

**أثر استراتيجية التعلم الاستنتاجي في زيادة حصيلة
المفردات الجديدة باللغة الإنكليزية لدى المرحلة
المتوسطة في محافظة الديوانية**

**The Effect of the Deductive Learning
Strategy on Increasing the Collection of
New Vocabulary in English Among Middle
School Students in Al-Diwaniyah
Governorate**

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Keywords: Deductive Learning Strategy, Vocabulary collection, English Language, Middle School, Al-Diwaniyah Governorate.



المخلص

هدف البحث الحالي هو التعرف على أثر استراتيجية التعلم الاستنتاجي في زيادة حصيلة المفردات الجديدة باللغة الإنجليزية لدى طلاب المرحلة المتوسطة في محافظة الديوانية. استخدم الباحث المنهج التجريبي، وتكونت عينة البحث من (٥٠) طالباً من الصف الثالث متوسط للعام الدراسي (٢٠٢٤-٢٠٢٥)، تم توزيعهم عشوائياً على مجموعتين: تجريبية درست باستراتيجية التعلم الاستنتاجي، وضابطة درست بالطريقة الاعتيادية، بواقع (٢٥) طالباً لكل مجموعة، أُجري التكافؤ بين المجموعتين في متغيرات متعددة منها التحصيل الدراسي للوالدين، محل السكن، الترتيب في الأسرة، العمر الزمني، والذكاء، أعد الباحث اختباراً تحصيلياً لمفردات اللغة الإنجليزية مكوناً من (٤٠) فقرة من نوع الاختيار من متعدد، وتم التحقق من صدقه وثباته إحصائياً، طُبّق الاختبار قليلاً وبعدياً، واستمرت التجربة ستة أسابيع بواقع حصة أسبوعية واحدة للمجموعة التجريبية، أظهرت نتائج المعالجة الإحصائية وجود فروق ذات دلالة إحصائية لصالح المجموعة التجريبية، مما يدل على فاعلية استراتيجية التعلم الاستنتاجي في زيادة حصيلة المفردات الجديدة، وفي ضوء النتائج، قدم الباحث عدداً من التوصيات والمقترحات التي تخدم العملية التعليمية وتحث على اعتماد الاستراتيجيات النشطة في تدريس اللغة الإنجليزية.

Abstract

The current study aims to investigate the effect of the inductive learning strategy on increasing English vocabulary acquisition among intermediate stage students in Al-Diwaniyah Governorate. The researcher adopted the experimental method, as it suited the nature of the study. The sample consisted of 50 third-grade intermediate students for the academic year 2024–2025, randomly distributed into two equivalent groups: an experimental group (25 students) taught using the inductive learning strategy, and a control group (25 students) taught using the conventional method. The two groups were matched on several variables, including parental education level, place of residence, birth order, age, and intelligence. The researcher designed a 40-item multiple-choice vocabulary achievement test, and its validity and reliability were confirmed statistically. The test was administered as both a pre-test and post-test. The experiment lasted six weeks, with one session per week for the experimental group. After applying the post-test, statistical analysis revealed significant differences between the two groups in favor of the experimental group. These results indicate the positive impact of the inductive learning strategy in enhancing vocabulary acquisition. Based on the findings, the researcher presented several recommendations and suggestions related to improving vocabulary learning through active teaching strategies.



(1) Research Definition:

(1-1) Introduction and Importance of the Research:

Vocabulary acquisition is a fundamental aspect of learning the English language, as it forms the cornerstone of developing reading, writing, listening, and speaking skills. However, many intermediate school students in Diwaniyah Governorate face difficulties in developing their linguistic vocabulary due to their reliance on traditional methods that focus on direct memorization and literal translation. This weakens their ability to use new vocabulary in different contexts (Al-Rimawi, 2017: p25).

Deductive learning is a modern educational method that relies on inferring the meanings of words from context, rather than directly presenting them to students. By analyzing texts and identifying the linguistic connections between words and sentences, learners gain a deeper understanding of new vocabulary and its use in different situations (Al-Shuwaikh, 2024: p47).

The deductive learning strategy relies on engaging students in interactive activities such as text analysis, group discussions, and linguistic problem-solving. This helps them develop self-directed strategies for understanding new vocabulary without relying excessively on dictionaries or simultaneous translation. This method also encourages active learning, as students actively participate in the language acquisition process. This contributes to improving their level of understanding of vocabulary and increasing their ability to use it in various contexts, both in academic settings and in everyday life (Al-Karimin, 2021: p171).

In view of this, this study seeks to examine the impact of the deductive learning strategy on increasing the vocabulary of new English language students among intermediate school students in Diwaniyah Governorate. This study analyzes the effectiveness of this strategy compared to traditional methods. It also aims to determine the extent to which deductive learning improves students' ability to infer word meanings and the sustainability of their learning of new vocabulary. It also explores the opinions of students and teachers regarding the use of this strategy in English language teaching. Based on the above, the importance of this research lies in providing practical educational solutions to improve English vocabulary teaching at the intermediate level, by highlighting the effectiveness of deductive learning as a tool for enhancing linguistic comprehension. It is expected that the results of this study will contribute to the development of teaching methods and provide recommendations for teachers and curricula on how to adopt more interactive and dynamic teaching strategies. This will positively impact students' linguistic achievement and help them develop their English language learning skills in more effective and independent ways.



(1-2) Research Problem:

The educational process in Iraq is moving toward the use of effective technical teaching methods and strategies in the areas of learning and teaching various academic subjects in general, and in the field of English language in particular. This is done in order to raise the level of quality learning for students, enabling them to become more successful and effective if they are to increase their vocabulary in English. In this regard, some studies have confirmed that the role of the teacher and the teaching strategies used are among the most prominent foundations upon which the effective learning process is based, because the quality of the teacher and the quality of teaching provide opportunities for students to be immersed in educational activities for the longest possible time (Al-Omari, interview, 2020: p48).

English is one of the most important tools for acquiring knowledge and understanding, interacting with the cultures of advanced nations, and keeping up with the latest scientific and technological developments. It is the tool that students can use to communicate with English speakers, whether in person or via social media. It is therefore the linguistic tool designated for students to confront situations that require its use, whether in learning situations or in their daily lives and interactions with others. Therefore, teaching students the English language must be given the utmost importance at all levels of study (Irshid, 2022: p91).

English language teaching aims to increase students' vocabulary in English, enabling them to use it in their daily lives. It is a tool for gaining diverse and varied knowledge and experiences, and is an important tool for achieving the goals of the educational process. Hence, English can be viewed not only as a subject of study, but also as a means of intellectual, cognitive, social, and cultural communication. From this perspective, teaching English in schools is not an end in itself, but rather a means of developing students' ability to understand what they read and learn in English, enabling them to interact with the linguistic experiences and activities contained in reading texts (Al-Nashwan, 2016: p75).

The deductive learning strategy is an effective method in teaching English. It relies on enabling students to infer the meanings of new vocabulary from context rather than being taught the meanings directly. Through this strategy, students are confronted with unfamiliar words within texts and asked to analyze the surrounding sentences and search for linguistic clues such as synonyms, antonyms, and examples. This enhances their ability to think analytically and learn independently (Macaro, 2007: p245).

When applying deductive learning to intermediate-level students, students are presented with a variety of texts containing new vocabulary carefully selected to suit their level. They are then asked to understand the



words by analyzing the relationships between them and other words in the context. This process can be supported by activities such as group discussions, guiding questions, and role-playing, which help consolidate the meanings in their minds. Teachers can also use visual strategies such as mind maps and tables that illustrate the relationship between words and their possible meanings, making the inference process more organized and easier (Rebecca, 2013: p211).

The use of traditional methods of teaching English in Iraq negatively impacts students' acquisition of new vocabulary, especially in intermediate school. These methods rely on direct rote memorization and literal translation without promoting deductive reasoning or active engagement with the language. Teachers often focus on mechanical memorization of word lists and their meanings without placing them in practical contexts that foster deep understanding and actual use. The absence of interactive activities, such as group discussions and language games, also limits students' opportunities to practice new vocabulary, leading to rapid forgetting and an inability to use it in writing or conversation. As a result, many Iraqi students find it difficult to develop their vocabulary, negatively impacting their ability to use English effectively in everyday communication and various academic situations.

The researcher sensed the research problem through his practical experience as an English language teacher. He observed that many students struggle to acquire new vocabulary and comprehend its meanings when using traditional methods based on direct memorization and literal translation. His interviews with English language instructors and fellow teachers reinforced this perception, as they indicated that students' weak vocabulary is due to their lack of strategies to help them infer word meanings from context, which negatively impacts their ability to understand texts and communicate effectively. Based on the above, the researcher realized the need to study the impact of using deductive learning strategies as a modern means of improving vocabulary acquisition and enhancing students' language skills more effectively.

The researcher also identified the research problem through previous studies that addressed vocabulary teaching strategies and their effectiveness in improving linguistic achievement among learners of English as a foreign language. Kasrawi's (2015) study indicates that using context as a tool to extract the meanings of new words helps students develop their vocabulary inference skills, compared to traditional methods that rely on memorizing words separately. This is consistent with the idea of deductive learning, where students rely on text analysis to acquire vocabulary meanings naturally. Ibrahim's (2016) study also demonstrated that the reading curriculum directly impacts vocabulary development, reinforcing the need to implement educational strategies that rely on deep



understanding rather than direct indoctrination. In addition, Al-Harbi's (2017) study confirmed the effectiveness of using interactive methods, such as electronic puzzles, in improving vocabulary retention among middle school students. This indicates the importance of incorporating active strategies, such as deductive learning, into vocabulary teaching. The results of Al-Harhi's (2019) study also supported the idea that modern methods, such as the SCAMPER program, contribute to improving students' comprehension of new vocabulary, reinforcing the importance of researching teaching strategies based on comprehension and deduction rather than direct memorization.

Based on these studies, the researcher saw the need to study the impact of deductive learning as an alternative strategy to traditional methods. This strategy may contribute to addressing the problems facing vocabulary teaching curricula in Iraq, particularly in the Diwaniyah Governorate, by enabling students to develop their skills in inferring meanings and improving their ability to use new vocabulary effectively in various contexts.

(1-3) Research Objective:

To identify the effect of the deductive learning strategy on increasing the vocabulary of new English vocabulary among intermediate school students in Diwaniyah Governorate.

(1-4) Research Hypothesis:

There are no significant differences between the mean scores of the experimental group and the control group in increasing the vocabulary of new English vocabulary.

(1-5) Research Limits:

Subject Limits: The research was limited to identifying the effect of the deductive learning strategy on increasing the vocabulary of new English vocabulary among intermediate school students in Diwaniyah Governorate.

Temporal Limits: The second semester of the academic year (2024-2025 AD).

Spatial Limits: Al-Bahaa Intermediate School for Boys in the center of Diwaniyah Governorate.

(1-6) Definition of Terms:

Strategy:

It is an organized, systematic plan aimed at achieving specific educational objectives through the use of a set of methods and procedures designed to improve the learning process and enhance the acquisition of knowledge and skills among learners (Bani Hamdan, 2019: p99).

Deductive Learning:

A teaching method that first presents general rules or concepts, then guides learners to draw conclusions about their applications or examples.



This helps them understand the structure of knowledge in a systematic way and enhances their ability to use concepts in different contexts (Dakhlallah, 2015: p48).

Vocabulary Stock:

Refers to the amount and proficiency of vocabulary a learner possesses in a given language, enabling them to understand texts and conversations and communicate effectively. Stock includes vocabulary acquired through reading, listening, and practicing its use in different contexts (Virginia, 2007: p187).

Intermediate Stage:

This is an educational stage that follows primary school and precedes secondary school. It targets students between the ages of 12 and 15 and aims to enhance their academic and linguistic skills and expand their knowledge in preparation for advanced educational levels (Al-Sayed, 2016: p19).

(2) Theoretical Framework and Previous Studies:

(2-1) Theoretical Framework:

(2-1-1) Introduction:

Deductive learning is an educational method that begins with general concepts and then moves to specific examples. The teacher first presents theories, then asks students to apply them to specific exercises. This method is useful in teaching language and programming grammar, and can also be used in the fields of artificial intelligence and machine learning (J. Michael & Anna, 1990: p100).

Deductive learning differs from inductive learning in that the starting point for deductive learning is that the teacher first presents general concepts, and then students apply these concepts to specific examples. In inductive learning, students begin by studying specific examples and then infer general concepts from them. This means that deductive learning proceeds from the general to the specific, while inductive learning proceeds from the specific to the general. This difference has important implications for how students learn and affects the educational applications of each method (Magdalena, 2016: p216).

(2-1-2) What is deductive learning?

Deductive learning is an educational strategy that begins with general concepts. The teacher first presents the theory and then asks students to apply it. This approach moves from the general to the specific. Deductive learning is characterized by formality and direct goal-directedness. It explains rules clearly and quickly, saving learning time. It also relies on the learner's ability to infer concepts from general information (Rebecca, 2013: p337).

This strategy has several benefits, including facilitating the organization of information in students' minds and reducing ambiguity when dealing



with complex concepts. It also provides a clear framework that learners can use to solve problems and deal with new situations. It is often used in teaching subjects that rely on laws and theories, such as mathematics, science, and language, where students need a solid knowledge base before applying it to real-life situations. However, this method may require engaging students in additional activities to promote effective interaction and ensure their full comprehension of the concepts presented (Stella & Tim, 2008: p52).

(2-1-3) Advantages of Deductive Learning:

The deductive learning strategy has several advantages that make it an effective tool in the educational process. It helps present knowledge in an organized and systematic manner, making it easier for students to absorb and understand information clearly. By starting with general rules and then moving on to applications, learners gain a greater ability to analyze information and relate it to practical situations, promoting deep understanding rather than superficial memorization. This strategy also reduces the confusion or ambiguity that students may encounter when learning new concepts, as they are clarified through real-life examples and applications, which contributes to increasing their confidence in their ability to use them in different contexts (Eugene & Carol, 2006: p214).

In addition, deductive learning supports the development of students' analytical and logical thinking skills, as they learn how to infer facts from general principles, which enhances their ability to solve problems and make decisions systematically. This strategy also provides a more efficient learning environment, as it helps reduce the time and effort required to acquire knowledge compared to exploratory methods. Furthermore, it enhances students' ability to apply what they have learned in new situations, making it ideal for teaching subjects that rely on laws and rules, such as mathematics, science, and language, which contributes to achieving more sustainable and effective learning (Nancy, 2003: p336).

(2-1-4) Disadvantages of Deductive Learning:

Despite the many advantages of the deductive learning strategy, it faces some disadvantages that may limit its effectiveness in some educational situations. The most notable of these disadvantages is that this strategy relies primarily on the teacher to provide information, which may diminish the student's role in discovering knowledge on their own, thus weakening their ability to think creatively and exploratively. Furthermore, presenting the general rule first may be difficult for some students, especially those who need practical examples and sensory experiences to understand new concepts. This may lead to boredom or loss of concentration during the lesson (Ernesto, 2002: p148).

Furthermore, this strategy may not be suitable for all learning styles, as some students prefer an approach based on exploration and



experimentation rather than direct reception of information. It may also lead to superficial learning if students are unable to connect the general rule to practical situations they encounter in daily life. Furthermore, the emphasis on indoctrination and direct explanation may make the learning process less interactive, reducing student motivation and affecting their active participation. Therefore, it is best to combine this strategy with other methods, such as exploratory learning or cooperative learning, to ensure a balance between theoretical guidance and practical application (Diane & Linda, 2012: p95).

(2-1-5) Deductive Learning in Language Teaching:

Deductive learning is essential in language teaching, as it helps students gain a deeper understanding of linguistic structures and concepts and effectively connects these concepts to practical applications. In deductive learning, the teacher first introduces grammatical and morphological rules and concepts, then asks students to apply these rules to specific examples (Alex & Kenichi, 2015: p89).

Deductive learning is used in teaching foreign language vocabulary by directly presenting the meanings and rules associated with words, then training students to use them in different contexts. The teacher begins by explaining the meanings of new words, showing how they are used in sentences, and clarifying linguistic rules such as derivation and inflection. Students then apply these words in activities such as writing sentences, conducting dialogues, or completing exercises that require inserting vocabulary in appropriate contexts. This approach contributes to enhancing the speed of word learning, especially when students already have a basic knowledge of the language, enabling them to absorb new vocabulary easily and accurately (Višnja, 2008: p67).

(2-1-6) Deductive Learning Strategies:

Deductive learning strategies focus on guiding students from the general to the specific. These methods help learners build their knowledge logically and enhance their understanding of basic concepts and their practical applications.

Top-down Learning Method:

The teacher begins by introducing general concepts and principles, then moves on to apply these concepts to specific examples. This approach helps students understand the big picture before understanding the details. The top-down learning approach enhances students' ability to make connections and think logically. It is part of deductive learning strategies that focus on overarching principles.

Bottom-up learning approach:

The bottom-up learning approach begins by presenting specific examples first, then gradually moves to general concepts. This approach helps students build knowledge through individual experiences. This



approach enhances students' ability to reason inductively and connect concepts to reality. It is part of deductive learning strategies that focus on building from details (Gavin, 2005: p176).

Deductive learning strategies provide flexibility in designing the learning process. The most appropriate approach can be chosen based on the nature of the content and educational objectives.

(2-2) Previous Studies:

(2-2-1) Qasrawi's study (2015) entitled "The Effectiveness of Using Context and Its Implications in Teaching English Vocabulary to Students Learning English as a Foreign Language" aimed to determine the effectiveness of the context and its implication strategy in developing and building the vocabulary and meanings of words for learners of English as a foreign language. It also aimed to determine the effect of this strategy in providing students with research tools that enable them to infer the meaning of vocabulary they may encounter in any text they encounter, compared to the context-independent word strategy. This study was based on a quasi-experimental design. The participants in the study were forty male and female students from the Mohammed bin Rashid Al Maktoum Private School in Ramallah, Palestine. The participants were divided into two equal groups, one experimental and the other control. The experimental group studied using the context and its implication strategy, while the control group studied using the context-independent word strategy. The data collection tool was a pre-test and a post-test. The results of these tests were compared to measure differences. The mean scores of the two groups before and after using the context and meaning strategy and the traditional strategy were compared. To analyze the results, the researcher used the Independent Samples T-Test. The results indicated that there were statistical differences in the results of the post-test, after using the context and meaning strategy with the experimental group and the isolated words from context strategy with the control group. These differences were in favor of the experimental group. The analysis results also indicated an improvement in the students' ability to infer the meanings of words from the text, but this improvement was not significant or noticeable. This study provided experimental evidence that using the context and meaning strategy improved students' knowledge of the meanings and vocabulary included in the study. Accordingly, some educational recommendations were proposed for using this strategy in teaching word meanings in English as a foreign language.

(2-2-2) A study by Damoush (2016) titled "Morphological Awareness and Vocabulary Knowledge of Learners of English as a Foreign Language" aimed to investigate the relationship between English vocabulary size and morphological awareness of Saudi students at Najran University in the Kingdom of Saudi Arabia. To accomplish this, a morphological awareness



and vocabulary test was administered to a study sample of 100 fifth-grade female students who had completed two academic years at the College of Arts and Sciences at Najran University. To determine the relationship between vocabulary size and morphological awareness, it was necessary to measure these two variables for all members of the study sample. The researcher used two types of tests: vocabulary size measurement and morphological awareness analysis. Vocabulary measurement was used to estimate the students' linguistic level, which ranged from 1,000 to 14,000 vocabulary items. The results showed that the students' vocabulary level exceeded 6,000 vocabulary items, and included two types of subtests: (word analysis test and word synthesis test). The results showed that the students' level of morphological awareness was high. Descriptive statistical analyses were conducted to test the relationship between vocabulary size and morphological awareness. The test results indicated a positive relationship between the variables, and there was a statistically significant relationship between students' morphological awareness and vocabulary size.

(2-2-3) A study by (Al-Harbi, 2017) entitled (The Effectiveness of Electronic Puzzles in Developing the Achievement and Retention of English Vocabulary for Second-Year Intermediate Female Students in Buraidah City) The aim of the research was to investigate the effectiveness of electronic puzzles in developing the Achievement and Retention of English Vocabulary for Second-Year Intermediate Female Students in Buraidah Governorate. To achieve this goal, an electronic puzzle game (crossword puzzle) was designed for the vocabulary of an educational unit in the English language subject for the second-year intermediate class. The research tool was also prepared, which was an English vocabulary test prepared by the researcher. The research sample consisted of (60) female students from the second grade (intermediate) at the First Intermediate School for Memorizing the Holy Quran in Al-Badai'. They were randomly divided into two groups: an experimental group consisting of (30) female students who studied using electronic puzzles, and a control group consisting of (30) female students who studied using the traditional method only. Three tests were prepared: pre-test, post-test, and postponed test for the two groups. The results showed that there were differences between the average scores of the individuals in the control group and the experimental group in the post-test of the achievement test in favor of the experimental group. In addition, there were no statistically significant differences at the level of (0.05) between the average scores of the post-test and postponed test for the experimental group, and there were statistically significant differences at the level of (0.05) between the average scores of the postponed test and the post-test for the control group.



(2-2-4) Al-Harhi's study (2019) entitled (The effect of using SCAMPER program in developing the English vocabulary of first-grade middle school students in the city of Makkah Al-Mukarramah). The study aimed to identify the effect of using SCAMPER program in developing the English vocabulary of first-grade middle school students in the city of Makkah Al-Mukarramah by identifying the effect of SCAMPER program on the acquisition of linguistic vocabulary by first-grade middle school students in the city of Makkah Al-Mukarramah, their retention of the meanings of linguistic vocabulary, and the extent of improvement of students' use of English vocabulary that was taught to them. The study population consisted of all first-grade middle school students in the city of Makkah Al-Mukarramah, while the study sample included a random sample of first-grade middle school students in the city of Makkah Al-Mukarramah at Hisham bin Hakeem Middle School in the city of Makkah Al-Mukarramah, which numbered (60) students, with 30 students for the control group and 30 students for the experimental group. The researcher used the quasi-experimental method as a study methodology based on the English vocabulary test as a study tool. The study reached many results, the most important of which are: the presence of statistically significant differences at the level <0.05 in favor of the post-application For the experimental group and for the English vocabulary test. There were no statistically significant differences at the <0.05 level between the pre- and post-test scores of the control group on the English vocabulary test. There were statistically significant differences at the <0.05 level in favor of the experimental group on the post-test scores of the English vocabulary test.

(2-2-5) A study (Al-Hajriya, 2020) entitled (The Effect of Using the Content and Language Interface (CLIL) Method on Vocabulary and Content Learning of Higher Education Students, as well as Their Attitudes Toward English Language Learning and Their Perceptions of This Teaching Method) The study aimed to investigate the effect of using the Content and Language Interface (CLIL) method on vocabulary and content learning of higher education students, as well as their attitudes toward English language learning and their perceptions of this teaching method. The study included a sample of 58 male and female students from Middle East College during the 2019-2020 academic year. The sample was divided into two groups: an experimental group of 28 students and a control group of 30 students. To answer the research questions, a vocabulary measurement test, a content test, a questionnaire on students' attitudes towards learning English, and a questionnaire on students' views of this teaching method were administered. In addition, interviews, observations, and experiment monitoring were conducted. The study reached the following results: There was no statistically significant difference between the scores of the experimental and control groups on the vocabulary



measurement test. However, word learning outcomes were higher for the experimental group compared to the control group, which indicates that the approach of integrating language and content learning has an impact on students' vocabulary size, but this effect was not statistically significant. There were also differences between the scores of the experimental and control groups on the content test, with the experimental group scoring higher than the control group, but these differences were not statistically significant.

(3) Research Procedures:

(3-1) Research Methodology:

The researcher used the experimental method.

(3-2) Experimental Design:

The researcher adopted the appropriate experimental design for this research, which is a two-group experimental design (experimental and control) with pre-tests and post-tests.

(3-3) Design Components:

1. Experimental Group: Includes 25 students who were taught using the deductive learning strategy.
2. Control Group: Includes 25 students who were taught using the conventional method.
3. Equivalence between the two groups: This was achieved based on variables such as parents' academic achievement, place of residence, student's family order, chronological age, and intelligence.
4. Pre-Test: An achievement test in English vocabulary was administered to both groups before the start of the experiment to ensure equivalence in vocabulary levels.
5. Experimental Treatment: The experimental group was taught using the deductive learning strategy for (6) weeks, at a rate of one lesson per week.
6. Post-Test: The same achievement test was administered to both groups after the experiment ended to measure the difference in vocabulary acquisition.

(3-4) Research Community and Sample:

The research community consisted of third-grade intermediate students at Al-Bahaa Intermediate School for Boys in the center of Diwanayah Governorate for the academic year (2024-2025 AD), totaling (87) students. After excluding absent students and students participating in exploratory experiments, the research sample consisted of (50) students who were randomly distributed into two equivalent groups: the experimental and the control. (25) students in the experimental group studied using the deductive



learning strategy, and (25) students in the control group studied using the traditional method. Equivalence was achieved between the two groups (control and experimental) in terms of students' academic achievement, parents' academic achievement, place of residence, student's family rank, chronological age, and intelligence, as shown in Tables (1) and (2).

Table (1) Equivalence of members of the two groups (control and experimental) on some variables using the chi-square test.

Equivalence Variables	Calculated value of Ka2	Table value of K2
Student Academic Achievement	2.28	5.99
Parents' Academic Achievement	0.43	3.84
Mothers' Academic Achievement	4.68	11.1
Residence Location	2.23	3.84
Student's Family Order	7.31	14.1

*Not significant at (n-1) (1-2) and at a significance level of (0.05).

Table (2) Equivalence of individuals in the two groups (control and experimental) in some variables using the t-test

Parity variable	control group		experimental group		Calculated T value*	Table value of (T)
	arithmetic mean	Standard deviation	arithmetic mean	Standard deviation		
Chronological age (in months)	274.2	15.256	175.15	22.859	0.555	2.05
Intelligence (score)	29.141	14.145	28.822	15.145	0.047	

*Significant at a degree of freedom of (48) and a significance level of (0.05).

(3-5) Research Requirements:

(3-5-1) Determining the Academic Material (Content):

The researcher identified the academic material covering the second semester of the English language textbook scheduled to be taught for the 2024-2025 academic year to third-grade intermediate students in Diwaniyah.

(3-5-2) Preparing the Instructional Plan:

Instructional plans were prepared for the experimental group. The instructional plan is based on the deductive learning strategy, whereby new vocabulary is presented in different contexts, and students are asked to infer its meanings and usage through interactive activities. The plan aims to enhance critical thinking and increase the English vocabulary of third-grade intermediate students. The instructional plan was presented to a group of judges and modified according to their approval and suggestions.

(3-6) Research Tool:

(3-6-1) English Vocabulary Achievement Test:



One of the requirements of the current research was to develop an English vocabulary achievement test used to measure students' final achievement according to modified Bloom's levels. The achievement test followed the scientific steps required for constructing any cognitive test, as follows:

1. Defining the educational material: The material included the content of the second semester of the English language textbook prescribed for the third intermediate grade.
2. Formulating the behavioral objectives: Behavioral objectives covering the skills of acquiring new vocabulary were defined according to modified Bloom's levels, to ensure comprehensiveness of the assessment.
3. Preparing the specifications table: A specifications table was created to ensure a balance between the content of the educational material and the levels of the behavioral objectives.
4. Choosing the type of test items: The test included (40) multiple-choice items to measure students' comprehension of new vocabulary.
5. Validity of the items: The test was presented to a group of judges in the field of curricula and teaching methods to verify the apparent validity of the items.
6. Formulating the Test Instructions: The instructions included clear guidelines for students on how to answer and how to mark the test.
7. Conducting the Pilot: The test was administered to a pilot sample outside the main research sample to ensure the clarity of the questions and measure the appropriate time required to answer.
8. Determining the Actual Test Time: The time required to answer was determined based on the pilot and analysis of student performance.
9. Statistical Analysis of Items: Difficulty and discrimination coefficients were extracted for each item to ensure the quality of the questions.
10. Analyzing the Effectiveness of Alternatives: The alternatives in multiple-choice questions were analyzed to ensure that incorrect alternatives were effectively distracted.
11. Conducting Scientific Coefficients: The reliability coefficient was calculated using the test-retest method, with the reliability coefficient reaching (0.89), indicating a high level of test reliability.

(3-7) Experimental Implementation Procedures:

(3-7-1) Deductive Learning Strategy:

1. Setting Learning Objectives: By clarifying the purpose of the lesson, which is to increase the vocabulary of new words in English.
2. Preparing Students: By providing an introductory introduction to the lesson to connect new information to prior knowledge, and motivating students by asking introductory questions about the target vocabulary.



3. Presenting New Vocabulary in a Specific Context: By presenting the target vocabulary within short, meaningful sentences and texts, and using images, videos, or other aids to enhance understanding.
4. Encouraging Students to Notice Patterns: By asking students to analyze the examples provided to extract rules or relationships between words, and encouraging them to discover the meanings of the vocabulary based on the context.
5. Guiding Discussion and Conclusion: By guiding students with deductive questions that help them arrive at the meanings of new vocabulary, in addition to verifying the validity of their conclusions and correcting any conceptual errors they may have.
6. Application of New Vocabulary: By assigning students to use the new vocabulary in their own sentences and expressions, and providing interactive activities such as discussions, language games, and role-playing to enhance practical use.
7. Evaluation and Follow-up: By conducting short exercises and tests to measure students' comprehension of the new vocabulary, in addition to providing immediate feedback and reinforcing unclear concepts.
8. Post-test: By administering an achievement test after the end of the experimental period to measure the extent of improvement in students' vocabulary, and statistically analyzing the results to compare the performance of the experimental group with the control group.

(3-7-2) Teaching Steps for the Deductive Learning Strategy:

1. Introduction and Excitement: By providing an interesting introduction to attract students' attention, asking introductory questions, or displaying an image or text containing the target vocabulary.
2. Presenting Contextual Examples: By presenting the new vocabulary within sentences and texts containing contextual clues, also using multiple media (images, videos, conversations) to enhance understanding.
3. Analyzing examples and drawing rules: This involves encouraging students to notice common patterns across vocabulary, while also guiding discussion with inferential questions to help them deduce word meanings.
4. Confirming conclusions: This involves correcting any incorrect conclusions, clarifying the precise meanings of vocabulary, and enhancing understanding by providing additional examples and explaining the differences between similar words.
5. Training and application: This involves assigning students to use new vocabulary in their own sentences and expressions, and engaging in interactive activities such as role-playing, discussions, and language games.
6. Evaluation and feedback: This involves providing exercises and short tests to measure vocabulary comprehension, as well as providing individual and group feedback to reinforce learning and prompt correction.



7. Final application and post-evaluation: This involves administering a post-achievement test to measure vocabulary improvement, and statistically analyzing the results to compare the performance of students in the experimental group with the control group.

(3-8) Post-test:

The researcher administered the English vocabulary achievement test to third-grade intermediate school students for the academic year 2024-2025 on Thursday, February 6, 2025, in the classrooms of Al-Bahaa Intermediate School for Boys in the center of Diwaniyah Governorate.

(3-9) Statistical methods used in the research:

1. Arithmetic mean.
2. Standard deviation.
3. T-test for two independent samples.
4. Cronbach's alpha equation.
5. Chi-square test.

(4) Presentation and discussion of results:

Presentation and discussion of the results of the comparative research hypothesis between the post-test of the control and experimental groups in increasing the vocabulary of new English vocabulary for third-grade intermediate school students at Al-Bahaa Intermediate School for Boys in the center of Diwaniyah Governorate:

Table (3) T-value between the two research groups regarding the variable of increasing the vocabulary of new English vocabulary

Experimental group		Control group		(t) value	Significance of differences
Mean Arithmetic	Standard Deviation	Mean Arithmetic	Standard Deviation		
91.33	3.24	76.74	7.41	3.86	Non-significant

Note that the tabular value of (t) at a significance level of (0.05) and a degree of freedom of (48) equals (2.05).

Table 3 shows that the calculated t-value was (3.86), which is greater than the tabulated value of (2.05) at a significance level of (0.05) and a degree of freedom of 48. This indicates the presence of statistically significant differences between the mean scores of the experimental group and the control group, in favor of the experimental group, in increasing the vocabulary of new English vocabulary for third-grade intermediate students at Al-Bahaa Intermediate School for Boys in the center of Diwaniyah Governorate.

The results indicate that the use of the deductive learning strategy had a statistically significant positive effect on increasing the vocabulary of new English vocabulary for third-grade intermediate students at Al-Bahaa



Intermediate School for Boys in Diwaniyah Governorate. This difference indicates that students who learned using the deductive learning strategy achieved higher achievement on the vocabulary test compared to students who learned using the traditional method, demonstrating the effectiveness of this strategy in teaching new vocabulary. This result can be explained by the fact that deductive learning promotes a deeper understanding of vocabulary through self-discovery of meanings rather than direct memorization. This helps consolidate information for a longer period of time and stimulates critical thinking in students.

The results of the current research are consistent with several previous studies that have confirmed the effectiveness of modern methods in teaching English vocabulary, including:

Kasrawi's (2015) study, which supported the idea that using strategies based on meaning inference, such as context and its significance, can be more effective than traditional methods in developing and building vocabulary among English language learners. Although the improvement in meaning inference was not significant, the results showed statistically significant differences in favor of the experimental group, supporting the results of the current research, which indicated that deductive learning contributed to improving students' acquisition of new vocabulary.

A study by Damoush (2016) demonstrated a positive relationship between vocabulary size and morphological awareness, suggesting that developing students' reasoning and analytical skills can enhance their ability to comprehend more vocabulary. This aligns with the findings of the current research, as deductive learning helps students discover the meanings of words rather than memorizing them, which contributes to improving their vocabulary.

A study by Al-Harbi (2017) confirmed that the use of electronic puzzles was effective in improving vocabulary acquisition and retention, with the experimental group that used puzzles achieving better results than the control group. Similar to this finding, the current research demonstrated that using a deductive learning strategy was more effective than traditional methods in teaching English vocabulary, reinforcing the idea that using interactive or analytical teaching strategies increases learning effectiveness.

Al-Harhi's study (2019) showed that using the SCAMPER program in teaching English vocabulary led to improved students' achievement and retention of new vocabulary, with statistically significant differences in favor of the experimental group. This result is consistent with the results of the current research, which confirmed that using deductive learning enhanced vocabulary achievement among third-grade middle school students.



(5) Conclusions and Recommendations:

(5-1) Conclusions:

1. Deductive learning increases active interaction between students and the subject matter, which contributes to improving their comprehension of new vocabulary.
2. Learning vocabulary through deduction helps enhance analytical thinking skills, as students learn to connect words to the contexts in which they are used.
3. Achieving statistically significant differences in favor of the experimental group indicates that the deductive learning strategy can be an effective alternative to traditional vocabulary teaching methods.
4. The results emphasize the importance of using modern teaching methods based on reasoning and deduction instead of traditional methods based on rote learning.

(5-2) Recommendations:

1. Generalize the use of the deductive learning strategy in teaching English vocabulary at various educational levels.
2. Train teachers on how to effectively implement deductive learning in classrooms.
3. Conduct additional studies to determine the impact of deductive learning on other areas, such as grammar or reading and writing skills.



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