أثر طريقة 5Es في تحصيل طالبات المرحلة الاعدادية

Impact of 5Es Method on Preparatory School Female Students' Achievement

زينب مثنى عبدالعزيز ميسر

د. شعيب سعيد الفهادي

جامعة الموصل – كلية التربية للعلوم الانسانية– قسم اللغة الانكليزية

Zainab Muthanna Abdul-Aziz Maysir

Dr. Shoaib Saied Fahady

Assistant professor

University of Mosul- College of Education for Humanities- Department of English

zainab14.alhafidh@gmail.com

تاريخ الاستلام ٢٠٢٢/٧/٢٧

تاريخ القبول ٢٠٢٢/٨/٣١

الكلمات المفتاحية: طريقة5Es – اختبار الدافعية– الإعدادية– لغة إنكليزية– تأثير.

Keywords: 5Es method, achievement test, Preparatory, English, effect.

الملخص

تحاول هذه الدراسة توظيف طرائق التدريس لتسهيل ربط المعرفة السابقة بالمعرفة الجديدة باستخدام طريقة 5Es. وتهدف الرسالة إلى التحقق من تأثير طريقة 5Es للتدريس على تحصيل الطالبات في المرحلة الإعدادية ودافعيتهن لتعلم اللغة الإنجليزية. وشمل مجتمع البحث طالبات المرحلة الإعدادية العلمية في المرحلة الرابعة في مدرسة الفاو الإعدادية للبنات للعام الدراسي ٢٠٢٢/٢٠٢١. وقد بلغ العدد الإجمالي للطالبات ١٩٨ طالبة. تتكون عينة البحث من صفين متكافئين من بين الفئات الخمسة، وهما B وC، وتمثل الفئة B المجموعة الضابطة، والفئة C تمثل المجموعة التجريبية. وقد اعدت الباحثة اداتين وقامت بتطبيقهما على

عينة البحث: أحدهما اختباراً تحصيلياً للطالبات في المادة والأداة الثانية هي استبيان لمعرفة دافعية الطالبات لتعلم اللغة الانكليزية. وأظهرت النتيجة أن هناك بالفعل فروق ذات دلالة إحصائية بين درجات المجموعة التجريبية والضابطة في الاختبارات البعدية لتحصيل الطالبات العراقيات، كما توجد فروق ذات دلالة إحصائية بين متوسطات درجات الاختبار القبلي والبعدي لدافعية المجموعة التجريبية من الطالبات، مما أدى إلى استنتاج مفاده أن التدريس باستخدام طريقة 5Es أكثر فاعلية من الأساليب التقليدية.

Abstract

Using the 5Es approach, this study attempts to modify the teaching strategies to make it easier for students to relate their past knowledge to new information. This research aims to find out the effect of the 5Es method of teaching on preparatory female students' achievement. The research population included students of the fourth scientific preparatory stage at Al-Fao Preparatory School for Girls for the 2021-2022 academic year. The total number is 198 female students. The research sample consists of two equivalent classes out of the five: B and C. Class B represents the control group, and class C represents the experimental group. An achievement test and a questionnaire for measuring students' motivation have been prepared and administered among the selected sample by the researcher herself. According to the findings, there are statistically significant differences between the experimental and control groups on accomplishment post-tests for female EFL students from Iraq, indicating that teaching using the 5Es model is more effective than using traditional methods.

1.1 Statement of the Problem

The English programs in Iraq are now under fire from academics because they rely on students just receiving material from the instructor without giving them a chance to relate what they already know to what they are learning. Additionally, the most typical approach used in Iraqi schools may have an impact on the students' enthusiasm to study English. Because they just learn the language from the instructor and do no practice, the majority of Iraqi language learners believe that learning English is difficult. The way that students are taught also has an impact on their academic performance. For instance, Köksal (2009) examines the efficacy of the constructivist approach-based 5Es model for teaching English grammar to seventh-grade pupils. He discovered that the 5Es strategy improved students' academic performance and attitudes about English as a whole. The current research provides an overview of how this strategy influences students' academic performance in EFL classes. For the first time, this technique is being employed in Iraqi schools to teach English. Previous research has indicated that the 5Es model has a good impact on success, and that many instructors are either inexperienced with this learning strategy or unsure of whether these tactics are appropriate for a certain learning activity while many students are unaware of the 5Es strategies. As a result, the current research may add to the body of knowledge already available on the impact of the 5Es model on the academic accomplishment of Iraqi EFL students.

1.2 Research Hypothesis

In light of the aforementioned study question, the researcher offered the following other explanation:

There is a significant difference between the scores of the experimental and the control groups on the post-test of the EFL female Iraqi students' achievement in English.

1.3 Aims of the research

The current study intends to find out how the 5Es approach of instruction affects the English proficiency of female prep students.

1.4 Limits of the Research

This research will be limited to the following:

1- A sample of preparatory female students in Mosul city.

2- Textbook: English for Iraq, Book 10 (student and activity book).

3-The academic year 2021-2022.

1.5 Definitions of Basic Terms

1.5.1 The 5Es Method

According to Bybee (1997), the 5E is "an approach that allows students redefine, reorganize, elaborate, and change their initial concepts through self-reflection and interaction with their peers and their environment. Learners interpret objects and phenomena, and internalize those interpretations in terms of their current conceptual understanding" (p. 176).

According to Chitman-Booker & Kopp (2013), It is an educational methodology designed to teach science, but it is a flexible method that can be used to teach other subjects. "It engages students' thinking and allows for explorative discovery and factual learning to deepen students' understanding of content matter. Students learn that one scientific question leads to another, which may lead to several more.

Students have the opportunity to become critical thinkers and continue their learning of topics of interest as time passes" (p.9-10).

Anil and Batdi (2015) State that the 5E, developed by Bybee, is one of the most useful forms when designing teaching processes based on the constructivist learning theory. "This model is based on 5 different stages of learning: Engage, Explore, Explain, Elaborate and Evaluate." (p.212).

While Orakci's (2020) definition of the 5E is "a constructivist model of instruction including five phases named as engagement, exploration, explanation, elaboration, and evaluation" (p.117).

The researcher defines it operationally as:

The 5Es is an educational approach created in 1997 by Roger Bybee. It enables students to create an appropriate grasp of a new idea based on their prior knowledge. Each "E" in the paradigm denotes a distinct stage: "engagement, exploration, explanation, elaboration, and evaluation."

2. Literature Review

2.1 Theory

This section will introduce the theory of learning and discuss it related to the 5Es method. First of all, Chitman-Booker & Kopp (2013) stated -in their book -that "the 5Es is grounded in Constructivist Theory." They define Constructivism as "a learning strategy that builds on students ' prior knowledge, ideas, and skill sets." Teachers who follow the constructivist hypothesis do as such, following crafted by Jerome Bruner. Different scholars, including Lev Vygotsky and Jean Piaget, impacted his work. The constructivist hypothesis indicates that understudies plan groundbreaking thoughts by crossing over earlier information with new data. Subsequently, the framework happens.

"....Constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes. Constructivism is a learning theory found in psychology which explains how people might acquire knowledge and learn. It therefore has direct application to education. The theory suggests that humans construct knowledge and meaning from their experiences...."(Bada and Olusegun, 2015, p.66)

As Brown (2007) mentioned, Constructivism is a school of thought that has integrated roots in many disciplines such as psychology, sociology, and linguistics. Constructivism focal thought is that human learning is developed, that students fabricate new information upon the underpinning of past learning. One of the important notions is that students should be active rather than passive. Attention to student-centred learning likely could be the main commitment of constructivism. (Bada and Olusegun, 2015).

As indicated by Driscoll (2000, cited in the article of Bada and Olusegun, 2015), the constructivism learning hypothesis is a way of

thinking which improves understudies' consistent and theoretical development. The constructivism learning hypothesis contends that individuals produce information and structure significance in light of their encounters. "Accommodation" and "assimilation" are two key concepts in the constructivism learning hypothesis that led to the development of one's new knowledge. Assimilation causes one to mix new and previous experiences together. This forces the person to adopt fresh perspectives, reevaluate earlier beliefs, and weigh what matters most, ultimately altering their perceptions. Rethinking the universe and having fresh intellectual contacts with the available knowledge constitute accommodation. People take into account a certain way that the world operates. They should oblige and rethink the assumptions with the results whenever things do not work in that circumstance.

The most prominent scholars of constructivism, according to Jendeya (2015)

are:

➢ Dewey: his contribution dealt with the significance of the person's relationship to their current circumstance and the formation of experience through activities. It has added to constructivism regarding its accentuation of proper education.

➢ Piaget: his contribution dealt with the phases of development individuals go through and the significance of discovery in learning. His work builds up numerous constructivist thoughts remembering its dependence on interior inspiration and the winding educational program.

➢ Vygotsky: his contribution focused on the social setting of learning and the importance of an understudy's previous learning on future

learning. He has impacted constructivism regarding its confidence in cooperative learning and understudy-centeredness.

The benefits of this theory, as mentioned by Bada and Olusegun (2015), are:

1. Youngsters find out additional, and appreciate learning more when they are effectively involved, rather than inactive audience members.
2. Education works best when it focuses on thinking and understanding. Learning to think and understand is at the center of constructivism.
3. Constructivist education is flexible. Understudies create coordination principles in constructivist study halls that they may use in other contexts.
4. Since learning relies on students' inquiries and investigations, and since students often participate in the preparation of the evaluations, constructivism assigns student's accountability for their learning. The constructivist assessment is based on the understudies' motivations and personal interests as expressed in their journals, research papers, real-world examples, and imaginative representations. Students' abilities to transmit knowledge in diverse ways are cultivated when they are encouraged to connect with their creative inclinations. The students will retain and apply the new material to real-world situations.
5. Constructivism energizes and retains students by placing learning activities in a real, authentic environment. In constructivist study rooms, students learn how to solve problems and apply their natural curiosity to the outside world.
6. Constructivism enhances social and relational skills by creating a learning environment that emphasizes teamwork and the exchange of ideas. By participating in several projects, students should learn how to communicate their ideas and collaborate on tasks. Therefore, students should exchange ideas, learn how to "organize" with others, and

evaluate their commitments in a manner that is acceptable to society. This is important because kids will constantly be exposed to a variety of contacts in which they must engage and consider the opinions of others.

2.2 The 5Es Instructional Model Steps

As Tuna & Kacar (2013) wrote in their thesis, the 5Es method consists of five learning steps, each starting with the letter "E", and is why it is called 5Es. The steps are "Engage, Explore, Explain, Elaborate, and Evaluate." A detailed look at each step is presented below.

The first one is "engaging". According to Bybee (2014), the objective of this stage is to catch the understudies' consideration and interest. Get the understudies zeroed in on a circumstance, occasion, show, or issue that includes the substance and capacities that are the guidance points. From a showing perspective, posing an inquiry, representing an issue, or introducing a discrepant occasion is mostly an instance of techniques to connect with students. Assuming understudies look astounded, communicating "How did that occur?" or "I have pondered about that," and "I need to find out about that," they are reasonably occupied with a learning circumstance. Understudies have a few thoughts; however, the declaration of ideas and utilization of their capacities may not be scientifically exact and useful. (p.10)

Furthermore, here the researcher could quote Chitman-Booker & Kopp's (2013) discussion of this step as they said that "the first phase of the 5Es is Engage. When a teacher kicks off a lesson with an activity that boosts the level of classroom energy, students' emotions are heightened, and they become enthused and interested in the topic." (p. 11). They also mentions some strategies that could be used to get students "Engaged" in a lesson, such as “games, controversy,

cognitively complex tasks, unusual information, and effective questioning".

The teacher's role in this step is to introduce what is going on and recognize the educational assignment. He likewise sets the standards and procedures for laying out the task (Bybee et al., 2006).

As for the second step, Bybee (2014) mentions that understudies have exercises with time and valuable chances to determine the disequilibrium of the commitment experience. The investigation illustration or examples give concrete, involved encounters where understudies express their present originations and show their capacities as they attempt to explain perplexing components of the draw-in stage. Exploration encounters ought to be intended for some other time presentation and portrayal of the ideas, rehearses, also abilities of the informative grouping. Understudies should have encounters and events to plan clarifications, examine peculiarities, notice designs, and foster their mental and actual capacities.

The teacher's role in this phase is to initiate the process, provide a sound basis, provide enough resources, and dispel any uncertainty. After this, the teacher steps aside and plays the role of a mentor, tasked with observing, listening to, and guiding students as they express their agreement, start recreating logical arguments, and develop their abilities. Students may do lab tasks that help them use prior knowledge to generate novel ideas, research issues and potential results, or organize and oversee an introductory test as part of their activities (Bybee et al., 2006).

In the third level, the focus of the students' inquiry and involvement activities is narrowed. It offers fantastic opportunities for people to demonstrate their rational agreement, procedural skills, or practices. Additionally, at this point, educators have the opportunity to

directly offer a concept, interaction, or skill. Students elaborate on possible interpretations of the concept. A fundamental component of this stage, explanation from the teacher or the educational program may guide them in the direction of a deeper comprehension. (Bybee and others, 2006) Kopp and Chitman-Booker (2013) Mention a few things you could do in the "explain" stage. "such as teacher may use text or video support, guest speakers, lectures, and so forth. Students may listen or read, take notes, or participate in highly effective reading strategies, such as SQ3R, Jigsaw, or Reciprocal Teaching."

The name "Extend" also applies to the fourth phase. The understudies are given chances for advancement in this phase that widen, extend, and improve the concepts and skills developed in prior phases. Working with the sharing of knowledge and skills according to novel conditions is the aim. The usage of tough but doable activities by the understudies is a key concern for this stage. In the elaboration stage, the instructor challenges students with new situations and fosters relationships amongst students using a variety of resources, including written material, data sets, reenactments, and online searches (Bybee, 2014).

According to Chitman-Booker & Kopp (2013), activities in this step might look like activities from any of the former three stages. This is additionally a period for instructors to return to starting thoughts and permit time for understudies to reshape their considerations with the goal that understudies own their learning. Coming up next are a few thoughts that can be used successfully during this stage:

• Introduce and talk about related ideas using logical text, graphs/visuals, video, Internet, or different media sources.

• Return to questions that emerged during class conversations and have understudies show learning imaginatively (e.g., show, banner, exploratory plan, or model).

• Give extra involved opportunities for growth connected with the idea. Eventually, in the final step, understudies ought to get feedback on the sufficiency of their explanations and capacities. Informal formative assessments will be going on from the first step of the educational arrangement. As a viable matter, educators should survey and cover instructive results; thus, the assessment stage resolves the appraisal issue.

According to Bybee (2014), the instructor should be congruent with the explanations and include understudy in acceptable and trustworthy interactions with those in previous stages. As part of the e
l
t

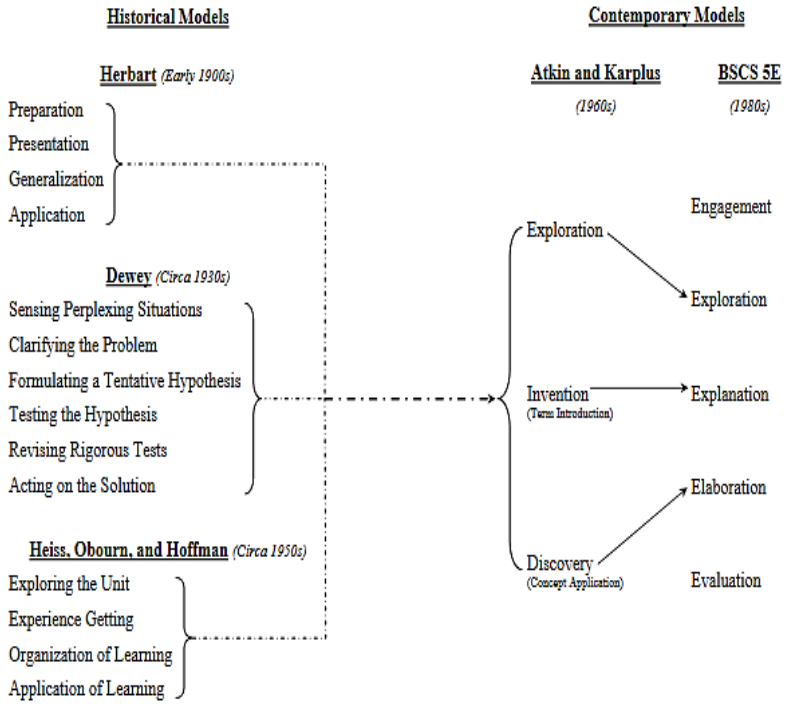

Figure A: phases of 5Es model.

Adopted from Ergin (2012)

To sum up, the five-stage stages of 5Es are fixed. The cycle starts with getting the students physically and mentally engaged while extracting previse knowledge, followed by a stage of students' questing name exploration. Students gain clarity in the explanation phase. After that, they apply to gain knowledge in a stage called extend. Evolution is being conducted throughout the whole cycle.

2.3 Benefits of the Model

The application of the 5E instructional model gives many benefits. Some of them are calculated by Antil and Batdi (2015). First of all, understudies will be more dynamic than the educator. Additionally, understudies will want to successfully utilize their decisive reasoning, critical thinking, conversation and collaboration abilities. Additionally, Students will show a built interest in investigating. Moreover, understudies will be occupied with the current movement at each stage. Lastly, it assists instructors with organizing the learning climate.

To add more, Naguib (2019) cited various researchers. She argues that the model has positive advantages as far as making expanded progress in teaching utilizing the model, accomplishing further developed mentalities and increasing motivation towards lessons, assisting understudies with gaining clear knowledge, and creating handling abilities and superior reasoning.

2.4 Drawbacks of the Model

There is no method without some point of disadvantages. The researcher has collated the following points. One of the drawbacks is that the 5E model requires a motivated and creative teacher who spend more time planning a lesson to be carried out following the steps of the model (Naguib, 2019). Also, Enugu (2016) mentions the problem of

time lacking in class and the difficulty of classroom management when using the model. Moreover, inadequate classroom resources add to the challenge of model application.

To sum up, the drawback of this method can be divided into two main problems; one is teacher-related, and the other is classroom environment-related.

3. Methodology

3.1 Experimental Design

In this research, I relied on the design of the control group type of experimental design with a pre-and post-test. The researcher randomly selected two groups from the population in Al-Fao Preparatory School for Girls located in Mosul, Hay Filastin. One of the two groups was the experimental group to which the 5Es method was applied, while the other group was the control group and was taught by the traditional method. Both groups were subjected to a pre-questionnaire of motivation, then taught for 40 days in which the sixth unit was completed, followed by an achievement test. After that, there was the post-motivation test. The following table presents a quick look at the experiment design of this thesis.

3.2 Population

This term was defined by Harland (2011) as "the complete collection of every item that has the same characteristics as the individuals in the sample group." (p.16). The research population included students of the fourth scientific preparatory stage at Al-Fao Preparatory School for Girls for the academic year 2021-2022. The stage consisted of five classes named according to the Arabic alphabet, starting from A, B, C, D and E. Each class consisted of approximately 40 students. The total number of students was 198 females students.

3.3 Sample

Many scholars have defined this term. Harland (2011) defines it as "a Sub-collection of data that represents a larger population." (p.16). While Weyers & McMillan (2007) state that a "sample means a sub-set of individuals from a specific population" (p. 110). The researcher uses the probability sampling method in this study, specifically simple random sampling. The research sample consists of two out of five

classes studying in the fourth scientific stage at Al-Fao Preparatory School for Girls, namely B and C. Class B represents the control group (henceforth CG), and class C represents the experimental group (henceforth EG). Class D is also selected to conduct a pilot study on students in that class.

The researcher equalized the CG and EG in terms of specific variables. These variables were supposed to have a positive impact on the study and to make the study as valid as possible rather than the extraneous variables. Many strategies can be used to regulate or reduce extraneous variables. One is balancing, i.e., the CG and EG are equated based on more than one feature or variable. It is impossible to achieve identical balancing. Therefore, the means and the variable should be as close to equal as possible (Best and Khan, 2008, pp.196_197).

The researcher has equalized both groups according to the following variables. The reason for so doing is to control many variables that may affect the experiment:

1. The age of the participants counted in months.
2. The participants' level of achievement in English in the previous academic year 2020-2021.

3.4 The Achievement Test

First of all, Algarabel & Dasi (2001) defined the term achievement, which is "the competence of a person in relation to a domain of knowledge" (p. 46). Katz & Slomka (2000) mentions that achievement test in education is "a continual evaluation process that includes teacher-made tests and letter-grade performance standards. The continuous monitoring of student performance within a particular academic content area provides means not only to assess student progress but also to link instructional strategies and to learn objectives with identified student learning needs or skill deficits" (p. 155). There

are several purposes for conducting a test, such as; Screening, Classification/Placement, Prescriptive Intervention and finally, Program Evaluation (Katz & Slomka, 2000). The test has been prepared based on the behavioural objectives, and the topics taught. The distribution of scores is as follows:

Table 3.8

Distribution of Marks

Questions	Marks out of 25
Q1. Unseen passage	6
Q2. Answer the following from your textbook	4
Q3. Grammar	6
Q4. Vocabulary	4
Q5. Literature focuses	5

The achievement test's validity, reliability, difficulty level and discrimination power are all established after the achievement test was formed, depending on the content and the behavioural objectives.

A- Validity of the Achievement Test

Validity is crucial in constructing a test or measuring a technique. Brown (2004, p. 22) defines validity as "the extent to which inferences made from assessment results are appropriate, meaningful and useful in terms of the purpose of the assessment." So, validity refers to accurately measuring what is supposed to measure.

The test must demonstrate appropriateness for its purpose to maintain test validity. Although there are various types of validity, only two are regarded as relevant for achievement tests: content and face validity. These two types will be tackled in detail in the following subsections.

1. Content Validity

Content validity is the most fundamental type of validity; however, it is also the most straightforward. To establish this validity, the instrument must demonstrate that it fairly and thoroughly covers the domain or term it claims to cover (Cohen et al., 2007, p. 137). In order to assess the test's content validity, one must first assess the subject_ matter knowledge and the behaviour of skills required to complete the test. After such an examination, a test is said to have content validity or not. There is no correlation coefficient calculated. Therefore human judgment is dependable. This type of validity is demonstrated when the researcher provided the test items in accordance with the behavioural objectives that she had previously specified and developed and had been accepted by the jurors.

2. Face Validity

The second factor that influences the test's usefulness is face validity. This type of validity is closely related to the previous type. To maintain this validity, a student must be satisfied that the test measures what it is supposed to measure (Brown, 2001, p. 388).

The test items were subjected to a jury of experts to decide on the face validity of the achievement test. The jurors were authorized to identify if the test items were suitable, partially suitable, or not suitable, as well as to amend, add or change anything they considered inappropriate. Finally, they agreed that the test is satisfactory and appropriate for fourth scientific grade students and within the accepted standards.

B- Reliability Coefficient of the Test

The term "reliability" is commonly used to indicate measurement stability. So, a reliable test score is consistent across many variables of the testing condition. The results would be the same if the same test

were given to the same students in the same conditions. Therefore, test scores must be dependable because they cannot provide information about the abilities we are trying to assess unless the scores are fairly consistent (Bachman and Palmer, 1996, p. 19).

3.5 Pilot Study

A pilot sample of (40) learners has been chosen from the population (class D) to apply the achievement test and the questionnaire to see if the items are clear to the participants and to check the time allotted for answering the questions. In addition, the application examines the reliability of the test. The test was given to the pilot sample on the 18th., March 2022. The learners are asked to answer the questions as they can. The exam lasts nearly one hour. The learners' responses are checked, and their scores are registered. Then, the two instruments have given to the pilot sample after 15 days on the 2nd., April 2022. The learners' scores are also registered. This procedure examines the instrument's reliability by applying the test-re-test reliability method. After collecting and analyzing learners' scores statistically, the achievement test reaches 0.77, and the motivation questionnaire reaches 0.85, which is high and acceptable.

The construction of the achievement test must address item analysis, item difficulty and item discriminability (Cohen et al., 2005: 335). The difficulty of the test items has been checked using a definite statistical mean. It has been found that the difficulty level ranged between 27% to 53% for all items. This was regarded as acceptable and satisfactory.

Item discriminability is calculated by subtracting the proportion of learners' correct answers in the lower group from the proportion of correct answers in the upper group. Using a suitable statistical mean, the discriminatory index ranges between (0.27 to 0.60) for all test items (see appendix G). Most literature indicates that the item is acceptable if

its discriminatory index is between (0.25 to 1). This means that all the test items are acceptable, and the test was suitable for measuring students' English achievement. Hence, the achievement test and the motivation questionnaire are suitable.

3.6 Final Administration

Depending on the results obtained, the different procedures came out with a valid and reliable achievement test. The final version reflected a good test's fundamental characteristics, including content and face validity, satisfactory reliability coefficient, difficulty levels and discrimination powers. So, the test has been completed and was ready to be administered. At the end of the instructional period, the EG and the CG students did the achievement test on the 5th of May, 2022. The researcher managed to get the help of two teachers of English in the school to monitor the classes. After handing out the test copies to the participants, the researcher explained the questions and clarified any ambiguity that the participants might encounter when answering the questions. The achievement test was carried out within one lesson of one hour. The participants were asked to read the questions carefully and to enhance their motivation. They were told their test scores would be considered in their class effort evaluation.

Worthy of mention here that the participants completed the exam and told the researcher that they got benefited from it because it took place before the final year examination, and that made them study the material completely. Furthermore, proper testing conditions and strict control were supplied to avoid potential interference as a variable in the test's discrimination. The researcher herself marked the responses. Regarding the motivation scale, it is worth noting that the same instrument was utilized in both the pilot and the main research, demonstrating that there was no need for a modified version.

3.7 Analysis of Data/Testing the First Hypothesis

There is a significant difference between the scores of the experimental and the control groups on the post-test of the EFL female Iraqi students' achievement in English.

This hypothesis is verified by comparing the mean scores in the experimental group's achievement test, 18.9, and the mean scores in the achievement test of the control group, 15.9, using the T-test. Moreover, as it appears in the following table, the calculated t-value is 3.38 at a significance level of 0.05 and 79 degrees of freedom. This indicates a statistical difference in favour of the experimental group, which means that the academic achievement of the group in which the 5Es teaching method was used was higher than the academic achievement of the group in which the traditional method was applied. Thus, it can be said that the Ho_1 is acceptable.

Table (1)

Result of Post Achievement Test

Group	NO.	Computed Mean	SD.	T-value		Sig.
				Calculated	Tabulated	
EG	41	18.9024	3.86526	3.384	1.993 (0.05) (79)	There is a significant difference in favour of EG
CG	40	15.9000	4.11875			

4.1 Discussion of Results

This research sought to determine the impact of the 5Es method on the academic success and motivation of Iraqi EFL learners. The following is a summary of the findings:

1. Indeed, there are statistically significant differences in the post-test results of the experimental and control groups of female Iraqi EFL students, leading to the conclusion that the 5Es model is more successful than conventional techniques.

2. There are certainly substantial variations between the mean scores of the pre- and post-tests of the experimental group of female Iraqi EFL students, leading to the conclusion that the 5Es model is more effective than conventional techniques.

This research aims to determine how the 5Es model is used in the context of Iraqi prep school pupils and how much it influences the academic success and motivation of Iraqi EFL learners. The researcher created a training program that was implemented to an experimental group of participants in order to evaluate the 5Es model's efficacy. An analogous control group, however, was instructed using conventional techniques without the 5Es model.

According to the data analysis, the experimental group of students and the control group of EFL students initially had similar levels of motivation and English proficiency. After a period of instruction, students who had received instruction based on the 5Es model showed statistically significant higher levels of achievement and motivation to learn English than students who had received instruction using the more conventional method, in which the teacher only creates and imparts new knowledge to the students.

4.2 Conclusions

This research intends to investigate how Iraqi EFL students' academic success and desire to learn English are affected by 5Es model teaching. As stated at the outset, this study broadens the body of research-based knowledge on teaching strategies that could be effective for educating Iraqi EFL students.

The research was done at the academic period before college. To understand more about the accomplishment levels of Iraqi students after using the 5Es approach and their enthusiasm for learning English, the research used qualitative methodologies. The research employed a variety of data gathering methods to evaluate its hypothesis. Data on the English proficiency of pupils was gathered by the researcher. The students' desire for learning English was then evaluated both before and after the 5Es methodology was used to educate them. After then, the gathered data was examined using conventional statistical techniques.

4.3 Pedagogical Implication

1-The results show the possibility of applying the 5E teaching method, which is mainly used to teach science to teach language as well.

2- It also appears that it provides the possibility to enrich and restore previous information, which applies to the English language because it is a continuous building process.

3- It also stimulates thinking through discussion, questions and actual embodiment, which makes the student an active element in the educational process. So, it is a student-centred method. It motivates students to learn and thus increases achievement.

4- The use of the 5Es method of teaching and learning in EFL situations seems to have some consequences based on the study's findings and conclusion. EFL instructors must continue to strengthen

their skills in teaching English as a second language. The 5Es concept should be properly incorporated into education at all levels by teachers.

5- Increasing the number of materials, tools, and technology resources may assist close the learning gap caused by conventional teaching methods. Therefore, it is important to emphasize that instructors need to be inspired to be flexible and employ resources and supplemental materials that enhance teaching English.

References

- Algarabel, S., & Dasi, C. (2001). **The definition of achievement and theconstruction of tests for its measurement: A review of the main trends**. Psicologica,22(1), 43-66.
- Atkin, J. M., & Karplus, R. (1962). "Discovery or invention?" **The Science Teacher**, *29*(5), 45-51.
- Bachman, L. F., & Palmer, A. S. (1996). **Language testing in practice: Designing and developing useful language tests** (Vol. 1). Oxford University Press.
- Bada, S. O., & Olusegun, S. (2015). "Constructivism learning theory: A paradigm for teaching and learning". **Journal of Research & Method in Education**, *5*(6), 66-70.
- Best, J. & Khan, J. (2006). **Research in Education** (10th ed.). Persian Education Inc.
- Blueman, A. G. (2007). **Elementary Statistics: A Step by Step Approach**. McGraw-Hill Boston.
- Brown, H. D. (2000). **Principles of language learning and teaching** (Vol. 4). New York: Longman.
- Brown, H. Douglas (2007). **Principles of Language Learning and Teaching**. USA: Longman.
- Bybee, R. (1997). **Achieving scientific literacy: From purposes to practices.** Portsmouth, NH: Heinemann Publications.
- Bybee, R. W. (2014). "The BSCS 5E instructional model: Personal reflections and contemporary implications". **Science and Children**, 51(8), 10-13.
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., & Landes, N. (2006). **The BSCS 5E instructional model: Origins and effectiveness.** Colorado Springs, Co: BSCS, 5, 88-98.

- Chitman-Booker, L., & Kopp, K. (2013). **The 5Es of inquiry-based science**. Teacher Created Materials.
- Cohen, L. H., Gunthert, K. C., Butler, A. C., O'Neill, S. C., & Tolpin, L. H. (2005). **Research Methods in Education.** (4th. ed.). London: Routledge Flamer.
- Cohen, J., & Grifo, J. A. (2007). **Research Methods in Education.** (6th ed.). London: Routledge. Tylor and Francis Group.
- Deci, E. L., & Ryan, R. M. (2008)."Self-determination theory: A macrotheory of human motivation, development, and health." **Canadian Psychology/Psychologie canadienne**, 49(3), 182–185 .
- Enugu, R. K. (2016). Challenges pre-service science teachers face when implementing a 5E inquiry model of instruction (Unpublished Doctoral dissertation, Texas Christian University).
- Ergin, I. (2012)."Constructivist approach based 5E model and usability instructional physics." **Latin-American Journal of Physics Education**, 6(1), 14-20.
- Harland, D. J. (2011). **STEM Student Research Handbook.** Arlington, Virginia: NSTA Press.
- Jendeya, M. H. (2015). **The Impact of 5E Model on Developing Tenth Graders' English Grammar Learning and their Attitudes towards English.**
- Katz, L. J., & Slomka, G. T. (2000). "Achievement testing". **Handbook of psychological assessment**, 149-182.
- Köksal, O. (2009). Teaching Tenses in English to the Students of the Second Stage at Primary Education through Using the 5E Model in Constructivist Approach 7th Grade. (Unpublished M.A. Thesis. The University of Selçuk, Konya. the Turkish Republic).
- Naguib, S. M. N. (2019). "Using the 5 E's Instructional Model to Enhance English Grammar Learning of Secondary Stage Students".

Journal of Studies in Curricula and Methods of Teaching, 244, 115-152.

- Oracle, Ş. (Ed.). (2020). **Paradigm Shifts in 21st Century Teaching and Learning**. Information Science Reference.
- Tuna, A., & Kacar, A. (2013).” The effect of 5E learning cycle model in teaching trigonometry on students’ academic achievement and the permanence of their knowledge." **International Journal on New Trends in Education and Their Implications,** 4(1), 73-87.

Appendix

Fourth Class Second Course Scientific Sections

Monthly Exam **Time: 40 Minutes**

Q1. Unseen passage: (6 M)

Read the following passage, then answer the questions:

There was a man who had four sons. He wanted his sons to learn not to judge things too quickly. So, he sent them each on a quest, in turn, to go and look at a pear tree. The first son went in the winter, the second in the spring, the third in summer, and the youngest son in the autumn. He called them together to describe what they had seen when they had all gone and returned. The first son said the tree was ugly, and the second son said it was covered with green buds. The third son. Disagree; he said it was so beautiful. The last son disagreed with them; he said it was full of fruit. Life and fulfilment. The man then explained to his sons that they were all right because they had each seen but only one season in the tree's life. He told them that you could not judge a tree, or a person, by only one season.

1- The man had (two sons / three sons / four sons).

2- What did the first son say?

3-The third son says it was ugly. (T / F)

Q2. Answer or complete the following from your textbook: (4 only) (4M)

1. How much sleeps should teenagers get per night?

2. The second stage of sleep is the time when you dream. (T / F)

3. Where were the first Asian Games?

4. The mascot for the 16th Asian Games was the three sporty goats. (T / F)

5- What do many teenagers find relaxing?

Q3. Grammar (6 M)

Do as required: (3 only)

1. I want some cough syrup. (Use reported speech)

She said that ----------

2. You should (go / want) to the doctor. [choice]

3. Farah might (learns) to sail this summer. [correct]

4- Perfect, imperfect; use, ----------.

Q4. Vocabulary (2 only)

Fill in blanks: (4 M)

[fever / vitamins / overweight / diet / dairy products / sore throat]

1. ---------- are foods made from milk.

2. ---------- means the food people regularly eat.

3. He should not eat so many sweets. He is a bit ----------.

4. I think I caught a cold. I have had a high ---------- since yesterday.

Q5. Literature Focus

Answer the following question: (5 M)

1- Who was Nazik Al-Mala'ki?

2- What do her famous poems include?

3- When did Nazik Al-Malaki die, and where was buried?

Good Luck