Using Brainstorming and Problem Solving for Developing EFL Creative Writing Skills among Preparatory Stage Pupils

By

Esraa Atef Mahmoud Ahmed
An EFL English Teacher

Dr. Eman M. Abdel Haq
Professor of Curriculum & Instruction (EFL) and Dean of Faculty of Education - Benha University

Dr. Magdy Mohammed Amin
Assistant Professor of Curriculum and Instruction (EFL) Faculty of Education, Benha University

Dr. Abdellatif E. Y. Ali
Lecturer of Curriculum & Instruction (EFL) Faculty of Education - Benha University
Abstract

The present study investigated the effectiveness of brainstorming and problem solving strategies in developing some EFL creative writing skills among preparatory school students. The design of the study was pre-post one experimental group design. The study sample consisted of 30 students selected from first year students enrolled at the BahgaYousief Preparatory School, Quesna (AL Monufiya). The instruments of the study were: an EFL writing skills checklist including four main skills and 47 sub-skills, an EFL creative writing skills pre-posttest and a rubric for scoring it. The EFL writing skills test was administrated to the participants then they were taught using brainstorming and problem solving strategies. After that, they were post-tested in the first term of the year 2020/2021. The findings of the study revealed that EFL writing skills were developed due to the use of brainstorming and problem solving strategies. The results confirmed the effectiveness of using brainstorming and problem solving strategies for developing some EFL Creative writing skills among first year prep school students enrolled at BahgaYousief preparatory school.

Key words: Brainstorming – problem solving – EFL writing skills
المستخلص

فاعلية استخدام استراتيجية العصف الذهني وحل يهدف هذا البحث إلى التعرف على
في تنمية مهارات الكتابة الإبداعية في اللغة الإنجليزية كلغة أجنبية لدى طلاب المشكلات
الصف الأول الإعدادى بمدرسة بجامعة بوسف الإعدادية بقويسنا و لقد تم استخدم التصميم
(قبلي بعدي) ولقد بلغت عينة الدراسة ثلاثين طالبا، تم دو المجموعة الواحدة التجريبى
اختيارهم عشوائياً من طلاب الصف الأول الإعدادى بمدرسة بجامعة بوسف الإعدادية وشملت
أدوات الدراسة: قائمة بالمهارات اللازمة لهؤلاء الطلاب مقسمة إلى أربعة مستويات رئيسية
مهارة فرعية و اختبار قبلى بعدى لقياس مهارات الكتابة الإبداعية لدي العينة و تم 47و
تطبيق اختبار الكتابة الإبداعية للغة الإنجليزية كلغة أجنبية قبلبا على المشاركين ثم التدريس
لهما باستخدام استراتيجية العصف الذهني وحل المشكلات و بعد ذلك تم تطبيق الاختبار بعدا
لقياس مدى التقدم في مستوي أدائهم وتم إجراء الدراسة في الفصل الدراسي الأول من العام
الدراسى 2020/2021 وجدت النتائج أن مهارات الكتابة الإبداعية للغة الإنجليزية كلغة
 أجنبية تم تدريجياً باستخدام استراتيجية العصف الذهني وحل المشكلات و أثبتت النتائج فاعلية
الإبداعية استخدام استراتيجية العصف الذهني وحل المشكلات في تنمية بعض مهارات الكتابة
للغة الإنجليزية كلغة أجنبية لدى طلاب الصف الأول الإعدادى بمدرسة بجامعة بوسف
بوسف. الإعداديه

كلمات مفتاحية: العصف الذهني، حل المشكلات، مهارات الكتابة الإبداعية باللغة
الإنجليزية كلغة أجنبية.
Introduction:
Writing is one of the significant skills in student’s expression of their views and their effective communication. Writing is an activity including cognitive, affective, social, and psychomotor processes. In the writing process, students need to realize various cognitive processes coordinately in order to express feelings and ideas effectively and to convey meaningful messages to the readers (Flowers and Hayes, 1981).

Writing that involves the use of skill and the imagination to produce something new is creative writing. It involves the use of mind for generating new ideas. It needs the involvement of thinking skill of the individual for composition of work. This type of writing aims at generating as many ideas as possible. The nature of those ideas should be innovative and imaginative. Such tasks demand use of cognition and thinking. According to Harmer (2004), there are four basic steps involved in the process of creative writing. These are ‘thinking about the ideas, arrangement of the ideas, writing the ideas and revising the ideas’.

Many researchers have presented definitions of creative writing. Ramet (2007) defined creative writing as “Having the power to create an imaginative, original literary production or composition” (p. xi). Another definition of creative writing was presented by Mohammed, Abdel-Hack, and Okasha (2011) as anything where the purpose is to express thoughts, feelings and emotions. As stated by Al-Hadi (2008), “creative writing can be defined as “the writing that expresses the writer’s thoughts and feelings imaginative often unique way that is characterized by generating original, internally consistent, coherent plausible ideas.” (p.29)

The most important aim of the creative writing activities is helping students in expressing their feeling and thoughts in original, fluent, interesting way instead of writing boring, repeated and monotonous writings (Temizkan, 2010). Therefor Ipsioglu (2007) mentions the aims of the creative writing as: Developing the sense perceptions, evoking the imagination and providing the wholeness of sensation, thinking, perceiving and observing abilities, generating the thoughts, experiments and observations in fictional wholeness, improving the abilities of observing, thinking, examining, commenting and criticizing and breaking patterns in minds, prejudices, the point of obstruction and finding language.
Considering the changing trends in teaching and the advantages of creative writing, it is certainly the responsibility of English teachers to give importance to creative writing and to understand the complexity of writing development. Nadeem (2007, p. 2) believes that ‘teachers should keep in view the needs and interests of students to enable them to be expressive in writing’. It is believed that creative writing can be pleasurable and self-developing if our expressive and communicative needs motivate us to write.

Goddard (2008) assessed the effects of self-monitoring on the quantity and quality of creative writing of fourth-grade students with learning disabilities. The participants, four fourth-grade students with identified learning disabilities, self-monitored both the quantity and quality of their writing. Results showed a statistically significant increase in writing quantity for all four students, as well as an increase in writing quality for three of the students. Furthermore, qualitative evidence indicated that students' interest in writing improved as a result of the self-monitoring intervention.

Sahbaz (2011) determined the effect of the cluster method on the creative writing skill of 6th grade students. In this paper, the students of 6-A, studying at Ulas Primary School in 2010-2011 academic year, were divided into two groups as experimental and control. Taking into consideration the various variants, pre-test and last-test were applied at the beginning and at the final process. These tests were compared according to the number of the words in written texts, actual and figurative usage of words, the usage of proverb-idiom, slip in spelling and the relation with the context. The results revealed that, the group which used the cluster method in creative writing studies was more successful than control group on academic success in writing skill.

There is a need for an approach for teaching writing that make students write freely without any pressure or fear from correction. One way to help students to improve their writing skills is to create writing assignments that require students to move back and forth between observation and inference, facts and assumptions. This can be done through effective strategies using active learning. Thus, when students use active learning, they cannot remain passive. They become able to make important critical choices while writing and ask themselves questions. This way would enable them to become better thinkers and better writers (Abdel-Hack, Helwa, 2014).
Active learning (brainstorming and problem solving), which entails any class activity that “involves students doing things and thinking about the things that they are doing” (Bonwell and Eison, 1991, p. 2), stands as an important pedagogical practice. Discussion, the types of questions to ask students in class, role playing, cooperative learning, debates, and the types of questions asked on examinations highlight forms of active learning. The key to active learning (brainstorming & problem solving) is the learning activity taking place within the student’s brain rather than the observed behavior that is a means to that cognitive work. The animated figure on this page illustrates that the teacher guides students in active learning, recognize those cognitive events consistent with desired learning outcomes. Be sure that your classroom activities have a clearly defined objective and effectively guide the student toward that learning goal (Braxton and Sullivan, 2000).

Active learning is generally defined as any instructional strategy that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing. While this definition could include traditional activities such as homework, in practice active learning refers to activities that are introduced into the classroom. The core elements of active learning are student activity and engagement in the learning process. According to active learning, students construct their own knowledge through objects and real experiences such as, direct objects, people, ideas and events. This condition is necessary to build a student's cognitive development. Students learn about the concept form, ideas and create their own symbols. Active students can be moving, listening, looking and feeling, the activities carried out through social interaction with teachers. There is a need for thinking to help students be active and interact inside classroom (Bonwell and Eison, 1991).

Bonwell and Eison (1991) suggested some examples of active learning including: class discussion, small group discussion, debate, posing questions to the class, think-pair-share activities, short written exercises and polling the class, these can be clarified as follows:

A class discussion may be held in person or in an online environment. It is best that these discussions be centered on an open-ended (occasionally controversial) topic (e.g. one that has no right or wrong answer).
A small group discussion is a similar activity between individuals, groups, or teams of individuals. A presidential debate is a common debate format. But these also may center on controversial or political topic.

A think-pair-share activity is when learners take a minute to ponder the previous lesson, later to discuss it with one or more of their peers, finally to share it with the class a part of a formal discussion.

A short written exercise is often used is the "one minute paper." In this exercise students are asked to summarize the day's discussion in a short paper to be turned in before the end of class. This is a good way to review materials.

Problem solving exercises: these types of exercises help students develop analytical skills and learn how to apply academic theories to real-world problems. Use case studies in a lecture and have students work out their solutions independently or in small groups, or use case studies as the basis for major projects or exams.

Debate: this is another active learning technique that helps develop critical thinking and logical reasoning skills. Present competing viewpoints in lecture and assign students to defend one, or both, of the viewpoints in a short (five-minute) written exercise or classroom debate.

Thus, active learning (brainstorming and problem solving) increases student investment, motivation, and performance when the teacher invites students to actively participate in the learning environment, they take more responsibility for their performance and the course. Similarly, when they have an opportunity to make decisions about what they learn and how they use that knowledge, students see the course as more valuable and more directly related to their goals. For example:

Brainstorm learning objectives – if you involve students in the development of classroom activities, e.g., allow them to choose the topic of a short discussion or generate ideas about how a concept could be applied to a problem that interests them, it automatically increases engagement levels. Involving students in classroom activities also requires them to assess their understanding and skill and rather than allowing them to rest comfortably with a surface knowledge, it forces them to develop a deeper understanding of the material.

In addition, Active learning strategies (brainstorming and problem solving) should provide a low barrier-to-entry, and invite involvement
among all students. Therefore, tasks should be simple or discrete. For more complex tasks, instructors should provide clear instructions that outline (and model) how students will participate in the activity. How will students engage with each other in the activity? What are the ground rules or guidelines for group interaction? Answering these questions explicitly will help students understand what is expected of their participation.

Kim (2013) suggested ten benefits of active learning, Students are more likely to access their own prior knowledge, which is a key to learning, they are more likely to find personally meaningful problem solutions or interpretations, they receive more frequent and more immediate feedback, in addition, they need to produce forces learners to retrieve information from memory rather than simply recognizing a correct statement, they increase their self-confidence and self-reliance, for most learners, it is more motivating to be active than passive.

Due to the importance of active learning (brainstorming and problem solving) and creative writing skills there were studies investigated the relationship between them:

Richard (2006) aimed to explored the effects of active learning and types of elaboration on procedure acquisition (writing database queries). Training materials emphasized elaborations of conditions for executing actions versus elaborations of the connection between conditions and actions. In the "active" conditions, participants performed structured exercises designed to encourage active processing. In the "passive" conditions, participants studied examples that contained instructional elaborations. The results indicate that condition-action elaborations improved procedural performance the most, in both the active and passive conditions. Active learning required longer training time but was offset by reduced test time.

There is a common saying “writers write”; there are many and many people who want to write but they could never manage it. Practicing writing is the vital first step. Active learning requires regular updates; active learning improves creative writing. Writing for an audience improves writing, that’s why it is a must to develop the accurate system of writing workshop, student magazines. Creative writing provides an audience; active learning provides writing.

Writing that matters improves writing; writers can only improve their writing by trying to choose topics that matter to them. Writing
about things that matter is essential to writer’s development. To be effective; active learning cross genre and topic. Active learning improves writing.

**Context of the Problem**

To some students, writing process is difficult and boring. Most students have negative opinions about writing because of the experiences that the students lived before, and writing is a skill which can be acquired hard and late. Students need to be motivated in order to begin, continue and complete the writing. With right method and techniques, these motivational supports can be supplied and students can be helped for developing positive attitudes towards writing (Bruning and Horn, 2000).

A lot of pupils face many obstacles in English language teaching and learning. They also face a lack of opportunity to use English in their daily lives. Moreover, most EFL pupils hate to write as they have no experience, no confidence, maybe no ideas, a slender of punctuation. So, students should practice, practice and still more practice to learn writing. They are always hesitant to write because they cannot generate ideas and are afraid of making mistakes (Abdel-Hack, 2009b).

English language teachers in Egypt carry out their teaching activities focusing on contents or information only, because their main focus is to facilitate learners become proficient in English, rather than developing their writing skills. Teaching and learning activities are confined to knowledge and comprehension level only. Al-Hadi (2008) asserted that creative writing has progressively gained prominence in the school level because it hones the pupils’ abilities to clearly express their thought. In addition, it stimulates their imagination, and encourages them explore life and mastering the creative writing skills such as originality, fluency and flexibility.

Based on the researcher’s teaching experience, it can be said that preparatory school students lack EFL creative writing skills and these creative writing skills do not receive the due interest. Teachers ignore teaching creative writing skills, because they concentrate on the basic information that can help students to pass their written exams.

To make sure of the study problem, a pilot study was conducted on a sample of first-year preparatory pupils enrolled in BahgaYouseif preparatory school in Quesna (thirty pupils)). The pilot study consisted
of an EFL creative writing skills test. It consisted of five questions to assess the EFL creative writing skills among pupils. The results of the test revealed that students lack concision: they often wander to corporate the ideas without focusing on the main ideas covering the whole topic. Therefore, students cannot gain a concise topic which contains the main ideas and several major supporting details. They lacked accuracy: they also had difficulty in expressing the main ideas clearly. The results of the test revealed the poor level of the students' EFL creative writing skills. The researcher suggests using brainstorming and problem solving for developing their EFL creative writing skills.

This lack of students' EFL creative writing skills was also pointed out by different studies (Mohammed, Abdel-Hack, and Okasha (2011), Temizkan,2011, Wang,2012, Kanala ,2013). These studies stated that the main focus in teaching English is mostly on written work. So, creative writing skills are still neglected in our English classes. Thus, there is a need for an effective way for developing creative writing skills for preparatory school students.

Statement of the Problem:
In spite of the importance of EFL creative writing skills, first-year preparatory stage pupils lack these skills. Thus, there is a need for using effective ways for developing EFL creative writing skills among preparatory stage pupils. So, the present study is an attempt for investigating the effectiveness of using active learning (brainstorming and problem solving) in developing EFL creative writing skills among first-year preparatory stage pupils.

Questions of the Study:
To investigate this problem, the present study attempted to answer the following questions:

1. What are the EFL creative writing skills required for the first-year prep stage pupils?

2. How can brainstorming and problem solving are used for developing EFL creative writing skills among the first-year prep stage pupils?

3. What is the effectiveness of using brainstorming & problem in developing EFL creative writing skills among first-year prep stage pupils?
Delimitations of the Study:
A- A thirty pupils of first- year preparatory stage enrolled in BahgaYouseif preparatory school in Quesna.

B- Some EFL creative writing skills (flexibility, originality, fluency and accuracy) required for first-year preparatory stage pupils.

Method
Design of the study
The present study followed the pre-post, one experimental group design.

Participants of the study
The participants were 30 first year students enrolled at of BahgaYouseif Preparatory School in Quesna at the first term of 2020-2021 academic years.

Instruments and materials of the study
The following instruments and materials were prepared and used to achieve the aims of the study.

- An EFL creative writing skills checklist prepared by the researcher.
- An EFL creative writing skills pre-posttest prepared by the researcher and a rubric to score it.
- A teacher’s guide that describes how to use brainstorming and problem solving in developing EFL writing skills

The EFL creative writing Skills Checklist
Purpose
The researcher prepared a list of EFL creative writing skills to identify the necessary writing skills for first year Preparatory School students at BahgaYouseif Preparatory School in Quesna specialized course in writing at the prep stage.

Description
The EFL creative writing skills checklist consisted of four mainskills. The first level, flexibility, included 14 sub-skills. The second level, originality, included 12 sub-skills. The third level, accuracy, included 11 sub skills. The fourth level, fluency, included 10 sub skills. The total number is 47 sub-skills
The Sources
The sources of EFL reading comprehension skills checklist, main and sub-skills, were:
- Review of literature
- Related studies
- National Academic Reference Standards (NARS)

The EFL creative writing Skills Test
Purpose of the Test
The EFL writing skills test was used as a pre-posttest to identify the level of first year prep school at BahgaYouseif preparatory school in Quesna in the EFL writing skills and to identify the effectiveness of brainstorming & problem solving in developing EFL writing.

Description of the test
The EFL creative writing skills test was developed by the present study researcher. The test has four parts, each part was developed to measure one of the intended skills (fluency, flexibility, accuracy and originality). The first part focused on assessing the fluency skills and the students are required to generate as many related ideas as possible, then choose two of these ideas and write a paragraph. The second part focused on assessing flexibility in which, students are required to restate a paragraph on his own. The third part focused on the accuracy indicators, where students were required written paragraph that contains some errors (spelling, grammar, vocabulary, and punctuation), identify these errors and correct them. In order to measure the participants' creative writing skills (originality, fluency, Flexibility and accuracy) before and after experimentation, the researchers prepared an EFL Creative Writing test.

The Validity of the EFL Creative Writing Skills Test
In order to validate the EFL writing test, it was submitted to jury members in Curricula and Methods of Teaching English. They were asked to indicate; the suitability of the test for the academic level of students and the clarity of it’s parts and whether the test parts cover all skills in the study. In the light of the jury’s suggestions and notes which were taken into consideration, the modifications were performed and the parts of the tests were modified in their final form.

Table (1): The correlation coefficient between the degree of each dimension in a test creative writing and the degree of the rest of the dimensions
It is evident from the previous table that all the correlation coefficients function at 0.01, which indicates the internal consistency between the dimensions and each other.

The Reliability of The EFL Creative writing Skills Test

To estimate the reliability of The EFL writing skills test, the researcher used SPSS V.18 to calculate the validity of the test in two ways:

A) Calculate the internal consistency between the different dimensions of the test and each other.

B) Calculating the internal consistency between the test dimensions and its total score.

A Teacher’s Guide for Using brainstorming and problem solving for developing EFL creative writing Skills

A teacher’s guide was prepared to give a detailed description of how to use brainstorming & problem. At the introductory session, the objectives, importance, and characteristics of the treatment were presented to the study sample. The guide included 6 sessions presented in the form of modules. The researcher set about creating the content for each of the 6 modules. These modules represent the 47 sub-skills of the main four skills of EFL writing. The core of the course was built in 6 learning modules.

Active learning (brainstorming and problem solving) strategies are built upon constructivist theories of learning, which emphasize the importance of building connections between one’s prior knowledge and new experiences and concepts. As such, active learning tasks are designed to tease out learners’ current understanding, make that understanding explicit, and then create opportunities for learners to integrate new knowledge into their understanding.

The researcher used in brainstorming and problem solving both formative and summative evaluation. Formative assessment was used for assessing the participants' progress in EFL writing skills and for
providing necessary and immediate positive feedback. The activities provided the researcher with the sufficient information about the participants' progress and development in EFL writing skills.

Summative assessment was conducted at the end of the treatment through the application of the EFL writing post-test to measure the achievement of the intended topics of the active learning strategy.

Data Collection
The Following procedures were conducted in the present study.

Pre-testing
The study participants were pre-tested using the EFL writing skills test to measure their level in EFL writing skills before using brainstorming & problem solving strategies. The participants' answers were analyzed and scored.

Treatment
After pre-testing, the study participants (N=30) were taught EFL creative writing skills following the teachers’ guide prepared by the researcher. The treatment lasted for three weeks with five sessions per week it took 45 minutes for each session.

Post-testing
The participants were post-tested to investigate the effectiveness of the brainstorming & problem solving. This was conducted at BahgaYouseif preparatory school in Quesna.

Findings and Discussion of the Study
The overall aim of using brainstorming & problem solving was to develop EFL writing skills for first prep school students at BahgaYouseif preparatory school in Quesna. The findings of the study will be presented in relation to the hypotheses of the study.

Findings of the First Hypothesis
1. There was a statistically significant difference between the pre and post test mean scores of the participants in the present study in pre-creative writing skills in favor of the post-assessment

2. There was a statistically significant difference between the mean scores of the study participants in EFL writing flexibility skills in the EFL writing pre-test application and the EFL writing post-test application in favor of the post application.
3. There was a statistically significant difference between the mean scores of the study participants in EFL writing originality skills in the EFL writing pre-test application and the EFL writing post-test application in favor of the post application.

4. There was a statistically significant difference between the mean scores of the study participants in EFL writing accuracy skills in the EFL writing pre-test application and the EFL writing post-test application in favor of the post application.

5. There was a statistically significant difference between the mean scores of the study participants in EFL writing fluency skills in the EFL writing pre-test application and the EFL writing post-test application in favor of the post application.

The following table presents the students' mean scores, standard deviations, t-value and level of significance of the study participants in the EFL creative writing pre-posttest.

**Table (2)**
The correlation coefficient between the score of each dimension in a test creative writing and the total score of the test
(N = 30)

<table>
<thead>
<tr>
<th>Skills</th>
<th>Flexibility</th>
<th>Fluency</th>
<th>Accuracy</th>
<th>Originality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.923**</td>
<td>0.918**</td>
<td>0.953**</td>
<td>0.884**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level**

It is evident from the previous table that all the correlation coefficients function at 0.01, which indicates the validity of the internal consistency of the test dimensions with the total score.

To check the discriminatory ability to test creative writing; Discriminatory validity was calculated; where 27% of the high scores were taken from the scores of the survey sample (30) students, 27% of the low scores for the survey sample, and the Mann-Whitney test was used to identify the significance of the differences between these averages.

The following is a table showing the results of the differences between the mean ranks and the z-value between the two groups, and the results were as follows:
Table (3)
The results of the differences between the mean ranks and the $z$-value between the high and low scores in the EFL creative writing test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Z- Value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>High group</td>
<td>8</td>
<td>12.50</td>
<td>100</td>
<td>3.378</td>
<td>0.01</td>
</tr>
<tr>
<td>Low group</td>
<td>8</td>
<td>4.50</td>
<td>36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the table that there is a statistically significant difference at the level of 0.01 between the two levels, which indicates that the test has a high degree of discriminatory validity.

Calculate the test reliability
The reliability of the test was calculated by means of Test-retest reliability:

With a time interval of two weeks, the Pearson correlation coefficient was calculated between the grades of the students in the two applications using the SPSS program (V. 18). The value of the correlation coefficient between the two applications was calculated in each sub-skill, as well as the test as a whole, as shown in the following table:

Table (4)
Results of Reliability of the EFL creative writing skills test
Using Test_retest

<table>
<thead>
<tr>
<th>Skills</th>
<th>Flexibility</th>
<th>Fluency</th>
<th>Accuracy</th>
<th>Originality</th>
<th>All Over The Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.897**</td>
<td>0.880**</td>
<td>0.876**</td>
<td>0.633**</td>
<td>0.927**</td>
</tr>
</tbody>
</table>

It is evident from the previous table that all correlation coefficients are high and all are significant 0.01, which indicates the reliability of each dimension of the test as well as the test as a whole.

Calculation of test time:
The test time was calculated by calculating the mean times that all the sample members took, and then the researcher concluded that the appropriate time for the test is 45 minutes.

**Statistical methods used in data analysis:**

The researcher used: SPSS (18) statistical packages program to arrive at the results by the following statistical methods:

1- Paired-Samples T-Test for comparison between the mean scores of the two pre and post applications.

2- Effect size $2\eta$ to study the size of the effect of the independent variable on the dependent variable: to find out the variance in the degrees of the dependent variable attributable to the independent variable.

3- Black Modified Blake's Gain Ratio to study the effectiveness of the independent variable in the dependent variable.

- **Presentation, analysis, discussion and interpretation of results:**

  a- Presentation and discussion of the results of the first hypothesis:

  To test the validity of the first hypothesis of the study, which states that "there is a statistically significant difference at ($\alpha \leq 0.05$) between the mean scores of the study group students in the pre and post applications of the sub-skills of the writing test in favor of the post application scores."

  **Table (5)**

  Results of the t-test between the mean scores of the creative writing skills pre-posttest

<table>
<thead>
<tr>
<th>Skills</th>
<th>Test</th>
<th>No</th>
<th>Mea</th>
<th>Std. Deviation</th>
<th>t-value</th>
<th>D</th>
<th>$\alpha$ Sig</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility</td>
<td>Pre</td>
<td>30</td>
<td>2.13</td>
<td>0.97</td>
<td>15.169</td>
<td>29</td>
<td>0.01</td>
<td>0.888</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Post</td>
<td>30</td>
<td>6.53</td>
<td>1.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Originality</td>
<td>Pre</td>
<td>30</td>
<td>2.73</td>
<td>1.34</td>
<td>12.757</td>
<td>29</td>
<td>0.01</td>
<td>0.849</td>
</tr>
<tr>
<td>Originality</td>
<td>Post</td>
<td>30</td>
<td>6.77</td>
<td>1.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>Pre</td>
<td>30</td>
<td>2.47</td>
<td>0.86</td>
<td>21.541</td>
<td>29</td>
<td>0.01</td>
<td>0.941</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Post</td>
<td>30</td>
<td>6.47</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluency</td>
<td>Pre</td>
<td>30</td>
<td>2.77</td>
<td>0.86</td>
<td>20.761</td>
<td>29</td>
<td>0.01</td>
<td>0.937</td>
</tr>
</tbody>
</table>

Table 5 indicates that the mean scores of the study group in the post application of the EFL creative writing skills test were higher than
their scores in the EFL creative writing skills pre-test in all sub-skills. All differences were significant at (0.001) which indicates improvement and development in the EFL creative writing skills.

To calculate the effectiveness of experimental treatment in developing creative writing skills, the Modified Blake's Gain Ratio was calculated. The result is shown in the following table:

**Table (6)**

Result of Black Modified Blake's Gain Ratio, in sub-skills for estimating the effectiveness of brainstorming and problem solving on developing sub-skills of creative writing

<table>
<thead>
<tr>
<th>Skills</th>
<th>Tribal average</th>
<th>Post average</th>
<th>Earning Degree (*)</th>
<th>Great end to the test</th>
<th>Modified Blake's Gain Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility</td>
<td>2.13</td>
<td>6.53</td>
<td>4.40</td>
<td>8</td>
<td>1.30</td>
</tr>
<tr>
<td>Originality</td>
<td>2.73</td>
<td>6.77</td>
<td>4.04</td>
<td>8</td>
<td>1.27</td>
</tr>
<tr>
<td>Accuracy</td>
<td>2.47</td>
<td>6.47</td>
<td>4.00</td>
<td>7</td>
<td>1.45</td>
</tr>
<tr>
<td>Fluency</td>
<td>2.77</td>
<td>6.77</td>
<td>4.00</td>
<td>7</td>
<td>1.52</td>
</tr>
</tbody>
</table>

The table shows the differences between the mean scores of the study group students in the pre and post applications of the sub-skills of the writing test.

**Table (7)**

Results of the t-test between the mean scores of the students of the study group in the two applications, pre and post, for the writing test as a whole

<table>
<thead>
<tr>
<th>Skills</th>
<th>Test</th>
<th>No.</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>t-value</th>
<th>DF</th>
<th>Sig</th>
<th>η2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL Creative Writing</td>
<td>Pre</td>
<td>30</td>
<td>10.10</td>
<td>2.33</td>
<td>34.708</td>
<td>29</td>
<td>0.01</td>
<td>0.976</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>30</td>
<td>26.43</td>
<td>1.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table (8)**

Black Modified Blake's Gain Ratio, in creative writing as a whole
Discussion of Results

The purpose of the present study was to develop EFL creative writing skills through using brainstorming and problem solving strategies. The findings of the present study are encouraging since they indicated that these strategies based on have a positive effect on the participants' creative writing skills.

These results could be attributed to several factors. The first factor is related to the nature of the brainstorming and problem solving, which included some aspects and tools for developing EFL creative writing skills, help students improve creative writing to the main idea, identifying specific information, identifying cohesive devices and discourse markers skills.

Brainstorming and problem solving strategies helped the students to change their concept about learning English language in general and EFL creative writing skills in particular. This helped them to turn from passive learners into active ones. In addition, it helped the researcher to turn from lecturer into monitor, guide and facilitator.

In light of the findings of the present study, the following conclusions can be imbedded: The study participants showed a great development in EFL writing and creative writing skills with their four main components; flexibility, fluency, originality and accuracy skills. In addition, the study participants' writing skills was apparently increased and they became much more motivated and encouraged to be active.

<table>
<thead>
<tr>
<th>Skills</th>
<th>Tribal average</th>
<th>Post average</th>
<th>Earning Degree (*)</th>
<th>Great end to the test</th>
<th>Modified Blake's Gain Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFL Creative Writing</td>
<td>10.10</td>
<td>26.43</td>
<td>16.33</td>
<td>30</td>
<td>1.36</td>
</tr>
</tbody>
</table>

(*) Gain Score = (Average Pre-Application - Average Post-Application).
classroom participants. Consequently, it can be concluded that the ALS was found to be effective in developing EFL writing among participants.

To sum up, it can be concluded that the participants’ EFL writing skills were developed as a result of receiving the brainstorming and problem solving. And consequently their EFL creative writing was increased. This means that the active learning strategy (brainstorming and problem solving) was effective in achieving the goals of the present study. The effectiveness of them may be due to depending on one of the new ways of thinking that has gained prominent importance recently. Previous research had proved that ways of thinking about ALS in general has a significant and effective role in EFL learning and teaching.

**Recommendations of the study:**

Based on the findings of the study, the following recommendations could be presented:

- Teaching should be turned from being teacher-centered to learner-centered in which learners become more involved in and responsible for their learning and become self-autonomous.
- Teaching and learning EFL writing skills through using active learning should be emphasized.
- Researchers, teachers, and students should be trained to use brainstorming & problem solving and other new strategies in general.

**Suggestions for further research:**

The following areas are suggested for further research:

1- Investigating the effectiveness of brainstorming and problem solving in developing other EFL skills among prep school students.
2- Investigating the effectiveness of brainstorming and problem solving for developing writing skills among students with special needs.
3- Comparing the effect of new active learning strategies versus traditional strategies to develop EFL writing skills.
References


Sahbaz, K. (2011). The efficiency of cluster method in improving the creative writing skill of 6th grade students of primary school. Department of Turkish Teaching, Faculty of Education, Mersin University, Mersin, Turkey.