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The Role of Cubing Strategy on EFL Iraqi Preparatory Pupils' Achievement

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A B S T R A C T

This learning strategy enhances deep thinking, and it can be used as a brainstorming tool to generate ideas and explore different aspects of a topic. The current study aim is Identifying the role of Cubing Strategy on EFL Iraqi preparatory pupils' achievement. The study hypothesizes that; there is no statistically significant difference between the achievement of the experimental group who has been taught by Cubing Strategy and Control Group who has been taught by conventional method in achievement in post-test... To achieve the aims and verify the hypotheses, Non-Randomized Control Group pretest -posttest have been chosen. The pupils have been taught during the academic year 2023-2024. The sample consists of (72) pupils who are derived from Al-Mustinsrya preparatory School for Girls in Tikrit, the fourth grade, the scientific branch. The sample has been divided into two groups Group (A) represents the experimental group who consists of (36) pupils who have been taught using Cubing Strategy. Group (B) represents the Control Group which consists of (36) pupils who have been taught using the conventional method. Both groups have been equalized in such variables as the educational level of parents, and the pretest of both groups. A unified posttest which contains five questions are constructed to collect data. Face and content validity have been attained. Reliability coefficient has been verified and the researcher herself teaches both groups. According to the results, the difference between the mean scores of both groups is rejected. Moreover, Cubing Strategy guides pupils in the experimental group to better achievement at the posttest.

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دور استراتيجية التكعيب على تحصيل طلبة الإعدادية العراقيين متعلمي اللغة الإنكليزية كلغة اجنبية

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الخلاصة:

استراتيجية التكعيب التعليمية تعزز التفكير العميق لدى الطلبة وتفحص جوانب متعددة لموضوع ما. تهدف هذه الدراسة إلى تحديد تأثير استراتيجية التكعيب على تحصيل طلاب اللغة الإنجليزية كلغة أجنبية

في المرحلة الاعدادية في العراق.

افترضت هذه الدراسة:

* عدم وجود فرق معنوي بين متوسط درجات المجموعة التجريبية في الاختبار القبلي و الاختبار البعدي.

ان دراسة البحث أجريت اثناء العام الدراسي ٢٠٢٣-٢٠٢٤. شملت الدراسة ٧٢ طالبًا من مدرسة المستنصرية الإعدادية للبنات في الصف الرابع الاعدادي، الفرع العلمي. تم تقسيم العينة إلى مجموعتين. تتكون المجموعة التجريبية (أ) من ٣٦ طالبًا تم تدريسهم باستخدام استراتيجية التكعيب. اما المجموعة الضابطة (ب) من ٣٦ طالبًا تم تدريسهم باستخدام الطريقة التقليدية. كانت كلا المجموعتين متساويتين في المعايير مثل مستوى تعليم الوالدين ودرجات العام الدراسي السابق ونتائج الاختبار التمهيدي. تشير النتائج إلى عدم وجود فرق ذو دلالة إحصائية في المتوسطات بين المجموعتين. وان استخدام استراتيجية التكعيب لطلاب المجموعة التجريبية ساعدت على تحسين أدائهم في الاختبارات النهائية. وأخيرًا، تم تقديم النتائج ذات الصلة والتوصيات والاقتراحات للدراسات المستقبلية.

الكلمات المفتاحية : استراتيجية التكعيب ، التأثير ، الإنجاز.

Section One

1.1 The Problem:

The English language plays a main role in education worldwide, serving as a crucial tool for communication, learning, and academic success. English is often referred to as the global language, which means it's commonly used as a common language for communication between speakers of different native languages. This prominence has led to its widespread integration into educational systems across the globe. Many individuals express a strong desire to acquire foreign language skills in order to engage in effective communication with people from different backgrounds. Language serves as a crucial means of understanding and connecting with others. Among the various languages to be learned, English holds significant importance (Harmer, 1991). Trying to use English language every day in our class, and or outside the classroom. This can stimulate our behavior to always use English as a habitual even daily conversation and this is a difficult thing to do. (Ismail, et al, 2019). Measuring achievement is an essential part in learning the English language as it represents a student's overall growth from academics to public behavior. It also helps pupils develop a sharp sense of their surroundings and helps them be more helpful, kind, and generous. In today's educational landscape, finding effective teaching strategies to enhance pupil achievement is crucial.

Developing pupils' achievement is a primary goal for educators. Learning English as a forging language is not an easy task so teachers need to motivate pupils

to learn the language by using different and new strategies, one of the most using strategies to enhance student's learning and achievement is Cubing Strategy. (Harmer, 2001).

English as a foreign language aims to help students communicate and express themselves professionally through four skills. However, many students struggle to learn the language and develop higher levels of practice due to their mother tongue. English language acquisition frequently involves specific teaching and practice with grammar, vocabulary, and linguistic standards. Effective communication in English requires skills in listening, speaking, reading, and writing, as well as adapting to new strategies. The Cubing strategy emphasizes student-centered learning, exploration, and engagement. The majority of school improvement initiatives include implementing new procedures. These practices could entail a completely new curriculum or a different approach to education, or they might just call for slight adjustments to some classroom activities.(Majeed & Mustaf, 2023). The Cubing Strategy is helpful in teaching language, depending on the requirements of the students, the setting, and the teacher's experience. It promotes critical and creative thinking about topics or concepts. The subject matter is viewed from six perspectives, each representing a distinct viewpoint. Exploring multiple aspects helps students get a deeper knowledge, engage in higher-order thinking, and improve their accomplishment. The Cubing strategy is chosen for determining its role in improve learners' achievement.

1.2 Aim of the study

The present study aims to determine the role of Cubing Strategy on the academic performance of EFL Iraqi preparation students.

1.3Hypothesis of the study

The present study hypothesis that there is no statistically significant difference between the mean score of the experimental group who is taught by Cubing

Strategy and the mean score of the Control Group who is taught by conventional method in posttest.

1.4 limits of the study

This study is limited for the fourth scientific branch, in Al -Mustinsrya School for Girls in Tikrit. In 2023-2024 year , in the first course .

1.5. Value of the study

Students will benefit from this research by improving their performance. By discussing with classmates and examining the content from several angles, students will improve their skills. Through the introduction of new tasks, the research seeks to increase students' motivation and interest. Attaining long-term learning through the use of the Cubing Strategy, which gives students the opportunity to absorb unfamiliar content through real-world scenarios, visual aids, and previous knowledge.

1.6 The Procedures:

The following are the steps to put the Cubing Strategy into practice:

1- The instructor separates the class up into six smaller groups, giving one of the provided viewpoints to each group.
2- The assignment to write a paragraph in which they express their designated point of view is given to each group.
3- Groups give their paragraphs to the class and get comments and suggestions from other pupils.
4- Small groups get back together to make the necessary adjustments. The collected paragraphs are shown in the space, mounted on one side of a large cardboard box.

Section Two

Literature review

2.1 The Concept of the Strategy

The Cubing Strategy is among many that rely on information organization. In 1980, Cowan developed it. The strategy uses six faces, each of which focuses on a distinct activity associated with the same subject. Due to its six sides, the cube strategy broadens pupils' perspectives. Teachers must divide their pupils into groups or pairs so that they may discuss the material since each side

approaches the idea or issue in a different way. Pupils who work in groups are more adept at explaining, synthesizing, and analyzing ideas. Additionally, it fosters the social relationships that pupils have with one another and boosts their self-esteem (Nasr, 1986). This strategy encourages students to share their thoughts and observations on topics, courses, or training units, particularly in complex or uninteresting subjects, (Apriyanti,2014).

According to Axelord et al, (2016). It is an approach that allows pupils to enhance their four skills abilities and develop their ideas. **First**: the teacher prints off the cube. Then, she/he puts the words on each cube, cuts it out, and glues it together. **Second:** the teacher explains the cube to the class, and gives them the handout with the cube. The teacher models examples and questions to the class. **Third**: the teacher explains the rules of the activity. Students will lightly toss the cube to someone. Then the pupil will respond to which side is facing up. **Fourth**: the teacher tosses the cube to a pupil who volunteers or who is usually responsive. The teacher allows the pupil a minute or so to respond. The teacher makes sure all students write down responses on a separate sheet of paper as they go. **Fifth:** for assessment, students will learn to talk about what they know and listen to others to be able to express their ideas.

2.2.The Importance of Using Cubing Strategy

According to Richardson et al, 2009), the value of applying the Cubing Strategy is demonstrated by the fact that when a teacher constructs a cube as a visual aid, it can allow a heightened and efficient learn of the material being taught.

Gregory et al, (2013), points out that this strategy is effective when students are limited to a specific way of thinking. According to Chalish, (2013) ,the Cubing Strategy may effectively engage students by reacting to their readiness, interests, and learning styles.

According to Chapman and King (2003), employing colored cubes with each color representing a different skill or learning style can better suit varied student capacities. This strategy can improve both weaknesses and strengths by applying several abilities. Cubing activities motivate, stimulate, and interest pupils. They promote analytical and problem-solving skills. The cube's sides symbolize many perspectives and dimensions of a topic, stimulating students' interest in learning English.

2.3 Ideas for implementing the strategy :

Al-Shimmery (2014) states that cubing may be viewed from the six angles listed below:

1. Defining: Describe the topic. For example, how does the topic seem? For instance, its name, size, form, and color.

2. Comparing: Draw more parallels with the subject. How does the subject matter compare, for instance? different from?

3. Associating: Explain how the writer and the subject are related.

4-Analyzing: Give particular information on the subject.

5. Applying: How can the pupils make use of the subject matter?

6-Arguing: Make the argument for the subject. i.e. What defenses of the subject can the students provide?

2.4 Rules for Using the Strategy

Scott (2015) offers two rules while using the Cube technique. The first rule involves using the six sides of the cube (explain, compare, associate, analyze, apply, and argue for or against). What separates this method from others in addressing the issue from several experiences. Students can stay engaged in the task by not focusing solely on one aspect, such as describing or analyzing the subject. However, after experiencing all six sides, they can do this task separately. The second guideline suggests going quickly and completing each side of the cube within 3-5 minutes. Cubing is an effective tool for students to quickly move between concepts. The ability to run quickly is crucial for implementing this method effectively

2.5 The Role of Teacher in This Strategy

Teachers can employ a variety of roles and duties while using the cubing strategy. The instructor is essential in helping students through the process by facilitating it, directing them, and making sure they comprehend the goals, know how to utilize the Cube models, and can get help when they need it. Active involvement and critical thinking are encouraged in a supportive learning environment that the instructor establishes by setting an example, outlining expectations, and offering feedback. The strategy's efficacy is further increased by placing a strong focus on time management and paying attention to

students' replies. In general, the teacher's involvement in putting the Cubing Strategy into practice is crucial for fostering student learning and success (Harmer, 2015).

2.6 The Role of Students in Cubing Strategy

The Cube Strategy emphasizes a learner-centered approach, where the active participation of students is crucial. In this strategy, students play a significant role by understanding the desired objectives and the vocabulary they need to acquire. When using the cubing technique, teachers might use a range of roles and responsibilities. In order to ensure that students understand the objectives, are able to use the Cube models, and can receive assistance when needed, the teacher plays a crucial role in guiding and supporting the process. In a supportive learning atmosphere that the teacher creates by leading by example, laying out expectations, and providing feedback, students are encouraged to participate actively and think critically. The effectiveness of the method is further enhanced by emphasizing time management and paying close attention to pupils' responses. For students to learn and succeed, teachers must generally be actively involved in implementing the Cubing Strategy (Harmer, 2015).

2.7 The Advantages of the Strategy

According to Nazario et al. (2013), the Cubing strategy offers the following key benefits:

1. It allows pupils to see the content from several perspectives.

2. It allows pupils to express in words and write their understanding of the subject.

3. It encourages students' critical thinking.

4. It helps educators and students address challenges in teaching and learning English language skills, especially speaking and writing.

The idea Gregory and Chapman (2007) define Cubing as a learning method that considers students' interests, intelligences, and degree of readiness (topic and competence). This approach is ideal for kinesthetic learners as it allows for experiential learning. The teacher may give assignments in different colors based on the small groups' abilities and interests. This allows for more unique and innovative teaching methods. Teachers can modify Cubing to meet

individual requirements and ensure all students receive suitable prompts depending on their skill levels.

Section Three

Procedures

3.1 Experimental design

The experimental design involves assigning experimental units to different levels and doing statistical analysis. The experimental design is the proposal that selects the experimental group. Selecting an effective experimental design is a crucial issue for researchers. (Cook & Stufflebeam ,1967).

Two groups of fourth-grade science preparation school learners are selected . this Table shows the experimental design of the study.

Table(1)

Experimental Design

Groups	Pretest	Independent Variable	Dependent Variable	Post test
Expermantal Group	Pupils' achievement	Cubing Strategy	Pupils' achievement	Post test Achievement
Control Group	Pupils'' Achievement	Conventional Method	Pupils' Achievement	Pot test Achievement

3.2 Population and Sampling

Gay and Geoffrey (2010) define the population as the group to whom a study's findings are generalized. The population of the current research consists of preparatory students of the fourth scientific stage for girls in Tikrit. The total number of the fourth grade pupils' population is(532) . According to Creswell (2012), a sample is a part of the target population that researchers analyze to make generalizations about the entire

population. Ideally, a sample of individuals should be representative of the total population. In order to achieve the aim of the study, the researcher has randomly selected **AL- Mustinsrya Preparatory School for Girls** as the sample in the academic year 2023-2024.The sample consists of (72) pupils divided in to two sections. The fourth scientific branch stage consists of two sections, section (A) has been randomly chosen as the Experimental Group and section (B) as the Control Group. Each section consists of (36) pupils.

3.3 Equivalence of the Two Groups

The equalization between the two groups requires controlling the following variables which may cause a variance in the pupils' achievement such as, parents' educational level, their general level in English, and their age, (Good, et al , 1976).

3.3.1 Fathers' Academic level

The computed (X2) value of (0.54) is lower than the tabulated (X2) value of (7.82) at (3) degrees of freedom and (0.05) level of significance, this indicating no statistically significant difference in taste between the EG and CG groups.

Table (2)

The Chi-Square Value of Fathers' Level of Education

Level of education	Groups		Total	The Value of the Chi-Square(x2)		D. F	Level of significance
	E G.	C G.		Computed x^2-value	Tabulated x2 value		
Preparatory or less	10	9	19	0.54	7.82	3	0.05
Diploma	8	10	18				
Bachelor's	8	9	17				
Master's and above	10	8	18				
Total	36	36	72				

3.3.2 Mothers' Academic Level

The computed (X2) value (1.34) is lower than the tabulated (X2) value (9.49) at (4) degrees of freedom and (0.05) level of significance, this indicating no significant difference in taste between the EG and CG groups.

Table(3)

The Chi-Square Value of Mothers' Level of Education

Level of education	Groups		Total	The Value of the Chi-Square(x2)		D.F	Level of significance
	EG.	CG.		Computed x^2- value	Tabulated x2 value		0.05
Primary	6	6	12	1.34	9.49	4	
Intermediate	5	6	11				
Secondary	7	6	13				
Diploma	5	8	13				
College or above	13	10	23				
Total	36	36	72				

3.4 Post Test Construction

3.4.1 Validity

When developing and evaluating measuring equipment, it is essential to prioritize validity. According to Ary et al. (2010), validity refers to whether an instrument accurately measures its intended outcome. Davies (1990) suggests that a test's validity is linked to its intended purpose. Validity refers to the accuracy, importance, and relevance of the assumptions obtained from test

scores. Nazario et al. (2013) define validity as a test that fully or randomly assesses the objectives and contents of the knowledge being learnt.

3.4.2 Reliability

A reliable instrument produces consistent findings. If a researcher tests a group's success at many times, they can predict similar results . Reliability relates to the consistency and accuracy of results across instruments and collections of things. (Fraenkel et al. 2012). Brown (2001) defines a dependable research instrument as one that delivers similar results when administered to the same or similar students again. Alpha Chronbach, a statistical measure of internal consistency, was used to assess the reliability of the result of the posttest. The alpha-Cronbach formula gave a suitable result of 0.86.

3.4.3 Difficulty and Discrimination Level .

The level of difficulty indicates the percentage of students that correctly identify the objects. High percentages make things easier, whereas low percentages make things more difficult. The test may not detect difficulty if the items are either too easy or too challenging. According to Ebel (1972), the difficulty level must be between 26% and 60%.

Discriminating power of a test measures how well it distinguishes between students with high and poor achievement. Brown (1991) defines an excellent test item as having a discriminating power of at least 0.20. The discriminating power for the accomplishment post-test ranged from 0.26 to 0.60. (Ebel, 1972) considers all test items appropriate.

Section four

4.1 comparisons Between the Mean Scores of the Experimental Group and the Control Group in the Post Achievement Test.

The T-test for pairs of samples is used to compare the mean scores of the experimental group between pre- and post-tests. The statistical analysis using the t-test for both groups of samples revealed significant differences between pre-test and post-test mean scores (51.56)with a standard deviation of (16.67) and (65.97)with a standard deviation of (15.87).

The computed t-value (17.30) which is higher than the tabulated t-test result (2.04), with a level of significance (0.05) and degree of freedom (34).There were statistically significant differences in the mean scores of the pupils before and after the test. The experimental group had a higher mean score in the pot test compared to the pre-test, thus, the hypothesis, which states that there is no statistically significant difference between the mean scores of the experimental group and that of the control group in the post achievement test, is refused, as shown in table (4).

Table (4)

The Mean Scores of Experimental Group in pre-Test and Post Test

Test	Mean	Stand	Mean of diff.	Stand of diff	T-value		D.F	L.S
					Computed t-value	Tabulated t-value		
Pretest	51.56	16.67	14.42	4.99	17.30	2.04	34	0.05
Posttest	65.97	15.87						

4.2 Discussion the obtain results

The obtained results of the current study show that pupils' achievement of the experimental group who has been taught by Using the Cubing Strategy is better than those of the Control Group who have been taught by using the conventional method.

This means that using Cubing Strategy proves to be more effective than the conventional method , in teaching English language .Also, The Cubing Strategy can help students maintain their engagement in language study. It stimulates them by forming cooperative groups.

Using Cubing Strategy can help instructors create situations where language is helpful and meaningful. It allows for flexibility in distinction. Teachers might organize students depending on readiness, interest, or learning preferences. Cubing also enables discreet and unique differentiation.

Cubing Strategy includes tasks like describing, comparing, contrasting, analyzing, evaluating, and imagining. This helps pupils engage with content at different cognitive levels.

Finally , Cubing Strategy adds an element of novelty and excitement to English lessons. It breaks away from conventional teaching methods and brings a

hands-on, interactive approach to the classroom. Pupils are actively involved in the learning process, which increases their engagement and motivation.

Section five

5.1 Conclusions

According to the obtained results of the current study, the following points have been concluded:

1. The achievement of the pupils of the Experimental group is better than the pupils of the Control group which indicates that those pupils were engaged in learning with the Cubing Strategy than the conventional method.
2. The use of this modern Strategy, has an impact on the improvement of communication language as it helps to understand and analyze the text.
3. The use of Cubing Strategy in teaching English skills provides an active role for pupils (student-centered) while their teacher becomes a facilitator and coordinator
4. The Cubing Strategy refers to self- organization, question generation, summary, note-taking, hypothesis generation and testing. Each strategy is a thinking process that has a positive impact on the student's learning process.
5. compounding effect of the Cubing Strategy could be applied to language learning, where pupils build upon their existing knowledge and skills to achieve more complex language proficiency over time.
6. Cubing Strategy helps pupils pay attention to things they learn and correct their errors related not only to spelling, but also to choosing the correct words.

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