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The Effect of SCAMPER Strategy on Evoking Iraqi EFL Preparatory Pupils' Creative Thinking Skills

A B S T R A C T

The current study aims at revealing the effect of SCAMPER strategy on evoking Iraqi preparatory pupils' creative thinking skills. To conduct the study and fulfill its aims, it is hypothesized that, there is no statistically significant difference between the mean scores of the experimental group which is taught by SCAMPER strategy and the control group which is taught by the conventional strategy in creative thinking skills, and there is no statistically significant difference between the mean scores of the experimental group and the control group in the post test achievement in English language.

To achieve the aims and verify the hypotheses the researcher had adopted a number of procedures beginning from Presenting a theoretical background of SCAMPER strategy as a new strategy for teaching English, selecting randomly samples of Iraqi preparatory pupils as subject for conducting and dividing them in two groups: experimental and control, and Constructing a pre and post achievement tests. Analyzing data by using suitable statistical means and then stating results, conclusions, suggestions, and recommendations.

The sample of the current study consists of (70) pupils derived from Um Al-Mu'minien Preparatory Schools for Girls, the fifth stage which consists two sections, section A was randomly chosen to be the experimental group and section B was randomly chosen to be the control group. Each section consists of (35) pupils.

Encouraging results had been obtained when analyzed the data, which are shown the following points: 1- There is a significant difference in the mean scores between experimental group who is taught by using SCAMPER strategy and the Control group which is taught by the conventional strategy in the posttest achievement in English language. 2- Teaching pupils by using SCAMPER strategy has proved effectiveness in raising pupils' creative thinking skills.

Based on the result, the obtained conclusions in this study, appropriate recommendation, and suggestions for further studies are put forward.

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أثر استراتيجية سكامبر على مهارات التفكير الإبداعي في إنجازات طلبة الإعدادية العراقيين المتعلمين
لغة الانكليزية كلغة اجنبية

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الخلاصة:

تعتبر استراتيجية سكامبر واحدة من الاستراتيجيات الحديثة التي يراد من استخدامها زيادة مهارات التفكير الابداعي لطلاب المدارس الثانوية في العراق. وبما ان الطلاب هم أحد عناصر العملية التعليمية فان تطبيق استخدام مثل هكذا استراتيجيات، منها سكامبر في المدارس العراقية امر مهم وضروري. تهدف الدراسة الحالية الى ايجاد أثر استخدام استراتيجية سكامبر في اثارة مهارات التفكير الابداعي لدى الطلاب العراقيين في المدارس الثانوية وكذلك ايجاد أثر استخدام هذه الاستراتيجية في زيادة تحصيل الطلاب. ولتحقيق هذه الاهداف وضعت الفرضيتين الصفريتين التاليتين

1 - ليس هناك فروق ذات

دلالة احصائية بين درجات الوسط الحسابي للمجموعة التجريبية والتي تم تدريسها وفق استراتيجية سكامبر والمجموعة الضابطة التي تم تدريسها وفق الطريقة التقليدية في الاختبار البعدي.

2 - ليس هناك فروق ذات دلالة احصائية بين درجة الوسط الحسابي للمجموعة التجريبية في استبيان مهارات التفكير الابداعي في الاختبار القبلي والبعدي.

لتحقيق الاهداف والتحقق من الفرضيات، اعتمدت الطالبة عدد من الاجراءات على النحو التالي:

١- تقديم نبذة نظرية عن استراتيجية سكامبر وكذلك التفكير الإبداعي

٢- اختيار عينات عشوائية من طلاب الاعدادية العراقيين

٣- تصميم الاختبار القبلي والبعدي للطلاب

٤- تم اجراء اختبار قبلي مكتوب لتقييم تحصيل التلاميذ في اللغة الانكليزية وكذلك من اجل المعادلة بين المجموعتين.

٥- استخدام استراتيجية سكامبر لتدريس اللغة الانكليزية للمجموعة التجريبية.

٦- أخضعت كلتا المجموعتين للاختبار البعدي لمعرفة ما إذا كان لاستراتيجية سكامبر دور في تحصيل التلاميذ وزيادة مهارات التفكير الابداعي لديهم.

٧- جمع بيانات الاختبار البعدي والنتائج و تم تحليلها وعلى اساسها قدمت الاستنتاجات والتوقعات.

تتألف عينة الدراسة الحالية من (70) طالباً اختيروا من اعدادية ام المؤمنين للبنات من الصف الخامس العلمي الاحيائي. وتتألف المرحلة الخامسة من القسم (أ) الذي تم اختياره عشوائياً ليكون المجموعة التجريبية ، والقسم (ب) ليكون المجموعة الضابطة ويتكون من (35) تلميذاً وتحليل البيانات التي تم الحصول عليها تم استخدام طرق احصائية مختلفة وهي الاختبار التائي لعينتين منفصلتين لقياس تحصيل التلاميذ واختيار الاختبار التائي لعينة واحدة والوسط الحسابي. اظهرت نتائج الدراسة الحالية ما يلي :

1 - توجد فروق ذات دلالة احصائية بين درجة الوسط الحسابي للمجموعة التجريبية والتي تم تدريسها وفقاً لاستراتيجية سكامبر والمجموعة الضابطة التي تم تدريسها وفقاً للطريقة التقليدية في الاختبار البعدي.

2 -اثبتت استراتيجية سكامبر فاعليتها في زيادة تحصيل الطالبات في مادة اللغة الانكليزية وزيادة رفع

واعتماداً على نتائج الدراسة الحالية وضعت الاستراتيجيات والتوصيات والمقترحات لدراسات مستقبلية لأثراء مجالات البحث الحالي.

الكلمات المفتاحية: سكامبر، التفكير الإبداعي، دمج، تكيف، تعديل، استبعاد.

1. Introduction

1.1 Problem of the Study

Learning English as a foreign language is a very complicated mental process which involves understanding its rules, word, expressions, the manner of using this expression, and in the context. It is very important and essential for each person especially for those who want to continue their study and education because English is regarded the first international language in the world. Therefore, a person who learns to use a foreign language has achieved a very complex work that consists of a lot of skills and wider knowledge. Learning a foreign language enables individuals to achieve many benefits, and in order to make such good learning, a learner has to activate all his/her senses, thoughts, and imagination to get that kind of learning. The process of learning English language usually counters different challenges for both of the learners and the teachers; therefore, there is a need to use various strategies to overcome these challenges. Unfortunately, most teachers use traditional teaching strategies and methods depending on making students memorizing collections of vocabularies and rules, while in fact students require more than that.

Droff (1988:33) comments that "till now teachers are still facing difficulty in how to provide their students with positive experiences, opportunities and new strategies to learn and reflect their negative experiences of learning. Preparatory pupils must have creative thinking skills in addition to language learning skills in accordance with the purpose of secondary curriculum objective.

One of the modern strategies is SCAMPER strategy which is thought to be an effective strategy in teaching English as a foreign language.

The researcher tries to turn the teacher's attention to the significance of using SCAMPER strategy on evoking creative thinking skills in teaching English that may improve the pupil's level.

1.2 Aims of the Study

This study aims at the following:

1. Specifying SCAMPER Strategy and showing its effect on evoking Iraqi pupils' creative thinking skills.
2. Finding out the effect of using SCAMPER strategy on Iraqi preparatory pupils' achievement

1.3 Hypotheses of the study

1. There is no statistically significant difference between the mean scores of the Experimental group which is taught by SCAMPER strategy and the Control group which is taught by the conventional strategy in the posttest achievement in English language.
2. There is no statistically significant difference between the mean scores of the Experimental group in creative thinking skills in pre and posttest.

1.4 Value of the study

This study is prepared to be beneficial to:

1. EFL teacher who are required to change their slack methods in teaching English language and turn to use dynamic strategies.
2. Curriculum planners and designers.
3. Researchers who will be working on finding new strategies in teaching English.

1.5 Limits of the Study

This study is limited to the following:

1. The use of SCAMPER Strategy on teaching unit one, two and three of the "English for Iraqi" textbooks.
2. Fifth preparatory EFL pupils
3. The academic year 2019-2020.

1.6 Definition of the Basic Terms

In this study, some terms need to be defined for the purpose of clarity and accuracy, those terms are:

1.6.1 Effect:

Good (1959:2950) defines it as “the effect of the experimental factor under controlling condition on the control variable”

Effect can be defined as “something brought about a cause “or “the way in which something acts upon or influences an object “(Be rub, etal,1982:439).

The operational Definition: The word effect can be defined according to the researcher's view as the result and the consequence that can be noticed or got after applying the changeable variable in an experiment and be compared with the control group.

1.6.2 SCAMPER

Eberle states that the meaning of the word scamper is to run a way or escape, he says “running playfully about as a child “or” to run playfully about in one's mind in search of ideas “(1948). Also in (1987) he states that it is an acronym which consist of seven letters referring to seven thinking techniques, each letter refers to specific one that reflects specific process, these processes are substitution, combination, adaptation, modification, put to another use, elimination, and reverse or rearrangement. This collection of techniques forms a framework for creative questioning that can be applied to almost any situation in a school or at home to enhance individual's creativity and imagination.

The operational definition: is that the word “SCAMPER” represents the acronym of seven techniques that forms a systematic and educational style which can be used effectively in enhancing learner's knowledge and expanding their thinking.

1.6.3 Strategy

Paris, et al, (1991:692) define strategies as “actions selected deliberately to achieve particular goals”

The operational definition of strategy: is that it means a group of learning steps or processes that is selected by the teacher to apply the lesson and achieve the desired aims.

1.6.4 Creative Thinking

Strak (2010:14) claims that creative thinking is one core component of contextual and sequential teaching and learning system of instructions that designed to make students realize meaning in academic materials then learn and retain it by connecting it their real daily lives.

1.7 Procedures

The following procedures have been followed and conducted:

1. Presenting theoretical back ground of the SCAMBER strategy as a new strategy for teaching English.

2. Selecting randomly samples of Iraqi preparatory pupils as subject for conducting and dividing them in two groups: experimental and control.
3. Constructing a pre and post achievement tests.

2.1 SCAMPER Strategy: A Historical Overview

Recently, many investigators state different strategies that call for the improvement of thinking skills, one of these strategies is SCAMPER strategy which is one of the brain storming strategies for innovation which purposes to improve and develop the skills of thinking, creative, imagination and motivation for learning to learners, in order not to get the stage of tense and drought in generating new ideas (Serrat; 2009: 12).

Gaubinger et al, (2015:42), Motyl & Fillipi (2014:113) clarified that the roots of designing SCAMPER strategy firstly belong to the suggestions and recommendations that made by Alex Osborn (1953) who formed the spurring checklist which is the first letters in the words of the checklist that designed the word SCAMPER to be a brain storming strategy that enhances in generating ideas and making an effort of brain storming which contributes to the promotion of thinking processes. The principles of generating ideas depend on the hypothesis that innovation comes from the arrangement and addition of innovative ideas.

Then, Richard De Mile in 1967, proposed a book which is called “Put your mother on the ceiling” which attempts at developing the imagination of students. This book contains imagination games; children use these imagination games which connect the worlds of facts and fantasy in a harmonic way. These games are played with the parent or teacher as a guide. Children explore situations at school, home and other settings.

After a period of time and exactly in (1970) Williams Frank and some of his colleagues when he was working as a boss on the national project of building a group of schools presented methods that are purposed to arouse the imagination and creative thinking and expression of children. These methods were based on two dimensions of processes which are:

1. Cognitive processes such as fluency, flexibility, originality and tendency to narrating details.
2. Effective processes such as curiosity, readiness to take risks and preferring complexity.

Finally , Bob Eberle ,(1996:5) made a mixture of the all the previous experiences especially those whom related to generate ideas, and explained the operational definition and the meaning of each letter of the word “SCAMPER”, and to which process it belongs Eberel has added Osborn’s spurring checklist to William’s methods and designed a new model which is called SCAMPER to develop creative imagination and he designed a group of educational questions, games and activities that contributes in enhancing child’s creativity.

After that, many researchers have worked in developing learners’ thinking and they confirm that SCAMPER strategy works to strengthen and support the

levels of creativity of students and learners when dealing with finding solutions for difficulties and problems. (Toraman & Altun, 2013) mentioned that SCAMPER strategy is regarded as one of the strategies, through which cognitive levels can be promoted among students. In this strategy a number of questions are directed to students in a way that encourages them to move out of ordinary and think in an unconventional way, then the series of the questions will be like the engine power that pushes and allows students to gain a lot of various

Thinking skills. SCAMPER strategy helps teachers to make unfamiliar and more flexible thinking.

Similarly, Melvira, (2012:36) showed that SCAMPER strategy has been successful in demonstrating its effectiveness in teaching many materials and it is one of the most effective strategies that can be applied in teaching English and overcome problems that faced students and teachers. In order to get effective employment of the strategy, the learning environment is very important and influenced factor which should be fixed firstly by the teacher. Therefore, the teacher has to follow a number of key actions (procedures) and steps, such as the teacher should prepare the suitable place for the study which allows for applying games by students, then the teacher should prepare the lesson plan to be able to identify priorities and determine the mechanisms through which the information will be transferred to the students and choosing the most interesting topics to keep students attention as long as possible.

Determining the time that is required for each stage of the lesson is very important whether it is dedicated to explain or dedicated to the work of students with each other a cooperatively.

SCAMPER principles are clarified by Michalko (2006) in the following organizer:

S	Substitute	Sample questions - What can I substitute? - Who can I substitute?
C	Combine	Sample questions: - Combine ideas/ purposes/ materials? - Can anything be blended or ensemble?
A	Adapt	Sample questions:- - How the problem is currently solved? - How can it be more compatible?
M	Modify	Sample questions: - How can this be altered for the better? - What can I modify?
P	Put to other uses	Sample question:- - What else can this be used for? - What are those uses? - Who else could use it?
E	Eliminate	Sample questions: - What should I simplify or enrich?

		- Should it be plain or fancy?
R	Reverse or rearrange	Sample questions: - What other arrangements might be better? - What would happen if I flipped the order?

2.1.2 Creative Thinking

When concentration is focused on the expression of “Creative Thinking” which consists of creativity and thinking, the attention is paid to the derivation of the word “Creativity” which is derived from the Latin word “crea” that means “Create” which is defined in the dictionary as the ability or power to bring into existence, to produce through imagination, to make something new (Webster Dictionary as cited in (Wilson, 2005: 23).

Moving to the another word which is “thinking” that is defined by (Jarwan; 1990: 33) as a series of mental activities that occurs when the brain receives a stimulus by one of the first sense or more, sight, hearing, smell, touch and taste. Also he states that thinking is related constantly as a distinctive feature to human being.

Sternberg, (2006:17) states that creativity is clearly a complex process which often appears mysterious to the observer, sometimes it shows uncommon gift of the few. But it is also very important to remind ourselves that creativity is the natural state of human being; from the earliest we notice that most children try to be experiment with the world around and find alternative uses for nearly every house hold item. Children use their creativity to express their view toward their world. Creativity involves the ability to generate manipulate and refine an imagination with the capacity for that change to be kept as a new memory which can be used or called through the connection that are made through the brain’s mental processes. The manipulation or transformation of an imagination is the creative process which may be or not leaded or translated into external action.

Mayer, (2001:87) says that thinking happens when you solve a problem, but Al-Khalil, (2005:52) states that thinking is the good device to address the problems and overcome them.

3. Methodology

3.1 The Experimental Design

In connection with the current study, use of aim and hypothesis demand the quasi - experimental design namely the Non- Randomized experiment group pretest-posttest design. Consequently, the two groups of the fifth scientific preparatory school pupils are the sample of the study.

3.2.1 The Population

Lehman and Mehrens (1971:81) mention that “a population refers to all of specified groups of subjects usually persons”. While Richards and Richard (2010:443) add that population can be defined as any set of items, objects, individuals etc. that share some common and noticeable features, and from which a sample can be picked out (adopted). The population of the present study consists of EFL Iraqi preparatory pupils of fifth scientific stage for girls in Tikrit. The total number of the fifth class pupil's population is (425) girls distributed into nine preparatory schools for girls in Tikrit.

3.2.2 The Sample

According to Leman and Mehrens (1971:18) "the sample is as smaller number of elements selected form a population and is hopefully representative of that population." While Ary, et al. (1979: 129) states that the sample is a small portion of a large population. Om Al – Muamneen preparatory school for girls has been chosen as the sample of the study. The sample consist of (70) pupils derived from two sections of scientific branch. Section (A) has randomly been chosen to be the experimental group; section (B) as the control group. Each section consists of 35 pupils.

3.3 Equalization

The two groups should be equalized according to the following variables: the academic level of pupils' mother variable, the academic level pupils' father variable pupils' achievement on the previous schooling year and pupils' achievement in the pretest.

3.4 Statistical means

The statistical tools which have been utilized in the present study for the purpose of analyzing the collected data are:

1. Percentage
2. T-test for Two Independent Samples
3. T-test formula for dependent sample
4. Chi-Square
5. Alpha Cronbach Formula
6. The Standard Deviation.
7. Formula of Difficulty level
8. Furmula of Discrimination Power.

3.7 The Experimental Application

The current study is concerned with investigating the effect of using SCAMPER strategy on evoking Iraqi EFL preparatory pupils' creative thinking skills. The researcher depends on the textbook under which is used in all Iraqi schools as

material to teach the English language at the fifth preparatory stages in which pupils have been studying English for at least eight years.

As have been mentioned previously the fifth year pupils of Om-Al-Mu'mineen preparatory school in Tikrit, Saladdin Governorate has been chosen as a sample of the experiment. The researcher has taught the two groups, the experimental group and the control group. The lectures are arranged to be on every Sunday for the experimental group and on Monday for control group.

The experiment started on the 1st November of 2019. On that day, the pre-test has been applied. The experiment has lasted for eight weeks, and at the end of the experiment the posttest has been applied. The researcher has chosen some subjects from the different first four units to be taught according to SCAMPER strategy for the experimental group and the same subject are introduced to the control group by using the ordinary technique of teaching which is also a communicative one, but not depending on using SCAMPER techniques.

The materials of the experimental group include:

1 – English of Iraq for fifth class (student book, activity book, and teacher guide).

_ Different colored cards which are used to illustrate the meaning of the seven techniques of SCAMPER that is followed in teaching, beside some educational cards that is related to some subject to be used during the lesson .

_ CDs _ White board and the smart board _ Data Show, Videos, YouTube.

2 - The material of the control group includes:

-Students book, activity book, and teacher guide -White board -Colored pens.

The researcher followed the following procedures in teaching the experimental group depending on SCAMPER strategy.

1. Firstly the researcher demonstrated and clarified the meaning of SCAMPER strategy with its principles and techniques in order to make pupils familiar with the background of what they are going to do.

2. Make students familiar with using the time of imagination in some lecture s when it is needed, because it is a new technique and unfamiliar for Iraqi students to be used in Iraqi school.

3. Putting students in to seven groups, each group represents one technique of SCAMBER; these groups have different cards of questions depending on the technique that they are represented.

4. Explain the result of playing some chosen games of SCAMPER games when it is necessary to teach some information.
5. Encourage students to be relax and use English language fluently as much as they can in order to evoke their creative thinking skills
6. Giving enough time for pupils to practice SCAMBER as a problem solving strategy with its activities and emphasize sharing the idea among them.
7. Giving pupils time to make handmade work such as the cards of Mothers' day.
8. It is very important for any researcher or teacher who wants to apply SCAMPER strategy in teaching to plan the time of each activity and the educational material that must be introduced in each activity previously.

3.8 Final Administration of Instruments

The posttest has been applied at the end of the experiment and after the test has been approved that it is reliable and valid. The posttest is administrated for the two groups, the experimental and the control, and it is conducted in the same time but in different places. The researcher got help from two preparatory teachers to monitor the classroom while explaining the questions to the pupils. The duration of time was limited to 45 minutes that means just one lesson, the pupils are instructed to read the questions carefully then to write down their answers on their papers. Papers are collected after they have finished their answers. The papers are corrected to check their performance after applying the experiment.

The questionnaire is applied in the following day on the experimental group; the researcher explains the meaning of some statements and the instructions of replying these statements to reflect their views toward using SCAMPER strategy in evoking their creative thinking skills.

3.9 The Lesson Plan

The researcher notices that in the teaching process, teachers face many critical situation and problems, some of them relate to time duration and some other relate to the process of shifting the information from the teacher to the pupils or even among pupils themselves in addition to the sequence of activities, most of the mentioned previous issues are resolved through good planning for the sequence of the lessons and the time of each activity.

Therefore, (Al-Mutawa and Kailani ,1989:140) believe that teaching is best when a teacher plans the lesson previously according to the need, interests and capacities of the pupils and the needs of each subject, some subjects need necessary detailed plans but others require a brief outline.

Droff (1988:287) states that the aims of planning a lesson are:

- 1 – To make teachers aware of the aims and language content of the lesson they teach.
- 2 – To help teachers distinguish the various stages of the lesson and to show the relationship among them.
- 3 – To clarify how to make simple plan.

According to Harmer (2000:12) a plan gives the lesson a framework and overall shape, of Course, good teachers are flexible and respond creatively to what happens in classroom, but they also require to have thought ahead, have a destination they want their pupils to get and how they are going to continue their progress.

The researcher prepared previously the necessary lesson plan for the control group according to the plan of the teachers' guide while the lesson plan of the experimental group is prepared according to techniques of SCAMBER strategy.

4. Discussion of Results

The current study attempt to investigate the effect of teaching English language by using SCAMPER strategy to evoke Iraqi: preparatory pupils' creative thinking skills. It also attempts to show whether there are significant differences between the two groups, the experimental and the control group at pupils' achievement. The result showed that the pupils of the Experimental group, who have been exposed to learn English language depending on applying SCAMPER strategy, were Superior to the students of the control group. Pupils of Experimental group are more capable stimulate–motivate interact with each other and raise the ability to generate multiple solutions to problem beside relating ideas or things which are previously unrelated to find ways to make the perfect vision happen depending on building imaginative and ideal situations.

Using SCAMPER strategy led to the improvement of pupils' achievement by creating various activities and motivating pupils' mind to communicate creatively, this is done through the class room environment by using many digital tools in order to encourage pupils to create their learning Different instructional materials are prepared and presented by using technology tool and other instructional material is prepared and presented depending on using simple tools such as cards. This means SCAMPER strategy can be applied by using technology tool or without, the most distinctive feature of SCAMPER

strategy that it does not need a very rich learning environment; it can be applied in simple learning environment.

5. Conclusions

Depending on the results of the current study, the following conclusions are illustrated:

1. SCAMPER strategy is one of the most effective thinking strategies that help to create cooperative learning inside the classroom with a great amount of motivation which has its positive impact on pupils learning process.
2. SCAMPER strategy as a problem solving strategy works to decrease the gap between teacher and pupils, when they work together to find innovative solution.
3. SCAMPER strategy has an important role in guiding pupils to organize their thinking process, generating questions and relating information to discover or create new things. Therefore, teacher should be aware of the importance of SCAMPER strategy moreover, they should be trained by educational supervisors on how to employ this strategy with its seven techniques in teaching all the language skills.
4. SCAMPER strategy is a teaching strategy and its positive effect on evoking EFL pupil's creative thinking skills, it helps pupils to generate a large number of information by providing them with the opportunity to train their minds to engage in an exchange of thoughts and views in a friendly and challenged atmosphere.

6. Recommendations

In the light of the conclusions of the current study, the following recommendations can be drawn:

1. Iraqi English language teachers are invited to adopt SCAMPER strategy in teaching.
2. Teaching strategies should focus on raising pupils' creative thinking skills depending on new communicative strategies such as SCAMPER.
3. Teachers have to use new ways to present knowledge such as imagination and games to make enjoyment through the process of learning.
4. Teachers have to learn how to use modern technological tools to create active lessons and facilitate the pupils' learning process.

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