of the pre–post– test results in order to determine the effectiveness of the two ways of teaching as indicated in table 5 below.

Table (5): The Mean Score (M), Standard Deviation (SD) and the F - value with 2 - tailed Significance of Students` Achievement in the Pre - and Post - Tests

		Mean	SD	F - value	Sig. (2-tailed)
Total Mark	Pre- test	**9.40**	**4.98**	**55.67**	**.00***
	Post- test	**22.37**	**8.8**		

Table 5 shows a statistically significant difference at ($\alpha \leq 0.05$) between students' mean scores in the pre- and post- tests in favour of the post- test. This result emphasizes the effectiveness of the deductive and inductive teaching methods in teaching passive voice in the English language.

7.2. Results of the Post-Test

To answer the questions of the study, Analysis of Covariance (ANCOVA) was used to analyze the results pertaining to the five questions in the post-test. The results of the five questions of the Pre- test were covariant.

7.2.1   Results of Question One

Table (6): ANCOVA Results of Question Number One in the Post - Test

		Mean	SD	F - value	Sig.
Method	Inductive	8.56	2.99	2.65	.105
	Deductive	8.03	3.16		
Stream	Scientific	9.82	2.59	17.87	.00*
	Literary	6.76	2.76		

Table (3): Cross Tabulation of the Achievement Test.

Question	No. of items	Mark
1	14	14
2	12	12
3	2	4
4	4	4
5	6	6
Total	**38**	**40**

To test the validity of the pre – post test, the researcher followed the following steps:

1 – After developing the test, copies were given to three TEFL university instructors, three experienced teachers and three English supervisors.

2 – The researcher made the necessary modifications in light of the notes provided by the jury of judges.

6.2.1. Reliability

The reliability of this test was estimated by administering it to a group of (30) first secondary students , randomly chosen from a public school, in two separate sessions (a test re-test method). Then, a coefficient of stability was determined by computing the correlation between the scores on the two administrations using Pearson product moment correlation formula. The reliability of the test was found (r =.81). Such a result is considered a reasonable value for classroom tests.

6.3. Variables of the Study

The variables of the study are two independent variables and one dependent variable. The independent variables are the method of teaching and the stream of study. The dependent one is the students` achievement.

6.4. Statistical Analysis

A three – way Analysis of Covariance (ANCOVA) was used to answer the questions of the study. More specifically, (ANCOVA) was used to find out if there were any statistically significant differences at ($\alpha \leq$ 0.05) between students` achievement mean scores according to way instruction, stream of study and the interaction between them.

7. Findings of the Study
7.1. Results of the Pre- Test

All the students were given a pre- test to find out whether they had the same previous knowledge of passive voice in the English language or not. A T – test was used to show whether there were any significant differences between students`mean scores on the pre-test as shown in table 4 below.

Table (4): T. test Results of the Pre - Test

	Method of Teaching	M	SD	T - value	Sig.
Q1	Inductive	5.9	2.7		
	Deductive	6.4	3.0	0.978	0.329
Q2	Inductive	1.2	2.3		
	Deductive	1.5	2.6	0.765	0.446
Q3	Inductive	1.4	1.1		
	Deductive	1.5	1.2	0.778	0.438

differences between the means of the distributions of the structural complexity scores of students taught in the inductive and deductive classes.

The literature reviewed above shows that many studies concentrate on the relationship between the inductive and deductive ways of teaching and students' achievement in English grammar. Few studies try to find out any relationship between the method adopted and the achievement of scientific and literary stream students. Moreover, few local or foreign studies deal with the relationship between deductive and inductive ways of teaching and students' achievement in passive voice. Therefore, the present study will hopefully try to shed light on the best ways of teaching which can be used by EFL teachers in teaching passive voice.

6. Methodology and Procedures

The present study aims at comparing the effectiveness of the inductive and deductive ways in teaching passive voice in English. The students participating in the study are 80 first secondary scientific and literary male students chosen from two public secondary schools in Al- Ahsa Directorate of Education.

6.1. Population and Sample of the Study

The population of the study consists of 1000 male students who were in their first scientific and literary streams in public schools in Al- Ahsa. Two public schools were chosen randomly. One public school was for scientific students and one school for literary students. Table 1 shows the distribution of students over each stream section in each of the two schools.

Table (1): The Distribution of Students over Sections in Each School.

School	No. of scientific sections	No. of students	No. of literary sections	No. of students
- Al – Waleed Bin Abdel – Malek School for Boys	3	102	3	100
- Al-Hafoof Secondary School for Boys	3	95	3	101

Then 80 students were chosen randomly from the two schools.After that, the sample was divided into four groups (two scientific and two literary). They were randomly assigned to the inductive way and were taught passive voice inductively. The other two were taught the same material in the deductive way. Table 2 shows the distribution of the chosen sample on the inductive and deductive ways of teaching.

Table (2): The Distribution of Study Groups.

Method Stream	Inductive	Deductive
	No.	No.
Scientific	20	20
	No.	No.
Literary	20	20
Total	**40**	**40**

6.2. Research Instrument

The researcher has developed a pre-post test which consists of five questions. Table 3 presents the number of questions, number of items in each question and the mark allotted to each question.

of teaching a syntactic bit in English language (passive voice) and on the effect of each way on their achievement. In addition, the study may help EFL curriculum designers and EFL methodologists develop teaching materials which suit each way of teaching and match students' level of achievement in the target language in general and in grammatical structures in particular.

3. Questions of the Study

The study attempts to answer the following questions:

3.1. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the students' achievement mean scores on passive voice according to the way of instruction (inductive and deductive)?

3.2. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the students' achievement mean scores according to stream of study?

3.3. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the students' achievement mean scores according to the interaction between the two ways of instruction, and stream of study?

4. Definition of Terms

The following terms are operationally defined to clarify usage in this study: Deductive teaching is a traditional approach in which information about target language and rules are driven at the beginning of the class and continued with examples. The principles of this approach are generally used in the classes where the main target is to teach grammar structures. For instance, these principles are convenient for the classes that grammar translation method is applied (Hall, 2011).

4.1 An Inductive Approach

Nunan (2003) identifies inductive approach as a process where learners discover the grammar rules themselves by examining the examples. In an inductive approach, it is also possible to use a context for grammar rules. That is to say, learners explore the grammar rules in a text or an audio rather than isolated sentences. He also added that in an inductive approach, learners are provided with samples which include the target grammar that they will learn. Then learners work on the examples and try to discover the

rules themselves. When students obtain the grammar rules and they practice the language by creating their own examples.

5. Literature Review

Many researchers are interested in comparing the effectiveness of deductive and inductive ways of teaching EFL. Some of their findings tend to favour the deductive while others tend not to do so. Moreover, some reveal no significant differences between these two ways of instruction, whereas others discuss and compare their effectiveness in teaching other school subjects than English.

Sheen (1996) has conducted a study to compare the effectiveness of an inductive approach with a deductive one based on explanation of the Contrastive Analysis input. It is hypothesized that the deductive approach will prove to be more effective than the inductive. The subjects of the study are fifty Saudi Arabian students enrolled in an intensive English programme in the USA. They are all male graduates aged between 23 and 34. They are divided into two groups of 25 based on an in-house grammar placement test. Results show that the treatment of the Contrastive Analysis input in the deductive approach used with the experimental group is more effective than the inductive in minimizing the error rate.

Other studies, on the other hand, favour the use of the inductive way in teaching grammar. In a study conducted by Shaffer (1989), for example, to determine if a difference exists in high school foreign language students' understanding of grammatical concepts depending on whether a deductive or an inductive teaching approach is used. Results show that the differences in score between the two approaches are small but the trend is in favour of the inductive approach. Similarly, Obaidat (1991) compares the effectiveness of the deductive and inductive methods of teaching English conditional sentences to tenth graders in Jordan. His results also show that the inductive method is more adequate in teaching English conditionals.

Thompson and Middleton (1973) carried a study to examine the structured complexity of pupils' writing as a function of whether they are taught by inductive or deductive methods. Results show no significant

1. Introduction

Second language teachers have attempted to employ various ways of teaching so that they can enhance students' progress and achievement in learning the grammar of a second language. Two of these ways are deductive and inductive.

Brown (2007) ascertains that these two techniques encourage learners to compensate for the gap in their second language knowledge by using a variety of communication strategies. A number of research studies, likewise, has reported that successful learners often adopt certain learning strategies such as seeking out practice opportunities or mouthing the questions put to other learners.

Decoo (1996) states that during the Reform Movement of the 1880's, the staunch conflict between direct and indirect methods used the opposition "induction versus deduction" as a way to identify "natural versus grammatical" foreign language learning. The conflict lingered on all through the first half of the 20th century, reaching new heights in the sixties, in the clash between audio – lingual methods and cognitive approaches. Since then, "induction" and "deduction" have often been studied in the light of this opposition, with some attempts to reconcile the dichotomy, but also leading to other definitions of induction.

Researchers such as Thomas (1970) expresses the belief that the best way to teach grammar is through deductive emphasis upon the rules of grammar. This kind of emphasis has three main hypotheses. They are: (1) If the premises are assumed to be true, the conclusion is absolutely to be true. (2) The premises provide conclusive ground for the conclusion. (3) The conclusion falls within the scope of the evidence .

Deduction is defined as reasoning from the general to the particular (Johnson, 1996). It requires a detailed analysis of the grammar rules. This analysis should be followed by application of the knowledge of these rules to the task of translating sentences and texts into and out of the target language (Richard & Rodgers, 1986). In other words, the teacher is required to work from the more general to the more specific. That is why this kind of work is sometimes called a "top – down" approach (Shaffer, 1989). This indicates that the grammatical rule or pattern is

explicitly stated at the beginning of the learning process. Students are presented with a rule or generalization. Then the students are asked to practise this rule before using their own experience and knowledge to give more examples (Decoo, 1996). Therefore, a major movement in the method of teaching began during the nineteenth century from deduction to induction (Thomas, 1970).

In an inductive process of teaching, on the other hand, the student is required to discover the grammatical rule. This discovery will guide him or her to analyze the foreign language data and to formulate the appropriate rule (Fisher, 1979). That is the student, who works with the inductive method, ought to practise the grammatical item meaningfully. This sort of practice may help him or her to derive the rule from the example being provided by either the teacher or the student (Seliger, 1975).

Hammerly (1975) states that induction is moving from examples to a generalization. Hammerly adds that the inductive method allows learners to discover by themselves how a part of the language works. This, according to psychologists, makes the learning more interesting, and such learning is better retained.

Richards and Rodgers (1986) remark that the meaning of structure is not to be given through explanation in either the native or the target language but is to be induced from the way the form is used in a situation. The merit of such inducement is that students can recognize when and how a structure is used. They can also formulate the underlying generalizations. However, this method is reported to be too difficult for slower students since only brighter students are capable of discovering the underlying patterns of a structure (Shaffer, 1989).

Rivers (1975) have recommended the use of an age – criterion to select between the deductive and inductive way of teaching. The deductive approach is most useful for mature, well – motivated students or for adult students in intensive courses, while the inductive approach is more appropriate for young language learners.

2. Importance of the Study

This study will shed light on the extent to which students respond to the inductive and deductive ways

The Effectiveness of the Inductive Versus Deductive Methods in Teaching Passive Voice to First Secondary Students in Al-Ahsa

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Abstract: This study aimed at comparing the effects of the inductive and deductive ways of teaching on learning passive voice in the English Language. More specifically, the study tried to find out if there were any statistically significant differences at ($\alpha \leq 0.05$) in the students' achievement according to way of instruction, stream of study and the interaction between them. The sample of the study consisted of 80 scientific and literary male students who were divided into two groups, inductive and deductive. This sample was given a pre- test to find out if there was a statistically significant difference at ($\alpha \leq 0.05$) between the means of students' achievement. After conducting the experiment, a post- test was given to the students in both groups. Results indicated a statistically significant difference at ($\alpha \leq 0.05$) between students' achievement on passive voice according to the way of instruction, and stream of study. Moreover, results showed statistically significant differences at ($\alpha \leq 0.05$) between students' mean scores according to the interaction between the way of instruction and the stream of study.

Keywords: Inductive, Deductive, Instruction, Achievement.

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فاعلية الطريقة الاستقرائية مقابل الطريقة الاستنتاجية في تدريس المبني للمجهول لطلاب الصف الأول الثانوي في منطقة الأحساء

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ملخص البحث: هدفت هذه الدراسة بشكل أساسي إلى المقارنة بين أثر طريقتي التدريس: الاستقرائية، والاستنتاجية، في تعلم المبني للمجهول في اللغة الإنجليزية. وبشكل خاص حاولت هذه الدراسة إيجاد فروق ذات دلالة إحصائية (0.05 ≥ α) بين تحصيل الطلاب، والتي تعزى إلى طريقة التدريس، وشعبة الدراسة، والتفاعل فيما بينها. تكونت عينة الدراسة من 80 طالبًا في الشعبتين: العلمي، والأدبي، حيث تم تقسيم العينة إلى مجموعتين: الاستقرائية، والاستنتاجية، وتم إعطاء امتحان قبلي؛ لمعرفة فيما إذا كانت هناك فروق دالة إحصائيًا بين متوسطات علامات الطلاب. وبعد تطبيق التجربة أعطي امتحان بعدي لجميع الطلاب في المجموعتين: الاستقرائية، والاستنتاجية، وأشارت النتائج إلى وجود فروق ذات دلالة إحصائية (0.05 ≥ α) بين متوسطات تحصيل الطلاب، تعزى إلى طريقة التدريس، وشعبة الدراسة. بالإضافة إلى ذلك أظهرت النتائج فروقا دالة إحصائيا (0.05 ≥ α) بين متوسطات تحصيل الطلاب، تعزى إلى التفاعل بين طريقة التدريس، وشعبة الدراسة.

الكلمات المفتاحية: الاستقرائية، الاستنباطية، التعليمات، التحصيل.

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