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## Investigating the Role of Cognitive Academic Language Learning Approach (CALLA) on EFL Preparatory School Students' Language Proficiency in Productive Skills

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### Abstract

Speaking and writing (productive skills) are problematic areas that many EFL school students suffer from. Accordingly, the current study aims at finding out the role of Cognitive Academic Language Learning Approach (CALLA) on EFL preparatory school students' language proficiency in productive skills. It is hypothesized that there are no statistically significant differences at the level of significance (0.05) in the mean language proficiency in productive skills among the mean scores of students' achievement between the experimental group taught by the Cognitive Academic

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Language Learning Approach (CALLA) and that of the control group receiving traditional instruction in language proficiency posttest. To verify the hypothesis of the study and achieve its aims, a quasi-experimental nonrandomized control group, pretest-posttest design is employed. Two groups are randomly selected from the fifth preparatory class at Amouriya Preparatory School for Girls to represent the sample of the study, comprising 60 students (30 students in each group). Both groups are subjected to the same pretest to ensure equivalence between them. Then the experimental group is taught according to the Cognitive Academic Language Learning Approach (CALLA), whereas the control group is taught according to the method stated in the *Teacher's Book*. After achieving the validity of the test, a pilot study is conducted on 25 students from the fifth preparatory class. Then both groups are subjected to the same posttest in language proficiency, focusing on productive skills. Data have been analyzed statistically. The results have shown a statistically significant difference between the experimental and control groups. In light of the obtained results, conclusions, recommendations, and suggestions for further studies are put forward.

**Key words:** Cognitive Academic Language Learning Approach, language proficiency in productive skills

## النهج المعرفي الأكاديمي اللغوي للتعلم وأثره على كفاءة طلبة الدراسة الإعدادية العراقيين

### دارسي اللغة الإنكليزية لغة أجنبية في المهارات الإنتاجية

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### المستخلص

تعد الكفاءة اللغوية في المهارات اللغوية الإنتاجية (التحدث والكتابة) من المجالات الإشكالية التي يعاني منها العديد من طلبة اللغة الإنكليزية – دارسي اللغة الإنكليزية لغة أجنبية. وعلى وفق ذلك ترمي الدراسة الحالية الى ايجاد أثر النهج المعرفي الأكاديمي اللغوي للتعلم على تحصيل الطلبة – دارسي اللغة الإنكليزية لغة أجنبية على الكفاءة اللغوية في المهارات اللغوية الإنتاجية. أفترضت الدراسة انه لا يوجد فروق ذات دلالة احصائية عند مستوى الدلالة (0,05) بين متوسطات تحصيل درجات المجموعة التجريبية التي درست على وفق النهج المعرفي الأكاديمي اللغوي للتعلم والمجموعة الضابطة التي درست على وفق الطريقة الموجودة في دليل المدرس في الاختبار البعدي للكفاءة اللغوية في المهارات اللغوية الإنتاجية. وللتحقق من فرضية الدراسة وتحقيق أهدافها، أستعمل الباحث التصميم شبه التجريبي بأختبار قبلي وبعدي ومجموعة ضابطة، وتم أختيار مجموعات البحث عشوائيا من طالبات الصف الخامس الإعدادي في اعدادية عمورية للبنات لتمثل عينة الدراسة التي مثلت 60 طالبة في مجموعتين

(30 طالبة لكل مجموعة). ثم درست المجموعة التجريبية على وفق النهج المعرفي الأكاديمي اللغوي للتعلم ودرست المجموعة الضابطة على وفق الطريقة الموجودة في دليل المدرس. وبعد التحقق من صدق الاختبار، أجريت دراسة استطلاعية على 25 طالبة من طالبات الخامس الإعدادي. ثم خضعت المجموعتين للاختبار البعدي نفسه في الكفاءة اللغوية في المهارات اللغوية الإنتاجية. وتم تحليل البيانات احصائيا. أظهرت النتائج الأحصائية للدراسة بأن الفروق بين المجموعة التجريبية والمجموعة الضابطة كانت ذات دلالة احصائية في اختبار الكفاءة اللغوية في المهارات اللغوية الإنتاجية البعدي لصالح المجموعة التجريبية. وفي ضوء النتائج التي تم التوصل إليها تم تقديم الاستنتاجات والتوصيات والمقترحات لأجراء المزيد من الدراسات.

**الكلمات المفتاحية:** منهج التعلم اللغوي الأكاديمي المعرفي، الكفاءة اللغوية في المهارات الإنتاجية

## 1. Introduction

Iraqi students encounter several problems and difficulties in learning English, which are related to the teacher, curriculum, educational environment, and the students themselves. According to the Teacher's Book English for Iraq, there are many learning strategies that students can use to learn English better, but these strategies are taught implicitly. The reason behind investigating the effect of CALLA on Iraqi preparatory school students' language proficiency in productive skills is the truth that the teaching of speaking and writing has recently been the focus of interest within both foreign and second language contexts. Judgments on the production of a learner may have consequences for the writer of the speaker. Writing and speaking are crucial in supporting other learning experiences, as a means of recording, assimilating, expressing, and exchanging ideas and opinions, and finally reformulating knowledge, and developing and working through students' own ideas. Writing and speaking may be a means of personal discovery, creativity, proficiency, and self-expression. In Iraqi, the demand for English language proficiency, particularly in speaking and writing (productive skills) has been identified due to globalization and the growing need for academic and professional competitiveness. CALLA which integrates language development with content instruction through explicit learning strategies, offers a solution for Iraq preparatory school students' limited proficiency in the area of productive skills. The study aims at finding out the effect of CALLA on Iraqi preparatory school students' language proficiency in productive skills. It is hypothesized that there are no statistically significant differences among the mean scores of students' achievement between the experimental group taught by CALLA and that of the control group taught according to the method stated in the Teacher's Book English for Iraq. The kind of the research paper is quantitative. The quasi experimental design has been applied to collect data.

## 2. Theoretical Framework

### 2.1 Cognitive Academic Language Learning Approach (CALLA)

It is an instructional model for second and foreign language learners based on cognitive learning theory and research, which integrates content with language improvement and explicit learning strategy instruction (Chamot & O'Malley, 1994). Anna Chamot and Michael O'Malley

are the designers of the CALLA model, which infuses content and language learning together in rigorous language learning environments. The CALLA model utilizes the discourse features (i.e., patterns in language) of academic texts to inform teachers' choices in language objectives (Reynolds, 2015). The goals of CALLA are for students to learn essential academic content and language, and to become independent and self-regulated learners through their mastery of a variety of learning strategies. It emphasizes that learners should mentally engage in interactive teaching-learning activities by applying prior knowledge to new problem-solving, searching for meaning in new information, engaging in in-depth thinking, and developing capabilities for regulating their own learning (Chamot & Robbins, 2006).

According to Horwitz (2020). CALLA is a widely used method for teaching language through content. It focuses on the dual nature of learning in content-based language instruction (where learners need to develop both academic concepts and academic language), and accordingly, it is based on a hybrid cognitive learning and sociocultural theory of SLA. CALLA has been designed to develop English skills through content learning and is made up of 3 components:

1. The instructional topics are chosen from major academic subjects and topics which can spark the students' interests.
2. Instruction focuses on the development of academic language literacy.
3. There is explicit instruction in both content and learning strategies. The explicit instruction in language learning strategies helps students in becoming active learners who mentally analyze and reflect on their learning (Chamot et al., 1999). Through the use of language learning strategies, students are able to learn and apply these strategies to various types of learning situations. The three types of language learning strategies include those that target metacognitive processes, those that address cognitive aspects of learning, and those that focus on social and effective skills (Chamot & O'Malley, 1994). These three components are described and explained in details in the following subsections.

O'Malley and Chamot (1990) explain that the CALLA is designed to develop the academic language skills of limited English Proficient students (LEP) in upper elementary and secondary schools, and that CALLA is intended to meet the academic needs of three types of LEP students:

1. Students who have developed social communicative skills through beginning level ESL/EFL classes or through exposure to an English-speaking environment, but have not yet developed academic language skills appropriate to their grade level.
2. Students who have acquired academic language skills in their native language and initial proficiency in English, but who need assistance in transferring concepts and skills learned in the first language to English.

3. Bilingual English-dominant students who have not yet developed academic language skills in either language.

### **2.1.1 Cognitive Theory**

Chamot (1995) interprets that CALLA is based on cognitive learning theory, which assumes that learners are mentally active participants in the learning-teaching process. The mental actions of learners are characterized by the function of using prior knowledge to solve new problems, searching for meaning in received information, engaging in higher-level thinking, and developing the ability to monitor their own learning. Aukrust (2011) notes that all processes of thought, whether conscious or unconscious, fall within the realm of cognition. These mental processes operate by manipulating information-laden mental representations, which are either retrieved from memory or constructed from sensory information. Thus, the mind can be understood as an information processor, continuously adding to its repertoire of mental representations and producing overt physical behaviors. O'Malley and Chamot (1990) clarify that an important concern of understanding of second or foreign language acquisition is the operation of transfer of both declarative and procedural knowledge from the first to the second language and the effect of cultural experiences on the development of different types of schemata, and the ease or difficulty with which a culturally influenced story grammar, event structure, or discourse organization schema may accommodate new information of this type learned in the second language. The CALLA instructional framework addresses these transfer issues, allowing us to distinguish between linguistic transfer and the elaboration of prior nonlinguistic knowledge, and teach both as important strategies that students can use to enhance their own learning.

### **2.1.2 Language Learning Strategies**

The CALLA model advocates the explicit instruction of learning strategies (Reynolds, 2015). Language learning strategies (LLS) are the mental and communicative procedures learners use in order to learn and use language (Nunan, 1999). Oxford (1990) defines LLS as "specific actions, behaviors, steps, or techniques that students use to improve their own progress in developing skills in a second or foreign language" (p. 518). Schmitt (2002) asserts that LLS are conscious and semi-conscious thoughts and behaviors used by learners with the explicit goals of improving their knowledge and understanding of a target language. Anderson (2005) agrees with Schmitt that strategies are the conscious actions that learners take to improve their language learning. Reynolds (2015) states that learning strategies are plans or procedures that learners use to acquire new knowledge or solve a learning problem, and it is a general term for a wide variety of techniques that learners employ to remember, learn, and comprehend new information.

### **2.1.3 The Components of CALLA**

The CALLA model includes three components that are topics from major content subjects, development of academic language skills, and instruction in learning strategies for both content and language (O'Malley & Chamot, 1990). Despite the fact that these three components are not separated during instruction, they are described individually before describing how they are integrated in CALLA lessons.

### **2.1.3.1 The Content-based Curriculum**

The CALLA emphasizes the use of language functionally as a tool for learning academic subject matter. Academic language skills, such as listening and reading for information, as well as speaking and writing about new knowledge, may or may not have been improved in either the first or the target language. Students may either need instruction on how to transfer previously learned language skills to English or may need to learn academic language skills for the first time (O'Malley & Chamot, 1990). The students need to concentrate on academic language that includes content, vocabulary, discourse structures of a variety of disciplines, the knowledge of the difference between social and academic language, and how each interacts with the difficulty of the task, which can help teachers plan suitable activities to develop academic language (Aukrust, 2011).

Academic language may be difficult for LEP students to acquire, depending on two dimensions that can be used to describe the language demands faced by both LEP and native English-speaking students. The first dimension concerns the context in which language tasks are placed, and the second dimension concerns the cognitive complexity of the task (Chamot et al., 2009). Language that is most comprehensible takes place in contexts rich in nonverbal and paralinguistic cues, such as concrete objects, gestures, facial expressions, visual aids, and vocal intonation and stress markings, whereas language is least comprehensible when these context clues have been reduced. Concerning task complexity, when the cognitive demands of a task are high, comprehension is more difficult (O'Malley & Chamot, 1990). Language tasks, such as learning concrete vocabulary, following oral directions, and engaging in classroom discussions about topics related to the students' own experiences, are perceived as having low cognitive demands. In contrast, tasks such as acquiring new information through reading and listening, or speaking and writing about academic topics, are considered to have high cognitive demand (Chamot et al., 2009). Both contextualized and decontextualized language are present in a typical classroom where teachers are aware that not all of class time is spent on cognitively demanding tasks (Horwitz, 2020).

O'Malley and Chamot (1990) explain that context-reduced language is generally associated with literacy skills, but oral language can also vary along the context-embedded to content-reduced continuum. LEP students can begin improving their academic language skills in English through cognitively demanding activities that provide contextual support to enhance comprehension. Content-based language activities provide opportunities for LEP students to develop the academic



language proficiency in English that will help them be more successful in mainstream classrooms. Horwitz (2020) demonstrates that CALLA teachers assist this development by including in their classes materials and concepts drawn from the content areas. CALLA teachers conduct classes in the target language, ensuring that both the content and language can be comprehensible to students. In CALLA, academic language is developed through a whole language approach, in which all language skills are applied and integrated for all content areas of the curriculum.

### **2.1.3.2 Academic Language Development**

The CALLA emphasizes the use of language functionally as a tool for learning academic subject matter. Academic language skills, such as listening and reading for information, as well as speaking and writing about new knowledge, may or may not have been improved in either the first or the target language. Students may either need instruction on how to transfer previously learned language skills to English or may need to learn academic language skills for the first time (O'Malley & Chamot, 1990). The students need to concentrate on academic language, which includes content, vocabulary, and discourse structures from a variety of disciplines. Additionally, they should be aware of the differences between social and academic language, as well as how each interacts with the difficulty of the task. This knowledge can help teachers plan suitable activities to develop academic language (Aukrust, 2011).

Academic language may be difficult for LEP students to acquire, depending on two dimensions that can be used to describe the language demands faced by both LEP and native English-speaking students. The first dimension concerns the context in which language tasks are situated, and the second dimension concerns the cognitive complexity of the task (Chamot et al., 2009). Most comprehensible language occurs in contexts rich in nonverbal and paralinguistic cues, such as concrete objects, gestures, facial expressions, visual aids, and vocal intonation and stress markings. Conversely, language is least comprehensible when these context clues have been reduced. Concerning task complexity, when the cognitive demands of a task are high, comprehension is more difficult (O'Malley & Chamot, 1990). Language tasks, such as learning concrete vocabulary, following oral directions, and engaging in classroom discussions about topics related to the students' own experiences, are perceived as having low cognitive demands. In contrast, tasks such as acquiring new information through reading and listening, or speaking and writing about academic topics, are considered to have high cognitive demand (Chamot et al., 2009). Both contextualized and decontextualized language are present in a typical classroom where teachers are aware that not all of class time is spent on cognitively demanding tasks (Horwitz, 2020).

### **2.1.3.3 Learning Strategies Instruction**

The third and central component in the CALLA model is instruction in learning strategies. According to O'Malley and Chamot (1990), the use of learning strategy instruction as a methodological approach in CALLA is based on four important propositions:

1. Mentally active learners tend to be better learners. Students who can organize new information and relate it to existing knowledge have more cognitive linkages to aid comprehension and recall than those who approach each new task as something to be memorized through rote learning.
2. Strategies can be taught. Students who are taught to use strategies and practice using them can learn more effectively than students who have had no experience with learning strategies.
3. Learning strategies transfer to new tasks. Once students have become accustomed to using learning strategies, they will apply them to new tasks that are similar to the learning activities on which they have been trained.
4. Academic language learning is more effective when combined with effective learning strategies.

The CALLA model suggests that in the explicit instruction of learning strategies, teachers should approach the instruction through the preparation of the strategy, providing practice opportunities, evaluating students' abilities to utilize the strategy, and expanding its application (Reynolds, 2015). These five stages are explained and described in the following subsections. Chamot et al (2009) point out that good language learners employ a variety of learning strategies (LS) to assist them in understanding and remembering new information. In contrast, less effective learners have fewer strategies and apply them infrequently or inappropriately.

Based on what O'Malley (1985) and Chamot and O'Malley (1987) propose, LS can be classified into three types:

- Metacognitive strategies, which involve executive processes in planning for learning, monitoring one's comprehension and production, and evaluating how well one achieves a learning objective. Beyer (1987) defines metacognitive strategies with three processes that are planning, monitoring, and evaluation.
- Cognitive strategies, in which the learner interacts with the material to be learned by manipulating it mentally (as in making mental images, or elaborating on previously acquired concepts or skills) or physically (as in grouping items to be learned in meaningful categories, or taking notes on important information to be remembered) (O'Malley & Chamot, 1990).
- Social/affective strategies, in which the student either interacts with another person in order to help learning, as in cooperation or asking questions for classification, or uses some affective control to aid a learning task (Reynolds, 2015). Table 1 describes LS taught in the CALLA model.



**Table 1**

*Learning Strategies Taught in the CALLA*

<b>Metacognitive Strategies</b>	
Advance organization	Previewing the main ideas and concepts of the material to be learned, often by skimming the text for the organizing principle.
Advance preparation	Rehearsing the language needed for an oral or written task.
Organizational planning	Planning the parts, sequence, and main ideas to be expressed orally or in writing.
Selective attention	Attending to or scanning key words, phrases, linguistic markers, sentences, or types of information.
Self-monitoring	Checking one's comprehension during listening or reading, or checking one's oral or written production while it is taking place.
Self-evaluation	Judging how well one has accomplished a learning task.
Self-management	Seeking or arranging the conditions that help one learn, such as finding opportunities for additional language or content input and practice.
<b>Cognitive Strategies</b>	
Resourcing	Using reference materials such as dictionaries, encyclopedias, or textbooks.
Grouping	Classifying words, terminology, numbers, or concepts according to their attributes.
Note taking	Writing down key words and concepts in abbreviated verbal, graphic, or numerical form.
Summarizing	Making a mental or written summary of information gained through listening or reading.

Deduction	Applying rules to understand or produce language or solve problems.
Imagery	Using visual images (either mental or actual) to understand and remember new information of a problem.
Auditory representation	Playing in back of one's mind the sound of a word, phrase, or fact in order to assist comprehension and recall.
Elaboration	Relating new information to prior knowledge, relating different parts of new information to each other, or making meaningful personal associations with the new information.
Transfer	Using what is already known about language to assist comprehension or production.
Inferencing	Using information in the text to guess the meanings of new items, predict outcomes, or complete missing parts.
Social and Affective Strategies	
Questioning for clarification	Eliciting from a teacher or peer additional explanation, rephrasing, examples, or verification.
Cooperation	Working together with peers to solve a problem, pool information, check a learning task, or get feedback on oral or written performance.
Self-talk	Reducing anxiety by using mental techniques that make one feel competent to do the learning task.

#### **2.1.4 CALLA Lesson Plan Model**

The CALLA lesson plan framework incorporates learning strategy instruction, content area topics, and language development activities. Learning strategy instruction is both direct and embedded. In a CALLA lesson, new learning strategies are introduced and familiar ones are practiced. (Chamot and O'Malley, 1994). To implement the CALLA model, a teacher could start by evaluating students' background knowledge on the content and language objectives. The teacher would identify what each student might know about the topic, and students' strengths and needs in speaking, listening, reading, writing, grammar, and vocabulary. Based on this needs analysis, the

teacher would map out reasonable content, language, and language strategy objectives for the lesson and identify materials that could support the learners' comprehension. In theory, all three types of objectives would overlap and enhance the others (Reynolds, 2015).

CALLA lesson involves both teacher-directed and learner-centered activities. Three types of objectives are specified: content objectives, language objectives, and learning strategies objectives. Each CALLA lesson is divided into five phases: preparation, presentation, practice, evaluation, and expansion activities. These phases are often recursive, in that the teacher may need to revisit earlier phases to clarify or provide additional instruction (O'Malley & Chamot, 1990).

The following description of each phase indicates how content topics, academic language skills, and learning strategies can be developed in a CALLA lesson:

### **1. Preparation**

In the preparation phase of the lesson, the teacher finds out, usually through brainstorming, what students already know about the concepts in the subject area to be presented and practiced, what gaps in prior knowledge should be addressed, and how students have been taught to approach a particular kind of learning activity or content area (Chamot & O'Malley, 1994). The LS most commonly taught and practiced in this phase are elaboration (students recall prior knowledge) and advanced organization (students focus on key vocabulary and concepts to be introduced in the lesson). To summarize, the preparation phase aims to develop students' awareness through a range of activities (Reynolds, 2015).

### **2. Presentation**

In the presentation phase of the lesson, new information is presented and explained explicitly to students in English that is supported by contextual clues, such as demonstrations and visuals. CALLA teachers ensure that students comprehend the new information presented so that they can practice it meaningfully in the next stage of the lesson (Chamot et al., 2009). LS skills expected to be taught and practiced in this phase are selective attention while reading a text or listening, self-monitoring (checking one's level of comprehension), guessing meaning from context, elaboration (relating new information to prior knowledge), and questioning for clarification (Horwitz, 2020).

### **3. Practice**

The practice phase of the lesson is learner-centered, as students engage in activities to reinforce the new information they have been exposed to during the presentation phase (O'Malley & Chamot, 1990). One of the important elements of this phase is that it is integrated into regular classwork, allowing students to make a connection between the new strategy and authentic tasks

they need to accomplish (Chamot et al., 1999). The teacher acts as a facilitator in helping students assimilate the new information and apply it in various ways. The CALLA teachers need to promote higher-order thinking skills by using a variety of activities, such as cooperative learning, process writing, and inquiry-based approaches. The students apply language and content learning strategies (Horwitz, 2020). The LS practiced in this phase of the CALLA lesson are self-monitoring (students check their language production), organizational planning (planning how to develop an oral or written report or composition), resourcing (using reference materials), grouping (classifying concepts and events), summarizing, deduction (using a rule to understand or produce language or to solve a problem), imagery (making sketches, diagrams, charts), elaboration, inferencing, cooperation (working with peers) and questioning for clarification (O'Malley & Chamot, 1990).

#### **4. Evaluation**

In the evaluation phase of the lesson, students check the degree of their performance so that they can get an understanding of what they have learned and any areas they need to review. In this phase, students learn to plan, monitor, and evaluate the effectiveness of their strategy applications independently (Chamot, 1998). Evaluation activities can be individual, cooperative, or teacher-directed. LS used in the evaluation phase of a CALLA lesson are self-evaluation, elaboration, questioning for clarification, cooperation, and self-talk (Chamot, 2009).

#### **5. Expansion**

In the expansion phase of the lesson, students are encouraged to apply and think about the new concept, skills and strategies they have learned, integrating them into their existing knowledge frameworks, make real world applications, and continue to develop academic language (Reynolds, 2015). This phase provides an opportunity to exercise higher-order thinking skills, such as inferring new applications of a concept and evaluating the importance of a concept or new skill (Chamot & Robbins, 2005).

### **2.2 Language Proficiency in Productive Skills**

Language proficiency is considered as the learning outcome in which teachers, administrators, curriculum developers, test constructors, researchers, and students are all interested. Proficiency can be viewed as a goal and thus can be defined in terms of objectives or standards. These can then serve as criteria by which to assess proficiency as an empirical fact, that is, the actual performance of given individual learners or groups of learners (Stern, 1983). Nunan (1999) defines language proficiency as the person's general language ability, whereas it is described by Chambers (2007) as the ability to communicate in a foreign language. Thus, it can be described as the ability to comprehend spoken and written English.

Linguists often describe language proficiency in terms of performance across the fundamental properties of language, including phonology, morphology, syntax, semantics, and

pragmatics, whereas psycholinguists tend to focus on how one gains proficiency in a foreign language, how, from a cognitive perspective, proficiency in one language affects proficiency in an additional language, and the amount of time is needed to gain language proficiency in a second language (Banks, 2012). It should be noted that the term 'language proficiency' can be used to refer to overall language proficiency, as defined by Hulstijn (2010, 2011), and can also be applied to a specific component (e.g., speaking proficiency). The term 'language proficiency' is used in this study to refer to the students' language achievement in specific components, specifically speaking and writing, as productive skills.

### **2.2.1 Approaches to Language Proficiency**

According to Stern (1983), four approaches to language proficiency can be distinguished, including theoretical conceptions, rating scales, standardized tests, and interlanguage studies. These form a continuum ranging from theoretically based to increasingly empirically based schemes. Carrasquillo (1994) explains that Oller has opted for a single concept expression of proficiency that is expectancy grammar, whereas Cummins has recognized a twofold division between a more academic and a more communicative component. Cummins (1981) views language proficiency as the ability to use language for both academic purposes and basic communicative tasks. He emphasizes that there is a strong relationship between language proficiency and academic/cognitive variables across the four language skills of listening, speaking, reading and writing. Thus, two major dimensions of language has been seen, a) communicative language skills, and b) academic language skills.

Canale and Swain's (1980) division of proficiency into linguistic, sociolinguistic, and strategic competence is a threefold classification. A fourfold interpretation is also implicit in the traditional division of proficiency into listening, speaking, reading, and writing. The Council of Europe Inventories represent a multifaceted interpretation of proficiency, combining roles, settings, topics, functions, and notions. In contrast, Carroll's analysis of proficiency relates four behavioral categories to three or more linguistic categories (Stern, 1983). To sum up, the concept of language proficiency has not yet found a completely satisfactory expression.

### **2.2.2 Assessment of Language Proficiency**

The area of assessment in second and foreign language learning, especially for limited English and non-native English speakers, plays a crucial role in determining students' future. Assessment data can be gathered through the following resources:

1. School records: referral forms, cumulative record folders, previous test records, and students' work folder containing samples of class-work and homework.
2. Interviews.

3. Observations.
4. Informal instruments: such as checklists, rating scales, language samples, criteria reference tests, and curriculum-based assessment experiences.
5. Standardized tests (Carrasquillo, 1994).

Stern (1991) argues that second or foreign language proficiency ranges from zero to full bilingual proficiency. It is possible to define stages or levels of proficiency which are appropriate for specified purposes. One of the best known rating scales of this kind is that of the U.S. Foreign Service Institute and the Defense Language Institute, and the so called FSL Language Proficiency Ratings, which distinguish five stages of proficiency that are 1. elementary proficiency, 2. limited working proficiency, 3. minimum professional proficiency, 4. full professional proficiency, and 5. native proficiency. Saville-Troike and Barto (2016) point out that rating scales are commonly divided in terms of communicative skills into listening, speaking, reading, and writing, and they achieve two functions. Firstly, they indicate standards expected for given purposes. For example, for certain government positions, such as the diplomatic service, standards of speaking, reading, or writing by reference to a rating scale can be specified. Secondly, rating scales can be used as descriptions or analyses of levels reached by second or foreign language learners. Learners themselves can also use them for self-assessment of their own proficiency.

Language proficiency can also be measured through standardized tests (Stern, 1983). Language tests are generally used for diagnosis, placement, analysis of achievement, and to measure proficiency in the target language. Typically, standardized assessment tools are widely used throughout the educational programme. At the beginning of the instructional programme, they are utilized to establish readiness during the students' experience with the target language to determine progress, and at the end of instruction to measure the effectiveness of the instruction (Carrasquillo et al., 1994). Standardized language tests imply a conception of proficiency which has a specific empirical basis in the fact that they reflect what learners at school or university are expected to be able to do, and these language tests represent what is taught in classrooms (Stern, 1983). Language tests typically assess the aspects of proficiency that can be taught as academic skills, such as the grammar and vocabulary of a language. In other words, language proficiency tests can be able to measure certain aspects of a foreign language proficiency in certain language skills (Porter-Szucs et al., 2025).

### **2.2.3 Productive Skills**

Some instances of language use may draw primarily upon a single skill, such as reading an article or listening to a song, yet the majority of communicative situations require language users to employ multiple skills and to integrate various types of knowledge into the communication task (Norris et al., 2017). Second/foreign language educators traditionally distinguish between four basic language skills that are listening, speaking, reading, and writing. These language skills are



related to one another by two underlying parameters: mode of communication (i.e., literacy vs. oracy) and direction of communication (i.e., interpreting vs. expressing or producing). For example, speaking is considered an oral, productive skill. However, that single skill still reflects a vast potential domain of ability: speaking to a friend in a café is different from speaking to a large audience when giving a lecture (VanPatten, 2013). Language is essentially a set of skills. A skill can be described as the ability to do something well. When explaining how words are used, teachers often relate to the four skills of listening, speaking, reading, and writing (Harmer, 2007). The four skills are related in complementary ways. Both listening and reading are receptive skills\_ modes of understanding. Speaking and writing are productive skills. Thus, the four basic skills are related to each other by virtue of both the mode of communication (oral or written) and the direction of communication\_ either receiving or producing messages (Powers, 2010).

## **1. Speaking**

Speaking skill is a fundamental ability for a learner's progress. Learners assess their language learning achievement based on how much they believe their spoken language ability has improved, ranging from simple conversations to formal public speaking (Wilson, 1997). The ability to function in another language is generally characterized by the ability to speak that language. When someone asks, "Do you know another language?" they mainly mean "Can you speak the language?" (Nunan, 1999). The ability to speak a foreign language is synonymous with knowing that language since speech is the most basic means of human communication. Thus, speaking in a second or foreign language is often viewed as the most demanding of the four skills (Celce-Murcia, 2001). Speaking is such a fundamental part of daily life that it is often taken for granted. However, learning to speak a foreign language involves developing nuanced and detailed knowledge about when, how, and why to communicate, as well as complex skills for producing and managing interactions, such as asking a question or obtaining a turn (Schmitt & Rogers, 2020).

## **2. Writing**

Producing a coherent, fluent, extended piece of writing is probably the most challenging thing to do in a foreign language. It is something most native speakers may not master, and absolutely for foreign language learners, the challenges are enormous (Nunan, 1999). The skill of writing holds a special status within the communicative framework of language teaching; it is through writing that a person can convey many different messages to a close or distant, known or unknown reader. Such communication is crucial in the modern world, whether the interaction takes the form of traditional paper-and-pencil writing or the most technologically advanced electronic methods (Celce-Murcia, 2001). Writing is defined by Richards and Schmitt (2002) as the procedures that follow a series of complex processes, including planning, drafting, reviewing, and revising. Hyland (2003) views writing as a sequence of processes whereby a person selects, develops, arranges, and expresses ideas in units of discourse.

### **3. Methodology**

In order to fulfill the primary goal of this study, to find out whether the preparatory school students' language proficiency in productive skills taught by the Cognitive Academic Language Learning Approach (CALLA), will equal or transcend that of students' taught via the method stated in the *Teacher's Book*, A quasi-experimental control group, pretest- posttest design is employed to investigate that point.

#### **3.1 Population and Sample of the Study**

The population of this study comprises all female fifth-grade EFL preparatory school students in Samarra city, Salahaddin Governorate, during the 2023-2024 academic year. The total number of population is (482) students. Students in the fifth preparatory grade at Amouriya Preparatory School for Girls are selected to represent the sample of the study. The total number of students in the sample is (60) after excluding the repeaters in each section. Equivalence between groups is the essence of the experimental method. Without equivalence, it is impossible to unambiguously evaluate the effect of the independent variable. Therefore, the researcher is keen to establish equivalence between the two research groups (experimental and control) before starting the research experiment and the actual teaching. As a result, the researcher has ensured equivalence in the following variables to avoid affecting the integrity of the experiment and the accuracy of its results:

1. Chronological age calculated in months.
2. The father's academic attainment.
3. The mother's academic attainment.
4. Pre-test of language proficiency in productive skills.
5. Students' previous scores in English.

#### **3.2 Identifying the Behavioral Objectives**

The behavioral objectives of the textbook *English for Iraq* for the 5<sup>th</sup> preparatory stage, Student's Book and Activity Book, have been prepared after making a content analysis of twenty five speaking and writing activities in units 5, 6, 7, and 8, which have been taught by the researcher. The identification of these behavioral objectives depends on Bloom's Taxonomy (revised version, 2001), which includes the following categories: remember, apply, analyze, evaluate, and create.

#### **3.3 Construction of the Posttest**

The researcher conducted an achievement test on the subject matter, which was determined at the beginning of this study, to measure the students' progress at the end of the course and to assess what the students had gained from the application of CALLA. The test consists of two parts, the speaking part and the writing part. The first part is the speaking component, which consists of an interview. A structured interview has been constructed by the researcher herself in order to assess students' level of speaking performance. Fulcher (2010) claims that the most common format of testing speaking is the interview, in which the test takers converse with an interviewer, and their performance is evaluated. Accordingly, interview topics have been selected from the units that have been taught during the experiment. The interview consists of five tasks. The first task is an intensive speaking task, dialogue completion. In the second task, students are asked general questions about various topics related to units 5, 6, 7, and 8 taught by the researcher. It is a responsive speaking task. In task three, students are given an argument and expected to express their opinions about it. The kind of speaking task is responsive. Task 4 is a picture-cued extensive speaking task in which students are given a picture and asked to discuss and describe it in detail. The last task is the closing part of the interview. This task is to round off the interview.

The second part is the writing part. This part consists of two questions. The first question asks students to write a composition of at least 100 words. This composition is unguided. In the second question, students are asked to write an essay of approximately 200 words, accompanied by a list of guided items. The entire test has been scored out of (100) marks. The test consists of two parts: the speaking part and the writing part. (50) marks are allotted for every part. The speaking part is a structured interview that consists of five tasks. (10) marks are allotted for every task. Evaluating the performance of the students' responses to each item of the speaking part of the test is not easy. Thus, this part is scored according to a scoring scheme adopted from Brown (2001). It is modified by the researcher according to the jury members' suggestions. The scoring scheme comprises five components for evaluating students' answers. The highest score of this part is (50), and the lowest score is (5). The second part is writing. (50) marks are given for this part, which consists of two questions. The first, which asks the students to write a composition, is given (25) marks. The second question, which is writing an essay, is allotted (25) marks. This part is scored according to a scoring scheme adopted from Brown (2007), which has been modified by the researcher in response to the jurors' suggestions. This scoring scheme consists of five components; each criterion is scored out of (5). The highest score given to each question is (25), while the lowest score is (5). The total score given to students in this part ranges from (5) to (50). Perkins (1983) notes that the purpose of employing such an analytical scoring scheme is to achieve objectivity and provide more useful diagnostic information about students' writing abilities.

### **3.4 Test Validity**

Validity is considered the most important psychometric characteristic, as it is an indicator of the ability of the measures to measure what it is prepared to measure (Harrison, 1983). It is the

degree to which a test measures the purpose for which it is intended to measure and how it can be applied successfully (Richards & Schmidt, 2013). The validity of the language proficiency in the productive skills test is achieved by content validity, face validity, and construct validity.

### **3.5 Test Reliability**

Reliability refers to the consistency of test results, specifically the precision of test scores (Douglas, 2010). The researcher has established the reliability of the test by adopting inter-rater reliability, which assesses the reliability of the scoring, as the estimate or correction is a potential source of errors that can affect the accuracy of the measurement.

### **3.6 Administration of the Test**

At the end of the experiment, both the control and experimental groups are subjected to the same refined version of the test as a posttest. The test was administered on the 22<sup>nd</sup> of April, 2024. The researcher has distributed the test papers to the examinees and asked them to read the instructions for the questions and state their responses within the limited time. At the end of the test, the researcher collected the examinees' papers in order to be scored later. The interview was administered on April 22<sup>nd</sup> at Amouriya Preparatory School for Girls, with the assistance of two English teachers.

## **4. Analysis of the Results**

After scoring the posttest, the results have been analyzed statistically to find out if there are any statistically significant differences among the mean scores of the experimental group, which is taught according to CALLA, and the control group, which is taught according to the method stated in the Teacher's Book for the 5<sup>th</sup> preparatory class. The statistical results show that the mean scores of the experimental group are (73. 300) with a standard deviation (16. 480), whereas the mean scores of the control group are (38. 867) with a standard deviation (13. 653).

The t-test formula for two independent samples has been used in order to find out whether there is a significant difference between the mean scores of both research groups or not. The computed 't' value, which is (8.813), has been compared with the tabulated 't' value, which is (2.000) at a significance level of (0.05) and a degree of freedom (58). This comparison indicates that since the computed 't' value is higher than the tabulated 't' value, there are statistically significant differences between the experimental group which is taught by CALLA and the control group which is taught according to the method stated in the Teacher's Book, as shown in Table 2. Thus, the hypothesis which states that "There are no statistically significant differences at the level

of significance (0.05) in the mean language proficiency in productive skills among the mean scores of students' achievement between the experimental group taught by CALLA and that of the control group taught according to the method stated in the Teacher's Book in language proficiency in productive skills posttest", has been rejected.

**Table 2**

*The Mean, Standard Deviation and ' T ' Value of the LLPS Posttest for the Two Research Groups*

Group	N.	Mean	Standard Deviation	Variance	t-test		Degree of Freedom	Level of Significance
					Compute d	Tabulate d		
Experimental	30	73.300	16.480	271.590	8.813	2.000	58	0.05
Control	30	38.867	13.653	186.404				

The statistical analysis of the obtained results of the current study points out the positive effect of CALLA on EFL preparatory school students' language proficiency in productive skills. Students taught according to CALLA perform better than students in the control group who have been taught according to the method stated in the Teacher's Book. Thus, it is possible to say that CALLA is effective. These results may be due to the fact that CALLA aids the students to acquire language skills in a more contextualized manner by putting emphasis on academic language and integrating it with cognitive strategies. Thus, this can lead to better performance in productive skills, speaking, and writing as students become more adept at using language effectively in various academic settings.

## **5. Conclusion**

In light of the obtained results, the following conclusions have been drawn:

- 1- CALLA has a positive effect on Iraqi preparatory school students' language proficiency in productive skills.
- 2- The integration of cognitive strategies fosters the students' innovative thinking.

- 3- The implementation of CALLA has facilitated more effective communication and expression of ideas, resulting in improvement in students' language proficiency in speaking and writing.
- 4- Employing cognitive and metacognitive strategies for learning has helped the students to increase their language acquisition and has improved their abilities to plan and execute academic tasks effectively.
- 5- The relevance of language skills to academic success encourages students to participate actively and take ownership of their learning process. This has positively influenced the students' motivation and engagement in learning.
- 6- The results underscore the adaptability of CALLA to the Iraqi educational context. Its focus on academic language and cognitive skills makes it particularly relevant for students facing academic challenges in learning a foreign language.
- 7- The findings suggest that incorporating CALLA into English language curricula can lead to more effective language instruction.

## **Appendix**

### **Language Proficiency in Productive Skills Posttest**

Language proficiency in productive skills posttest consists of two parts, speaking part and writing part. The researcher has constructed all the items of the test by herself.

#### Speaking Part ( Interview )

- All students are interviewed at Amouriya Preparatory School for girls / Samarra.
- All tasks are assessed.
- The researcher interviews the students.
- The assessor does not take part in the interview.
- The researcher ( the interlocutor ) and the assessor assess the performance of students together using the criteria of pronunciation, fluency, vocabulary, grammar and discourse features.
- Total: 50 marks.

Instructions and guidelines:

- Do all the tasks orally.



- Don't write anything while doing the speaking part of the test.

- Finish each task within the given time for each one.

Task 1 ( It lasts for 1 minute ) ( 10 marks )

This task assesses the students' ability to use social greetings, to provide information about themselves. The examiner's main aim is to help the students to relax. This is intensive speaking task, dialogue completion.

Item ( Teacher to Student )

T: Good morning / Good afternoon / Hello.

S: \_\_\_\_\_

T: What is your name?

S: My name is \_\_\_\_\_

T: How old are you?

S: \_\_\_\_\_

T: How are you today?

S: \_\_\_\_\_

Task 2 ( It lasts for 2 minutes ) ( 10 marks )

The students are asked general questions about different topics related to the textbook English For Iraq / 5th Preparatory Class such as food , technology, media, education, relationships, hobbies, weekends, etc. The kind of this speaking task is responsive.

Item

- Do you use the Internet? Why/ why not?

- What is the recipe for making a cake?

- What kind of films do you like?

- What sort of things do you do in your spare time?

- In what ways do you think you will use English?

Task 3 ( It lasts for 3 minutes ) ( 10 marks )

In this task, each student is given a slip of paper with an argument and expected to give opinions about it. It is responsive speaking task. Students are not prompted even if they cannot speak at all.

Item

Teacher to Student: You are going to give your opinion about what is written in the paper.

You will talk for 2 minutes. Here is your topic:

Fast food has many disadvantages. What do you think? What can we do to reduce this problem?

Now you can start

Task 4: ( It lasts for 3 minutes ) ( 10 marks )

In this task, each student is given a picture to talk about it and describe it. This is a picture-cued extensive speaking task.

Item

Look at the picture and then describe it.

Task 5 ( It lasts 1 minute ) ( 10 marks )

This is the closing part of the interview. The aim behind this task is to round off the interview. It includes using special formulas, saying farewell and thanking.

Item ( Teacher to Student )

T: Thank you very much for answering my questions.

S: \_\_\_\_\_

T: How do you feel about today's experience?

S: \_\_\_\_\_

T: Do you mind if you go back again to the same experience in the future?

S: \_\_\_\_\_

T: Do you have anything to say?

S: \_\_\_\_\_

T: Goodbye.

S: Goodbye.

### Writing Part

- Total: 50 marks

- Time: 40 minutes

- Note: Answer all the questions

- The researcher assesses the students' performance in writing using the criteria of content, organization, discourse, syntax, vocabulary, and mechanics.

Task 1 ( 25 marks )

Write a composition of your favourite TV show in about 100 words.

Task 2 ( 25 marks )

Write an essay about your kind of food. The essay should be about 180 words. Your essay should have the following information:

- Introduction to the favourite food.
- Describing the appearance, smell, taste and the recipe.
- Is your food healthy or unhealthy?
- Do you try to develop healthy habits of eating

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