Developing EFL Preparatory School Pupils' Process Writing Through the Cognitive Academic Language Learning Approach (CALLA)

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بحث مشتق من الرسالة الخاصة بالباحثة
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Abstract
The aim of this study was to develop some writing skills of EFL second year preparatory school pupils through the Cognitive Academic Language Learning Approach (CALLA). The researcher adopted the quasi-experimental design. The participants of the study were 80 pupils who were randomly drawn and divided into two groups: the control group (N = 40) and the experimental group (N = 40) from El-Gemeiza preparatory school for girls, Sharkia Governorate in the school year 2018/2019. The experimental group was taught through the Cognitive Academic Language Learning Approach. On the other hand, the control group received regular instruction. The instruments of the study were: a) Writing skills checklist, b) Writing test, c) Rubric for grading the writing test and d) CALLA strategies questionnaire and the strategy was taught for three months. The results indicated that there was a statistical difference between the mean scores of the experimental and that of the control group in the writing skills. It was concluded that the present study provided evidence for the effect of CALLA to develop writing skills.

Keywords: Cognitive Academic Language Learning Approach (CALLA) and process writing, Egypt.
استخدام استراتيجيات الوعي الصوتي لتنمية الطلاقة للقراءة الجهرية للغة الإنجليزية كلغة أجنبية لدى تلاميذ المرحلة الابتدائية

المستخلص

تهدف الدراسة الحالية إلى تنمية بعض مهارات كتابة اللغة الإنجليزية لدى تلاميذ الصف الثاني الاعدادي باستخدام المدخل المعرفي الاكاديمي لتعليم اللغة. استخدمت الباحثة المنهج شبه التجريبي في الدراسة. اشتملت عينة الدراسة على 80 طالبة وتم توزيعهم عشوائيا على مجموعتين ضابطتين وجريبتين بمدرسة الجميزة الاعدادية بمحافظة الشرقية للعام الدراسي 2018-2019. استخدمت الباحثة المدخل المعرفي الاكاديمي لتعليم اللغة مع المجموعة التجريبية بينما اتبعت الطريقة التقليدية مع المجموعة الضابطة. اشتملت أدوات الدراسة على (1) قائمة مهارات الكتابة، (2) اختبار مهارات الكتابة، (3) مقياس تصحيح اختبار مهارات الكتابة، (4) قائمة باستراتيجيات المدخل المعرفي الاكاديمي لتعليم اللغة. أوضحت النتائج أنه يوجد فرق دال إحصائيًا بين متوسط درجات المجموعتين التجريبية والضابطة لصالح المجموعة التجريبية وانه يوجد اثر للمدخل المعرفي الاكاديمي لتعليم اللغة في تدريس مهارات الكتابة.

الكلمات المفتاحية: المدخل المعرفي الاكاديمي لتعليم اللغة، عملية الكتابة، مصر.
Introduction

Writing is much more than putting words on paper. It is a group of forward and backward steps which makes learners think, reflect, revise, detour, start over, and repeat some steps. The job of teachers is to guide and help students through the process writing in order to help them become better writers. In order to give students the important skills, writing must be explicitly taught and given enough time so it cannot be just a few minutes here and there! Students may write quickly and freely, but they also need to be deliberate and thoughtful to produce an effective finished product.

Writing is viewed as complex consisting of various sub-skills. Harmer (2007) believed that the effective writer should have a purpose in his mind and write real message for reading. He classified the sub-skills of writing skills in terms of mechanical components of writing aspects. These include handwriting, spelling, punctuation and the construction of well-formed texts.

El-shafie (2006) stated that writing is the most difficult skill of all the language skills taught to EFL students and some sort of punishment for students. Students cannot develop their ideas when asked to write simple or compound sentences, and certain types of grammar mistakes dominate their writings (e.g. sentence structure, conjunction, tenses, adverbs, adjectives, voice, prepositions, word-order, spelling, paragraph development, vocabulary choice, and punctuation). In addition, their sentences are almost Arabic structures literary translated, their writing is unsatisfactory and poor and they are unable to express themselves in writing appropriately and correctly.

To solve most of the problems and the difficulties EFL students encounter in writing, the focus of research on writing has moved to the process approach. Richard and Rodger (2001) mentioned that teaching of writing has transferred from focusing on writing contexts to the emphasis of the process of writing. Through this approach, students are well-trained to create ideas, think of the purpose and audience and write many drafts so as to produce contexts that show their ideas. In process writing teachers give students time to try ideas of what they write in their drafts.
According to (Reimer, 2001) process writing is a road map through which students' beliefs and ideas are written from the beginning of writing to the end of the work. This map presents a structure about writing to students. Process writing is a multiple draft process which consists of creating ideas in the pre-writing stage, writing a first draft to discover meaning and student's ideas, second and third and maybe more drafts to revise ideas and the relations between those ideas. Reader's feedback on the different drafts is what guides the student throughout the writing process on to the finished product. Therefore, feedback is essential to the multiple draft process. Process writing is a resource used to teach students how to write.

Stromquist (2007) explained that writing has different stages that a learner must go through. The level of awareness regarding when and how these stages happen can differ. The specific insight that forms the basis of the writing pedagogy that goes under the name; process writing. She wrote that the arrows move in both directions from pre-writing to revising they move to indicate a dynamic course of events. Process approach gives students the chance to use the expressive writing and writing as a way for learning and thinking.

El Marsafy (2009) asserted that writing is learned by much writing. It is a recursive process in which pre-writing, writing and revision activities occur. Writing is a means of learning, developing and communication skills. It is a creative activity that can be analyzed and described. The method of evaluation determines how well written product adapts the aims of the learner to the needs of the reader. Process Writing is rewriting that consists of a series of full drafts, that early ones being to discover content, it is being to refine the way that content expressed. Errors are natural and are corrected in the final stages of writing, not to hinder fluency of thoughts. Students create meaning through writing, so, it shapes and refines thought. They discover the effective writing techniques and strategies under the supervision of the
teacher. So, it enhances invention and discovery strategies among them. The teacher role changes from an examiner or grade-giver to a facilitator who helps students recognize and work on their own strengths and weaknesses, during writing.

In addition, Kabka and Oberman (2001) and Harmer (2004) added that process writing allows students to be responsible of their own writing and learning. Therefore, this approach emphasizes skills, such as planning and drafting, more than linguistic knowledge such as grammar and text structure.

The process approach focuses on the phases a learner goes through to write a text, instead of focusing on the finished product. In the process approach, content and organization are more important than correction of grammar, spelling, vocabulary and punctuation which happens gradually while writing (Harris, Graham and Mason, 2003; and Tessema, 2005).

Taking into consideration the recursive nature of writing, several scholars differed in the number of steps/stages of the process writing and various researchers described aspects of the process writing involves five stages: pre-writing, drafting, revising, editing, and publishing.

**Characteristics of process writing:**

Abdel-Maksoud (2007), Bae (2011) and Deane (2014) indicted the following features of the process writing:

1- The process approach regards writing as a cyclical process that can be taught; emphasizes writing as a method of learning as well as communication and writer as a creative producer of texts.
2- It also gives feedback that encourages the teacher to intervene during the process of writing and help the students to make their first draft better.
3- In addition, it provides an evaluation technique that specifies to what extent a product of writing adapts the goal of the writers to the readers' needs as audience.
4- The process approach helps students to write effectively and choose their own topics which make them responsible for their own learning.

5- It shows students how to produce and link ideas; how to receive and give feedback and provides them with writing strategies that allow them discover and express their intended meanings and focus on meaning rather than on learned grammatical structures.

Brown (2005) added that the process approach is crucial in the following:

- Helping students in understanding their own composing and creative processes.
- Giving students time to write and revise.
- Getting students explore what they intend to say when they write.
- Indicating the importance of the process of revising.
- Giving feedback to students during the writing process not only on the final product.
- Encouraging feedback from both the instructor and peers.

2.1.2.3. Advantages of process writing

Caudery (1997) and Hussein (2015) highlighted the following advantages of the process approach:

1- It emphasizes the importance of purpose and audience.

2- It increases students' awareness of what goes on when they write.

3- It motivates both students and the teachers alike, facilitates instruction and practice in many cases, involves students in new situations and stimulates learning experiences such as peer feedback.

4- It focuses on content, as the teacher is interested in what students say more than the number of mistakes they make while writing.

5- It focuses attention on the student as a writer and enables the teacher and the students' peers to assist in the student-teacher-writing conferences.
6- The process approach puts the student into center of the pedagogic concern.
7- It emphasizes the importance of the skills involved in writing.
8- It recognizes that what students bring to the writing classroom contributes to the development of their writing ability.
9- It provides a flexible five-step model which allows learners to move forth and back to come up with new ideas.
10- It helps students develop their writing skills step by step where the teacher provides scaffolding and constructive feedback.

Therefore, it would be important to use new strategy instruction models in EFL teaching and learning. Among these models, Cognitive Academic Language Learning Approach (CALLA). It was developed in the United States in 1986 by Anna Uhl Chamot & J.Michael O'Malley in order to overcome the academic problems that secondary school students who were learning English as L2 were facing in their classes. Chamot & O'Malley noted that students lacked cognitive language proficiency because the academic language of schooling does not have the visual and non-verbal clues associated with non-academic or social language. The desire to overcome these problems led to the creation of this model (CALLA) (Allen, 2003; Chamot & O'Malley, 1994; and Chamot & O'Malley, 1996).

CALLA can be used at different educational levels such as colleges, universities, intensive Language programs, and foreign language programs. CALLA is an instructional model created to develop students' academic language skills in English in elementary and secondary schools. The rationale is that learning a language using learning complex cognitive skills is better than it does using learning facts, isolated pieces of information, or in meaningful texts. So students learn language through an organized way to the content area materials they need to study in their classrooms. CALLA model is implemented in approximately 30 school districts in the United States and in several
other countries. CALLA has three main components: content topics, Academic language development and learning strategies (Chamot, Barnhardt, El-Dinary & Robbins, 1999; Chamot & O'Malley 1994; Chamot & O'Malley, 1996 and Chamot & Robbins, 2005).

**According to Chamot (2005) CALLA has three types of strategies:**

1- Metacognitive strategies: which include advance organization, selective attention, self-evaluation, self-monitoring and organizational planning.

2- Cognitive strategies: such as grouping, note taking, imagery, resourcing, summarizing, deduction, auditory representation, elaboration, transfer and inference.

3- Social-affective strategies: such as questioning for clarification, cooperation and self-talk.

**Objectives of CALLA**

CALLA model principal objectives are to assist students in the following ways:

1- To value their personal prior knowledge and cultural experiences and relates this knowledge to academic learning in a new language and culture.

2- To learn the content knowledge and the language skills that are most important for their academic success.

3- To develop language awareness and critical literacy.

4- To choose and use suitable learning strategies and study skills that will develop academic knowledge and processes.

5- To develop abilities to work successfully with teachers or peers in a social context.

6- To learn through hands-on, inquiry-based, and co-operative learning tasks.

7- To increase motivation for academic learning and confidence in their ability to be successful in school.

8- To evaluate their learning and planning to become more effective and independent students (Chamot and Robbins, 2005).
Implementation procedures of the modified CALLA

O’Malley and Chamot (1990) introduced a scope and sequence framework for learning strategy instruction that should be adopted by CALLA’s teachers.

**Phase 1. Preparation:**
A teacher identifies students’ current learning strategies for familiar tasks.

**Phase 2. Presentation:**
A teacher models, names, explains new strategy; asks students if and how they have used it.

**Phase 3. Practice:**
Students practice new strategy; in subsequent strategy practice, teacher fades reminders to encourage independent strategy use.

**Phase 4. Self-evaluation:**
Students evaluate their own strategy use immediately after practice.

**Phase 5. Expansion:**
Students transfer strategies to new tasks, combine strategies into clusters, develop repertoire of preferred strategies.

According to Cary (2000) CALLA’s classes are communicative, constructivist and cooperative. CALLA draws on critical pedagogy, whole language approaches, process writing and brain-based learning strategies. The goal of CALLA is to make students use different ways to practice language and learn subjects at the same time.

The framework of CALLA emphasizes the importance of learning strategies, teaching academic language skills, scaffolding to content subjects and building background knowledge. CALLA model has an instructional design sequence to help teachers use its components and principles in planning and assessment. CALLA’s instructional design is task-based and include both teacher-directed and learner-centered activities. CALLA identifies students’ learning strategies through questionnaires and discussions about learning tasks, and the strategies used after performing a task (Chamot and O’Malley, 1994; Chamot, 2005 and Chamot, 2007).
Statement of the problem:

Based on a pilot study conducted by the researcher on a sample of (32) EFL second year preparatory school pupils at El Gemeiza preparatory school for girls on 15th of October 2016, it could be stated that the pupils had a remarkable weakness in writing skills. This was obvious in their inability to generate ideas related to the topic, provide supporting details, write the proper form of paragraphs and emails, apply correct sentence structure, use different tenses, use good range of vocabulary, use punctuation and correct word spelling. Ratio of pupils who answered the first question, related to writing a paragraph was 38%, the second question related to writing an email; it was 31% and the third question related to answering short questions, it was 27%.

So the problem of the present study could be stated in the following main question:

**What is the effectiveness of using the Cognitive Academic Language Learning Approach in developing EFL preparatory school pupils' process writing?**

This main question could be subdivided into the following questions:

1- What are the EFL writing skills needed for 2nd year preparatory school pupils?

2- To what extent do pupils assess these skills?

3- What are the strategies of the Cognitive Academic Language Learning Approach suitable for 2nd year preparatory school pupils?

4- What is the effect of the Cognitive Academic Language Learning Approach on developing the writing skills for 2nd year preparatory school pupils?

**Participants of the study**

The participants in the current study were second year preparatory school pupils who registered in the Ministry of education for the school year 2018/2019. Second year preparatory school pupils were chosen in order to develop their writing skills. The pupils were randomly divided into two groups: the experimental and the control groups (40 pupils each).
Instruments of the study

After reviewing the related literature and the previous studies related to process writing, the following instruments were designed by the researcher:

1- for the writing skills:
   a) A writing skills checklist.
   b) A writing test.
   c) A rubric for grading the writing test.

2- CALLA strategies questionnaire.

Hypotheses of the study:

1- There would be a statistically significant difference between the mean scores of the experimental group and those of the control group in the post administration of the writing test in favor of the experimental group.

2- There would be a statistically difference between the mean scores of the experimental group in their performance in the pre and the post administration of the writing test in favor of the post administration.

3- CALLA would be effective in improving the experimental group pupils' writing skills.

Study procedures:

In order to achieve the aims of the study, the following procedures were adopted:

1- Reviewing relevant literature and previous studies related to:
   a) process writing to determine the skills needed for 2nd year preparatory school pupils.
   b) Cognitive Academic Language Learning Approach to design the experiment.

2- Designing the following instruments:
   a) Writing skills questionnaire.
b) Writing test.
c) Writing skills scoring rubric.
d) CALLA strategies questionnaire.

3- Analyzing the content of the EFL syllabus of 2nd year at the preparatory stage to choose the writing topics.

4- Submitting the writing test to a jury of specialists to validate its content and modify it to reach its final form.

5- Selecting a sample of 2nd year preparatory school pupils and randomly dividing them into two groups: the experimental and the control.

6- Pre administering the writing test to both the groups.

7- Implementing the Cognitive Academic Language Learning Approach to the experimental group while the control group was taught through the traditional method.

8- Post administering the writing test to both the groups.

9- Comparing the pre and post results of both administrations to conclude the study results.

10- Analyzing the results of comparison statistically.

11- Interpreting the results and discussing them.

12- Providing conclusion, recommendations and suggestions for further research.

**Techniques of data analysis**

1- T-test was used to verify the differences between the mean scores of the experimental and the control groups performance of the pre-post administration of writing test as a whole and in each skill.

2- To test the effect of CALLA on writing skills, the following formula was calculated:

\[
\eta^2 = \frac{t^2}{t^2 + df}
\]

(Cohen, 1992)

T=t-test value df=degree of freedom
3- The following formula was used to calculate the effect size of the writing test skills as a whole and for each skill.

\[ \text{Es} = \sqrt{\frac{t^2}{1-n^2}} \]

(Cohen, 1992)

Es=D=Effect size

**Hypothesis 1**

T-test was used to verify the first hypothesis which stated that "There was a statistically significant difference between the mean scores of the experimental group and those of the control group in the post administration of the writing test in favor of the experimental group".

**Table (1): comparison between the results of the post administration of the writing test for both control and the experimental groups:**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>40</td>
<td>21.33</td>
<td>2.00</td>
<td>0.33</td>
<td>3.58</td>
<td>.0000</td>
</tr>
<tr>
<td>Control</td>
<td>40</td>
<td>19.89</td>
<td>2.02</td>
<td>0.37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that there was a statistically significant difference at 0.01 level between the attained mean score of the experimental and that of the control one in favor of the experimental group in the post administration of the writing test. The estimated t-value is (3.58). It is significant at (0.05) level in favor of the post administration of the experimental group. The mean of the experimental group in the post administration was (21.33) and that of the control group was (19.89). So the mean of the experimental group was higher than that of the control one.

Moreover, the deviation of the experimental group is higher than that of the control group. The deviation of the experimental group was (2.00) and that of the control group was (2.02).
Hypothesis 2

T-test was used to verify the second hypothesis which stated that "There was a statistically significant difference between the mean scores of the experimental group in their performance in the pre and post administrations of the writing test in favor of the post administration".

Table (2): comparing the pre and post administrations of the experimental group on the writing test:

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>T-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>40</td>
<td>9.52</td>
<td>2.48</td>
<td>0.41</td>
<td>36.250</td>
<td>0.00</td>
</tr>
<tr>
<td>Control</td>
<td>40</td>
<td>21.33</td>
<td>2.00</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (2) shows that there was a statistically significant difference between the mean score of the experimental group in the pre and post administration of the writing test. As the mean score in the pre-test was (9.52) and it rose in the post-test to become (21.33). The t-value was significant (36.250). This means that pupils writing skills were improved which can be due to CALLA.

Hypothesis 3

T-test was used to verify the third hypothesis which stated that CALLA would be effective in improving the experimental group pupils writing skills" Cohen's (1998) equation was used.

Table (3): results of Cohen's Equation-comparing the pre and post administrations of the experimental group in the writing test:

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Compared Mean</th>
<th>T-Value</th>
<th>df</th>
<th>95% Confidence interval of the Difference</th>
<th>Cohen's Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>40</td>
<td>11.81</td>
<td>36.25</td>
<td>35</td>
<td>Lower 11.14  Upper 12.47</td>
<td>11.38</td>
</tr>
<tr>
<td>Control</td>
<td>40</td>
<td>11.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \eta^2 = \frac{t^2}{\bar{t}^2 + df} \]

\[ Es=d=\sqrt{\frac{\eta^2}{1-\eta^2}} \]
As indicated in the previous table, it is obvious that the final value of Cohen’s equation for the experimental group, comparing its pre and post administrations on the writing test is (11.38). Based on that, it has been concluded that CALLA is effective in improving the pupils’ writing skills.

In the aforementioned table, Cohen's equation value is significant at 95% confidence interval of the difference between the pre and the post administration of the experimental group on the writing test.

**Interperation of results**

The results of the present study revealed that the study sample taught by CALLA shows a significant improvement on the post administration of the writing test.

The significant difference between the experimental and the control group found in the post administration of writing test is due to teaching CALLA which enhanced pupils writing skills. This supports the first hypothesis showed in table (1) in which the mean of experimental group in the post administration was (21.33) and that of the control group was (19.89) with a t-value of (3.58). So, the mean of the experimental group was higher than that of the control one.

The results of the current study revealed that the study sample (taught through CALLA) showed a significance improvement in the post administration of the writing test. The significant difference found in the post administration of writing test is due to teaching CALLA which enhances pupils' writing. This supports the second hypothesis shown in table (2) in which the mean of the pre-administration was (9.53) compared to the post administration which was (21.33) with t-value of (36.250).

The previous result showed that there is a significant differences at 0.95 between the mean scores of the study sample in their performance in the pre and post administration in developing writing skills favoring the post one.
According to the previous results, it is clear that the students were positive towards using CALLA. As shown in table (3), n2 was (0.97) and the degree of freedom was (11.38) which was more than 0.8; so the effect size was large. This ascertained that the CALLA was effective in developing pupils writing skills.

Conclusion

From the results and the discussion drawn from the present study, it can be concluded that:

Results of the study proved that CALLA is effective in developing the experimental group participants' writing skills. CALLA improved preparatory school pupils' ability to master important elements of paragraphs writing and emails. Pupils wrote more organized emails provided good introduction, supporting details and conclusion.

CALLA provided pupils with the ability to control their behavior, they were more active, aware of their thoughts process, motivated and like working in group. It proved to be effective in helping pupils improve their communication skills. Pupils gained awareness in their process writing. They are allowed to plan their writing, monitor their thoughts and evaluate their own answer to enhance writing skills. The positive feedback given by the teacher to the pupils improved their writing performance.

Recommendations

In light of the results drawn from this study, the following recommendations could be provided:

1- Teacher is advised to conduct EFL discussion groups with pupils as a way of sharing their thinking about writing work in order to enhance their understanding of what they write.

2- Teachers are recommended to play their roles as guides not the only source of information for pupils, to enable them compare, analyze and make decisions.
3- In teaching writing it is preferable for writing to adopt some of the CALLA while teaching writing to enable the pupils' reason inductively and deductively.

4- Pupils are recommended to share responsibilities in their learning by asking questions about details in writing work and give more ideas in writing.

5- Teacher is advised to undergo a good class atmosphere during writing lessons in order to grab the pupils attention and to enable them, specially the shy pupils, to express their opinion.

6- It is preferable for pupils to share information in the writing emails and paragraphs. They are studying to help them get interested in studying writing and understand them.

**Suggestions for further research**

In the light of the study findings and results, the following are suggested for further research:

1- This study has been conducted on pupils in the primary stage, secondary stage, university students and pre service teachers.

2- Further research would be needed to examine the use of CALLA in developing other language skills such as listening, reading and speaking.

3- Further research is needed to investigate the effect of CALLA on developing other writing skills (e.g. creative writing and writing performance.

4- Studies can be developed to investigate how CALLA may make use of the development of the discourse analysis skills.
References


