

## *The Effect of Metacognitive Strategies on the Writing Performance of Iraqi Advanced EFL Learners*

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### **Abstract:**

This study aims to provide an in-depth sight to the way learners can promote their learning process in which the learner's awareness and the proficient use of metacognitive strategies may enhance the ability of the leaners to control and follow up their learning process more effectively. For this purpose, a mixed approach is designed for data collection. The questionnaire is used to measure two main categories; the metacognitive awareness and metacognitive strategies(regulation). It is followed by an experimental study including a pre-test that is conducted to examine the actual performance of the students in writing before the training course. The training model of the strategic instruction is the Cognitive Academic Language Learning Approach (CALLA) which is embedded with the writing course for an eight-weeks treatment course. The post-test examines the correlation between the metacognitive strategic training and the actual performance of the learners. The subjects in the study are sixty EFL Iraqi students in the third year in the department of English, College of Arts, Basra University. In terms of the results of the questionnaire, learners show a high degree of self-awareness and knowledge about metacognitive strategies. In the experiment, results show a positive correlation between the instruction and writing performance of the students in which practice is considered an essential part of the course. But language proficiency, lack of practice and motivational reflections may potentially influence writers' performance. Based on the findings of the study embedding the strategic instruction in the writing courses for EFL Iraqi learners is one of the main recommendations presented in this study.

**Keywords: Learning Strategies, Metacognition, Writing.**

## أثر استراتيجيات ما بعد الإدراك في الأداء الكتابي للمتعلّمتين العراقيتين للغة الانكليزية كلغة اجنبية في المستوى المتقدم

الباحثة

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### الملخص:-

ان البحث في العمليات الذهنية المرتبطة بالتعلم عند المتعلمين من منظور إدراكي قد يتيح فهم عملية التعلم أكثر مما يساعد في تحسين مخرجات التعلم عند المتعلمين . القرارات ، خطوات و الأفعال الذي يوظفها المتعلم بشكل واعي في المهام المطلوبة تعرف باستراتيجيات ما بعد الإدراك التي قد تساعد في أداء مستوى التعليمي للمتعلّمين. أن وعي المتعلم بقدراته و أدائه بالإضافة الى مدى استخدامه لهذه الاستراتيجيات يساعد في إدارة و متابعة عملية التعلم بشكل أكثر فاعلية في مجال اللغة عموماً و الكتابة على الخصوص . لقد صنفت استراتيجيات ما بعد الإدراك على أنها من العوامل المؤثرة في تحسين أداء المتعلمين. تهدف هذه الدراسة الى التحقق من مستوى وعي المتعلمين عن استراتيجيات ما بعد الإدراك و لاستخدام الاستراتيجيات لتعليمي اللغة الانكليزية على مستوى الجامعي، إذ اختيرت عينة الدراسة من طلاب جامعة البصرة . كلية الآداب ، قسم اللغة الانكليزية، المرحلة الثالثة. إضافة الى التقييم العام لمستوى ادراك الطلاب ، فان هذه التجربة الميدانية تبحث في تأثير التدريب على استخدام الاستراتيجيات ما بعد الإدراك عن طريق تنشيط الاستراتيجيات التي تعلمها الطلبة من قبل بالإضافة الى إعطاء مجموعة من الاستراتيجيات الجديدة في الكتابة. وقد اعتمد البحث على مجموعة من أدوات البحث منها الاستبيان والتجربة الميدانية والتي هي عبارة عن امتحان قبلي لتحديد مستوى أداء الطلاب. وفقاً لنتائج الامتحان القبلي تم تصنيف العينة الى مجموعتين ، المجموعة التجريبية و المجموعة الضابطة . وفي نهاية مدة التدريب اجري الامتحان البعدي لاختبار نتائج التدريب. اجريت ايضا المقابلة مع أفراد العينة من مجموعة التجريبية لغرض معرفة التغيير المحتمل في مستوى وعي الطلبة باستراتيجيات الكتابة .

و قد اظهرت نتائج الاستبيان ان افراد العينة يتمتعون بمستوى عال من الوعي فيما يخص تقييم قدراتهم في مهارة الكتابة و فاعلية الاستراتيجيات ، في حين اشارت نتائج الامتحان القبلي التي تبحث في تطبيق الاستراتيجيات بشكل عملي الى الضعف في توظيف هذه الاستراتيجيات بشكل فاعل. و من النتائج الملفتة للنظر في هذا البحث هو التغيير الملحوظ في أداء الطلبة بعد تلقي التدريس مكثف لمدة شهرين و بواقع ثلاث محاضرات في الأسبوع. حيث وضحت البيانات الإحصائية الفارق بين أداء مجموعة التجريبية و مجموعة الضابطة في الامتحان البعدي الذي اجري لتحقيق من فاعلية التدريب . و قد جاءت نتائج المقابلات متوافقة مع ما خرجت به الأدوات البحث الأخرى (الاستبيان و التجربة الميدانية) و اذ اظهر المشاركون في المقابلة ، مستوى ادراك جيد بخصوص الاستراتيجيات غير انهم يعززون بعض الصعوبات في الكتابة الى عوامل أخرى مثل مستوى الكفاءة في اللغة الانكليزية و عنصر الوقت و العوامل النفسية . من التوصيات التي خرجت بها الرسالة هي ضرورة التركيز على التدريب في استراتيجيات ما بعد الإدراك ضمن دروس الكتابة لأنها اثبتت فاعليتها في حال دمجت في منهج الكتابة بشكل مناسب

## 1.Introduction

The cognitive view in language learning focuses on the psychological components that determine the underlying processes in language comprehension and language production. Harrington (2002) describes cognitive science as science which tries to interpret the "internal mental representations" in charge of the higher-ordered functions such as categorization, vision, and language. The cognitive approach to Second Language Acquisition is primarily concerned with the reinforcement of intellectual processes and the cognitive skills in learning a language as well as helping learners to be effectively engaged in the learning process.

According to the cognitive approach, writing consists of a series of mental processes and mechanisms for idea organization and production. The linguistic competence is the fundamental constituent but it is shaped by cognitive operations. In this approach, the teacher motivates the logical thinking and guides the learners to elevate their self-awareness, and conscious self-evaluation in addition to communicative and linguistic considerations through the active use of learning strategies. Strategies are defined as conscious or unconscious activities, processes, procedures or actions that the learner uses to boost his/her learning. Pedagogically, activating already known strategies and teaching strategies to learners increase the opportunity for a more successful experience in language learning.

## 2.Research Questions

The present study accounts to answer the following research questions :

- 1-To what extent do Iraqi EFL learners perceive and understand the metacognitive strategies in writing?
- 2- How often do the Iraqi EFL learners use the previously known strategies in writing?

3- Does using metacognitive writing strategies enhance the writing performance of Iraqi EFL advanced learners?

4-What is the significant correlation between explicit metacognitive strategy instruction in writing and the students' writing performance?

### **3.Sampling**

The target population for this research is the EFL Iraqi learners. The sample of the population is a group of 60 EFL Iraqi students in the third year in the department of English, College of Arts, Basra University. The rationale of choosing the sample is that the students by this stage have mastered the basic components in writing in previous stages and in the third year they receive relatively intensive writing courses in which they receive two separate courses in writing; the essay writing course and research writing course.

### **4. Review of Related Studies**

Flavell, (1979)brought the term metacognition into the field of education for the first time. There are several studies that investigate the relationship between metacognition and different skills in language learning . In the domain of writing, Lv and Chen (2010) in their empirical study investigate the influence of strategy training on the writing of the vocational college students to find an appropriate teaching method. The study shows that the strategic training and language ability of the students both have a positive impact on students' writing performance. Similarly, Negretti (2012) investigates how metacognition and self-awareness changes over time among the beginning academic writers. The study focuses on effect of the perception of the student on the strategic choice and evaluation in their writing. Negretti comes to the conclusion that there is a connection between the metacognitive awareness of students with their perception. Maftoon and Seyyedrezaei (2012)

administrate a case study of a " good language learner" to identify the cognitive and metacognitive strategies used by a successful learner. The results show that the learner was highly good at using prefabricated phrases and sentences in her writing.

In the same token, Farahian (2015) argues that any research about the relation between metacognition and writing in English as a foreign language need to rely on a valid tool for measurement for assessing the metacognition. Consequently, he tried to develop a valid "Metacognitive Awareness Writing Questionnaire "( MAWQ). By the end of the study, Farahian presents a " hypothesized model " for metacognition assessment that may help EFL teachers to have a better understanding of the potentials that improve their students' writing performance.

Mekala et al. (2016) administrate a study to examine the influence of teaching metacognitive strategies in promoting writing in English with 27 Indian ESL learners. The researchers conclude that a successful implementation of metacognitive strategies results in the production of a more " comprehensive " written texts. Sabria (2016) conduct a study about the Strategy Based Instruction (SBI) in the writing skill to enable the students to find out which of the strategies are more effective and appropriate for a given task. Sabria suggests instead of giving writing assignments, language learners should acquire the knowledge, skills, and strategies required to be more responsible for their own learning. Consequently, more time and practice and reinforcement of strategies in writing in addition to the explicit training are needed to improve writing performance. Similarly, Wang and Han (2017 ) investigate the writing performance of 65 Chinese EFL learners in two argumentative writing tasks. The results in the study point out that the performance of the learners differs due to the familiarity and easiness of the writing topic in which in the less familiar and more

challenging writing task, high- performers use more planning and evaluating strategies than low-performers. As can be seen, the above-mentioned studies in the literature of strategy research in relation to writing skill emphasizes the influence of metacognitive strategies on learner's performance in writing. In like manner, the present study investigates the metacognitive knowledge and metacognitive strategy usage and their possible impact on the writing of the Iraqi EFL learners.

### **5. Language Learning Strategies**

The way in which people approach their own learning process became the main concern for many researchers such as Rubin (1975) who started questioning the behaviour of the good learner to help learners who face difficulties in language learning. O'Malley and Chamot (1990:1) refer to learning strategies as " the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information". O'Malley and Chamot (1990) classify the strategies into three main categories ; the cognitive strategies, the affective and social strategies, and metacognitive strategies. The cognitive strategies involve the manipulation and transformation of the materials. The affective and social strategies are the interaction and behavior of the learner with others in the learning environment. The metacognitive strategies entail the knowledge about learning and observing learning through :

- a. Planning including advanced organizers, directed attention, functional planning, selective attention, and self-management.
- b. Monitoring is another aspect of metacognitive strategies that controls and corrects the performance of the learner.
- c. The evaluation includes comparing the final product of the learner with the standard.



According to Oxford (1990) strategies can be divided into two general types; strategies that have a direct impact on learning such as memory strategies, cognitive strategies, and compensation strategies and the strategies with an indirect relation to the learner's performance such as the social strategies, affective strategies, and metacognitive strategies.

### **6. Metacognitive Strategies**

Different terms such as self-management, meta-learning, and meta-components are used interchangeably with the term metacognition by different researchers. The notion of "metacognition" was proposed by Flavell (1979) in the educational field. It is defined as the "cognition about cognitive phenomena," or "thinking about thinking" (Flavell, 1979, p. 906). Metacognition refers to the ability of the learner to manage, control and evaluate his/her own learning process. In other words, metacognition is a "higher-order executive skill" (O'Malley and Chamot 1990). According to Flavell (1979) metacognition mainly is composed of two main components:

1-Metacognitive knowledge ( awareness ) which refers to the learner's knowledge about his or her learning.

2-Metacognitive regulation which includes any process, action, procedure and activities that are consciously selected to improve learning outcomes.

Cognitive and metacognitive interact with each other so as most of the cognitive strategies can act as metacognitive strategies. The present study focuses on both aspects of metacognition which are cognitive knowledge and cognitive strategies because the investigation of strategies without investigation of the metacognitive states of the learner may lead to less comprehensible results. Though different skills in language learning share a

different set of strategies, the mentioned MS are the strategies that are related to writing skills and are summarized from different categories proposed by researchers.

In the writing process, the concept of knowledge plays a critical role according to Harris et al. (2010) in which it is categorized as :

- a. The person knowledge that accounts for the mindfulness of the learner about his/her abilities in learning.
- b. Task knowledge that is the knowledge of the learner about how to accomplish a task or solve a problem.
- c. The conditional or the strategic knowledge which enables the learner to determine where and why to use a particular strategy or use an appropriate alternative strategy for a specific task.

Moreover, metacognitive regulation consist of three major kills :

1-Planning that is concerned with setting goals and sourcing the strategies for a task. Resourcing ideas, retrieving, generating ideas, global planning, evaluating ideas and rehearsing ideas are the mental processes involved in planning in a pre-writing stage.

2-Monitoring that observes learning and controls performance during learning. This while-writing process entails retrieving, avoidance, elaboration, translation, making connections, local revising, hypnotizing, researching ideas, recalling, evaluating local production, monitoring local production, rehearsing structures, evaluating paragraph task, and feedback.

3-Evaluation which is the post-writing assessment of performance to cover rereading, transcribing, revising, error correction, monitoring production evaluating production and evaluating ability.



## 5. Writing As Applied Metacognition

Writing as one of the productive skills of a language consists of a network of relations among writer himself/ herself, the text, the reader of the text and the reality. Richards and Schmidt (2010: 640) define writing as " the strategies, procedures, and decision-making employed by writers as they write". Whereas writing is cognitively modeled as a " problem-solving " process by Zimmerman and Reisemberg (1997). Writing is viewed as the result of complex processes of planning, drafting, reviewing and revising so as some approaches of teaching L1 and L2 try to teach students to use these processes effectively.

Hacker et al. state that " Writing is the production of thoughts of oneself or others under the direction of one's goal-directed metacognitive monitoring, and control, and the translation of that thought into an external symbolic representation"(2009: 154). Metacognition observes and evaluates the progress of thinking and writing. Strategies such as reading, re-reading, reflecting and reviewing are classified as monitoring strategies; control and evaluation strategies of the actual production stage in writing include idea generation, word production, translation, editing, drafting, and revision. It is important to realize that writing as a meaning production process is guided by the writer's goal so as the selection of metacognitive strategies may change accordingly. Finally, the process of meaning production results in the translation of thoughts into an external symbolic representation (the text on the page ). It does not only rely on the linguistic representation only but it also needs to account for social and cultural characteristics in the external representation. It is important to realize the importance of both long-term memory and working memory ( short-term memory) in all the processes that are involved in writing. Long-term memory is where the knowledge stored ( knowledge about audience and

topics). It is flexible, changes over time and continuously interacts with external factors in one hand and with the working memory on the other hand. Glover et al.( 1990)point out that processes such as planning, translation, and reviewing are featured in short-term memory. The movement from one process to another is not inevitably sequential but the writer may move back and forth whenever it is necessary.

Hayes and Flower (1980) design a cognitive model of writing that accounts for two different sets of components involved in writing. First, the internal factors that are represented in long-term memory including knowledge of topic, knowledge of audience and stored writing plans( writing schemas). Externally, the task environment is realized in topic, audience and motivational factors. The relationship between both internal and external elements affect the wiring process.

The chief processes of writing according to this model include :

- a. Planning: the input of this process is the task environment and the long-term memory that frame the output as an abstract blueprint of writing. Planning entails a sequence of processes as generating ideas, mentally organizing the produced ideas, and goal setting. Based on the planned target idea generation and organization can be modified.
- b. Translating: the blueprint of the planning phase turns to the actual text that represents the ideas and goals.
- c. Reviewing: in this phase, the produced text is read, revised and proofread and the necessary modifications and corrections are made.
- d. Monitoring: metacognitive observation of the connection between planning, translation, and reviewing is monitoring.

Hayes ( 1996) in his review of the model ignores the external components in favour of the cognitive processes and their subcomponents. In the modified model, the focus is on the mental activities of the task especially on the long-term memory, short-term memory, and motivation. The cognitive processes are described as text interpretation, reflection, and text production.

## **6. Factors influence writing**

Deane et al.(2008 ) comment that writing proficiency is influenced not only by the mental processes involved but also by the flexibility of access to relevant knowledge (prior knowledge ) in the long-term memory. Reading also gives the opportunity for writers to know more samples of writing as it may improve the writing skill. Additionally, the automaticity of transcription either handwriting or typing can affect writing. Accordingly," inefficient transcription may function as a bottleneck, allowing fewer language representations to get transformed into words on the page" (Deane et al 2008: 8). Oxford(1990) stresses on "strategy training" in the field of L2 learning because she believes that learners cannot be "spoon-fed" but they should be active self-directed participants in learning. She argues that strategic instruction offers learners meaningful potentials for learning. O'Malley and Chamot (1990) highlight factors such as developing teacher's abilities to teach learning strategies, the instructional materials of strategies either as textbooks or embedded materials, methods of teaching that fulfill the students' needs, and the language proficiency as important aspects in teaching strategies.

Gass and Selinker(1994) consider motivation as one factor of " differential success" in learning. Dörnyei (2005:65) confirms that " It provides the primary impetus to initiate L2 learning and later the driving force to sustain the long and often tedious learning process".

Therefore, using a metacognitive process must be accompanied by a learner's "willingness, effort and persistence " rather than strategic" competence " (Zimmerman and Moylan, 2009: 300). Zimmerman and Moylan maintain that self-regulated learning needs to be enriched with motivational strategies for more efficient performance. Dörnyei (2001) confirms that teachers and educators play an essential role in creating a motivating context for learners. The appropriate behaviour of the teachers is crucial because the process cannot be successful in a " motivational vacuum " (2001:31). On the other hand, Odlin (1989) argues that learning L2 is influenced by the knowledge of any previously learned language. The potential difficulty in learning L2 can be cognitively transferred. The learner already has developed the declarative knowledge in L1 that is transformed to procedural knowledge in later stages of language learning whereas in L2 formal instruction can offer only procedural knowledge so as the declarative knowledge will develop gradually. As a result, the knowledge of L1 will play a role in learning L2 cross-linguistically.

## **7.Methodology**

A self- reported close-end questionnaire and an experimental study are two instruments for data collection in this study to measure the degree of the metacognitive knowledge of the learners in addition to the use of metacognitive strategies.

### **7.1.The questionnaire**

The questionnaire investigates the degree of knowledge of metacognitive strategies and the frequency of strategy usage by the learners to accomplish a task in writing. It explores what learners think of their own learning process, their attitude and their preference of strategies in a specific context. It is designed based on

a framework suggested by Farahian (2015) in which it is divided into two main categories; knowledge of cognition and cognitive regulation. Works such as Schraw and Dennison (1994) and the SILL ( Strategy Inventory for language learning ) of Oxford (1989) also are consulted as well. In terms of cognitive regulation, planning, monitoring, and evaluation are included. In addition to the main categories of metacognitive strategies, due to the importance of the general online strategies, part of the questionnaire is devoted to investigating the probable use of time management, the attention ( selective and general attention), avoidance strategies, asking for help and the transfer of L1. The total number is 40 items classified into self-awareness strategies : 6 items, strategic knowledge: 7 items, planning :6 items, monitoring: 4 items, revision, and evaluation: 8 items and general online strategies: 9 items. It also is piloted and examined by a jury before the administration (see Appendix A).

## **7.2.The experiment**

The experiment research used as one of the methods in this work to examine the possible associative relation between teaching strategies and the writing performance of the learners. The sample of the experiment is 60 students of the population that are assigned to two groups depending on the results of the pre-test in which the group with lower scores is assigned as the experiment group. The control group has the regular writing course but the experiment group has the additional materials of the strategic training included within the course. Both groups are pretested to test their actual performance in writing. In order to evaluate the writing performance of these two groups, the post-test is conducted to examine the students' writing performance after training. Both tests are in-class writing tests in which students were given respectively

50 minutes to plan, write and revise a piece of writing within the given time. The response format in both tests is an open-ended essay test. It gives the researcher a better understanding of the quality of the learners' production to establish a comparison between the pre and post-tests. The written products of the students are assessed based on a socio-cognitive approach for scoring that is suggested by Wier (2005). The specific purpose of the pre-tests is to measure the degree in which the students use the metacognitive strategies in processing writing in English to examine the possible result before receiving the treatment. The topic of the essay of the pre-test is " The mass media have a great influence on shaping people's ideas". The topic for the essay in the post-test is "Schools and life both give lessons. Agree or not ? " The same evaluation and scoring procedures used for both tests. The results of the tests are computed and statistically analyzed with a t-test tool to compare the relationship between the instruction and tests' results.

### 7.2.1. Strategy Training

Strategy training provides the strategic knowledge to improve the performance of the learners. The training course for strategy use was conducted in an eight-week course of 3 hours per week. In this phase, the researcher has an intervention to teach and help students to practice the strategies within the research writing course. In the current study, the training model is a "Cognitive Academic Language Learning Approach (CALLA) " that is proposed by Chamot and O'Malley ( 1987) for the first time but it is refined and reviewed continuously by O'Malley and Chamot ( 1990) till the final proposal of the model by Chamot(2005). The model is an emergence of explicit instruction, content-bond instruction and " academic language development". Application of CALLA model is useful for students of different level and because of its non-linear



characteristic, the students and teacher are able to restore the prior instructional stage (Liu, 2010). Each stage of the training is covered in different sessions including theoretical materials and sets of the exercises specified for each strategy or a set of related strategies. For the materials that are presented in the course, Olson and Land(2007) and Oxford (1990) are consulted.

The model entails six main stages as :

**Stage 1-** preparation: introducing the metacognitive strategies and identifying the already known strategies by the students. The aim is to establish a conscious meaningful connection among the mental processes, strategy usage and the learning process by the students.

**Stage2-** Presentation: more detailed explanation of the strategies is presented in this stage to include introducing different types of strategies for writing, their application, appropriateness, and modeling some strategies by examples. Students in this stage learn how to use strategies and decide which strategies are useful for a given task .

**Stage3-** Practice: the third stage concentrates on the practical side of strategy use more. In addition to practicing and review of some already known strategies, some new strategies are put into action.

**Stage 4 –** Evaluation: subsequent to practicing of the strategies the student are asked to evaluate their performance and examine the effectiveness of the strategies . Group work, pair work and individual work all can help to enhance the evaluation ability.

**Stage 5 –** expansion: to enable the learners to use the strategies skillfully they need to be able to transfer the strategy to different contexts and build up their own connections between the newly acquired strategies and previous knowledge. For this stage, the learners are given homework to write reports about subjects of the

semester of their choice or paraphrase a piece of writing as an exercise.

**Stage 6 – Assessment:** the final stage in the strategy training is the teacher's evaluation and assessment of the students' performance in writing. During the course an ongoing weekly assessment is adopted to design activities and exercises if required.

## **8.Results and discussion**

### **8.1.The questionnaire**

Investigating metacognitive awareness and cognitive regulation are realized in six main areas as self-awareness, strategic knowledge, planning, monitoring, revision, and general online strategies. The results of the questionnaire( see Appendix B) show that the participants in this study possess a high degree metacognitive awareness(items 1,4,5,7,10,18). The students can connect their experience and prior knowledge with the assigned writing task. The results also confirm the knowledge of different components of writing in addition to the linguistic and non-linguistic tools such as the cohesive devices. The category of strategic knowledge also reveals that the participants are aware of the writing strategies (items 2,3,8,20,28,29,40). Though the majority agreed that they find writing more difficult skill among other skills of language but still 43.8 % of the participants disagree and 10.4% believe that they have "no difficulty" to use writing strategies but 37.5% of the participants agree that "writing a good topic sentence "is one of the challenging factors of writing. The results demonstrate that planning (items 11,12,13,14,15,17,32) is a crucial aspect in which 47.9% agree and 27.1% strongly agree in response with item No. 12 to confirm setting goals before writing. On the other hand, only 22.9% of the students do not follow a specific order in writing and a total number of 51.1 % depending on

previously ordered ideas. Concerning the monitoring strategies (items 9,19,26,27), with item No.9, 37.5 % of the respondents agree and 10.4 % strongly agree that they observe the possible mistakes in writing. Referencing checking the organization in correspondence to the previously prepared plan, the total number of people who either agree or strongly agree that they observe their writing is 60.4 % (45.8% agree and 14.6 % disagree) with a mean of 3.56 and SD of 1.00 for item No. 19. Checking the effectiveness of the strategies and finding alternatives are reported more frequently.

The results of the items (31,33,34,35,36,37,38,39) of the revision category show that students tend to revise their work frequently in the textual level ( 52.1 % agree and 25% strongly agree with item No.31 ). It emphasizes the value of the revision in their performance. In item No. 35 in addition to linguistic features, 45.8 % of the students agree and 12.5 % strongly agree that " once I finish the essay I compare the content with an outline I prepared." In contrast, only 9 respondents ( 18.8 %) announce that they do not care about the realization of the outline.

Interestingly the item of reader consideration indicates that less attention is given to this point. Reviewing , editing and mistake correction are more habitual in comparison to general online strategies (items 6,16,21,22,23,24,25,30,32) in which the findings show less agreement among the respondents. More than half of the participants ( 43.8 % agree 27.1 % strongly agree ) concentrate on the exact set of content, organization or vocabularies. The focus on the given task show approximately different results so this time the majority ( 45.8 % with a mean of 3.35 and SD of 0.86) assert that they cannot decide if they are capable to avoid distraction during writing.

In terms of avoidance strategies, it can be seen that 62.5 % strongly agree and 27.1 % agree to practice avoidance strategy. Likewise, the overall students who claim that they do not translate their thoughts from Arabic are 29 students ( 16 strongly disagree and 13 disagree to item No.24). The mean reference is 2.56 and SD is 1.39 that indicates that the individuals use their L1 indifferently (33.3% strongly disagree and 27.1 % disagree ). Additionally, students approve that using dictionary, reading similar written samples (mean = 3.97, SD= 0.98 )and spending more time on reading can help learners to make progress in writing (( mean = 4.04, SD 0.98 in item No.6).

The focus on the textual feature, time management and the importance of reading are also confirmed. Moreover, the correspondence between the plan and the actual production and focus on a specific set of material are stressed out. In brief, it can be realized that among several areas that are investigated by the questionnaire knowledge of cognition shows more consistency in results to authenticate the mindfulness of the students about their performance in writing which is one essential factor of being an active language learner.

## 8.2.Finding of the Pre-Test

The t-test analysis of results of the pre-tests does not identify any remarkable difference between the results of the control group(CG) and the experiment group(EG). The mean of CG is 8.56 average with 3.28 standard deviation. The mean for the EG is 8.10 with a 3.00 standard deviation. In respect to this data, the group with a lower mean is assigned to the experiment group and the other group is the control group.

Table (1): The mean results of pre-test for control group and experiment group

		N	Mean	SD	d.f	t	p-value
Pre-test	CG	30	8.5667	3.28721	29	1.584	0.124
	EG		8.1000	3.00975			

### 8.3. Findings of the post-test

Regarding the results of the post-test , there is a convincing evidence to conclude that the training had a positive effect on the performance of the experiment group in which the learners receive training for practicing metacognitive strategies when they write. Notably there is a difference between both groups' performance but comparatively the experiment group achieves higher scores in the post-test. Statistically the results of the control group refer to an average mean of 9.30 with 3.59.

Table (2): The results of post-test for control group and experiment group

		N	Mean	SD	d.f	t
Post-test	CG	30	9.3000	3.59262	29	-3.631
	EG	30	11.3667	3.15664		

On the other hand, the mean of the experiment group is higher which is 11.36 with is 3.15 SD for this group . The most noteworthy conclusion to emerge from the data is that the explicit instruction of metacognitive strategies has an observable impact on the writing outcome of the students in the experiment group.

#### 8.4. Finding of Paired Samples Statistics.

It is important to establish a comparison between the paired t-test of pre-test and post-test within each group. As can be seen in the table (3), the mean of the pre-test is 8.56 and the SD is 3.28 for the control group. The average mean in the post-test for the same group turn into 9.30 and the SD =3.59. The t-value is 1.187 and the p-value is ( $p=.245 > .05$ ).

Table (3): The results of Paired Samples Statistics for control group and experiment group

		N	Mean	SD	d.f	t	p-value
Paired CG	Pre-test	30	8.5667	3.28721	29	1.187	0.245
	Post-test	30	9.3000	3.59262			
Paired EG	Pre-test	30	8.1000	3.00975	29	-4.475	0
	Post-test	30	11.3667	3.15664			



To put it differently because the p-value is bigger than the alpha value 0.05 consequently, the difference between the two tests is not statistically significant.

The comparison of the within-group results of the experiment group, shows that the average mean for the experiment group increases from 8.100 to 11.36. Similarly, the SD that is 3.00 in pre-test turns to be 3.15 in post-test. The t-value of the paired analysis is 4.475 and the p-value is ( $P=0.00<0.05$ ). On the light of the results, because the p-value is smaller than the alpha value 0.05, it is valid to account for the positive influence of the strategy training on the actual performance of the students

Comparatively, in the pre-test , the students mostly use shorter sentences and shorter paragraphs in writing. More of grammatical mistakes, spelling ,and some problems in terms of the development of the essay and arguments can be noticed as well . The review of post-test of the same group shows that the students tend to write relatively longer paragraphs, more coherent writing and make better conclusions. They also show greater progress in terms of mechanicals( spelling and punctuation) and fewer grammatical mistakes. On the other hand, a minor progress is made pertaining the development of ideas and thoughts and arguments. The tangible performance( metacognitive regulation ) show slightly non-identical results between pre-test and post-test. Practically, it is observable that the students experience some difficulties in the application of the strategies based on the results obtained from the pre-test. Whereas the succeeding strategy training shows the change in the performance of the students in which the course includes the intensive practice of strategy use.

## 9. Conclusion

A successful language learning process enables the learner to self-regulate his learning process cognitively. Metacognition is a conscious behavior which is thinking about thinking and learning. In the field of language learning and teaching, several studies exhibited the important role of metacognition in the learning process in which learners who have higher metacognitive awareness and use metacognitive strategies more frequently are more successful language learners. Having cognitive knowledge entails the self-awareness in terms of abilities and language proficiency. Additionally, the cognitive regulation is mainly concerned with three general cognitive processes in learning language planning (setting goals and resourcing ), monitoring ( observing the performance ) and evaluation (assessment of performance and product during and subsequent to the performance).

With respect to the data collected from third-year students in the department of English, College of Arts, Basra University, findings confirm the correlation between the explicit instruction of metacognitive strategies and progress in writing performance. This empirical study confirms the fact that metacognitive skill is considered as a " valuable " skill for language learners (Millis, 2016 )hence it can affect the learning outcome positively. Being active learners requires consciousness of mental processes involved in learning. In parallel with strategy instruction, a learner's attitude about strategy use is important too. Different aspects such as language proficiency, lack of practice and motivational reflections potentially influence writers' performance. Based on findings of the study embedding the strategic instruction in the writing courses for EFL Iraqi learners is highly recommended.

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## Appendix (A)

The effect of metacognitive strategies on the writing performance of Iraqi advanced EFL learners

## Metacognitive awareness writing questionnaire (MAWQ)

The information provided by you in this questionnaire will be used for research purposes only. Please complete all items and answer one option at a time. When you read the statements try to think of what you generally do when writing. Please tick one of the boxes which best suits you. The options are :

Strongly disagree = 1   disagree = 2   unsure = 3   Agree = 4   strongly agree = 5

Male: ..... female: .....      Age: .....

#		1	2	3	4	5
1	Among many topics for writing I choose the one that I can relate to my own experience.					
2	I know all or some of the writing strategies (e.g. planning , revising , editing... etc. )					
3	Reading the instruction carefully before writing is important in an exam.					
4	I know the main component of an essay(introduction, body, conclusion )					
5	I find Writing more difficult than reading , listening and speaking.					
6	Spending more time on Reading helps me to write better.					
7	I have no difficulty with writing strategies.					
8	I cannot decide when to use a strategy .					
9	I am aware of the mistakes I have done while writing					
10	I use my previous knowledge in the writing task in hand .					
11	Before I start writing , I prepare an outline in mind or on paper .					
12	I have specific goals in my mind while writing.					
13	When I choose a topic for writing , I divide it to subtopics to include more details in the essay.					
14	I stop after each paragraph to think about what to write next.					
15	There is no specific order of ideas in my writing .					
16	I focus on general ideas rather than details .					
17	I list some words and expressions to use them in my writing					
18	I have difficulty to write a good topic sentence.					



19	While writing , I stop to check the organization of the essay.					
20	I check the benefit of the writing strategies I use in writing.					
21	I focus on specifics information , structures or keywords while writing.					
22	I avoid distraction from the task in hand when I write.					
23	I try to finish the essay in the given time.					
24	I translate my thoughts from Arabic into English.					
25	When I write I use sources such as a dictionary , webpages and read similar writing samples.					
26	I ask myself if I am doing well while writing.					
27	I correct the mistake I have made immediately during writing.					
28	I use different strategies if a strategy that I use is not effective.					
29	I depend on fixed set of sentences that I know rather than new structures.					
30	I try to avoid using vocabularies or grammatical structures that I do not know .					
31	I revise textual features ( spelling , vocabularies ,and grammar) of the essay when I finish writing.					
32	I am careless about what the reader thinks about my writing.					
33	I can judge how well I have done after finishing a writing task.					
34	I ask others (classmates, teachers .....etc.) to review what I write.					
35	Once I finish the essay I compare the content with the outline I prepared.					
36	In an exam, I devote time for revision.					
37	I always write a draft and then revise and correct it.					
38	The teacher's feedback helps me to improve my writing.					
39	When I revise I paraphrase some sentences.					
40	I know some or all of linking words (e.g. therefore , also , then , unless .....etc.)					

## Appendix B

Frequency and Means of Self-awareness.

Items No.	1	2	3	4	5	MEAN	S.D
1		1	2	36	9	4.10	0.55
%		2.1	4.2	75.0	18.8		
4		1	5	22	20	4.27	0.73
%		2.1	10.4	45.8	41.7		
5	2	12	11	13	10	3.35	1.19
%	4.2	25.0	22.9	27.1	20.8		
7	5	21	15	7		2.5	0.87
%	10.4	43.8	31.3	14.6			
10	1	3	5	32	7	3.85	0.82
%	2.1	6.3	10.4	66.7	14.6		
18	2	11	13	18	4	3.22	1.03
%	4.2	22.9	27.1	37.5	8.3		

Means and frequency of strategic knowledge .

Q	1	2	3	4	5	MEAN	S.D
2	1	4	16	21	6	3.56	0.896
%	2.1	8.3	33.3	43.8	12.5		
3			2	9	37	4.72	0.53
%			4.2	18.8	77.1		
8		12	20	13	3	3.14	0.87
%		25.0	41.7	27.1	6.3		
20		3	15	26	4	3.64	0.72
%		6.3	31.3	54.2	8.3		
28		3	17	21	7	3.66	0.80
%		6.3	35.4	43.8	14.6		
29	2	7	18	17	4	3.29	0.96
%	4.2	14.6	37.5	35.4	8.3		
40		5	18	10	15	3.72	1.02
%		10.4	37.5	20.8	31.3		

Mean and SD of planning strategies

Item No.	1	2	3	4	5	MEAN	S.D
11	1	7	5	14	21	3.97	1.15
%	2.1	14.6	10.4	29.2	43.8		
12	1	3	8	23	13	3.91	0.94
%	2.1	6.3	16.7	47.9	27.1		
13	2	4	9	25	8	3.68	0.99
%	4.2	8.3	18.8	52.1	16.7		
14	2	7	6	19	14	3.75	1.15
%	4.2	14.6	12.5	39.6	29.2		
15	5	20	12	10	1	2.62	1.00
%	10.4	41.7	25.0	20.8	2.1		
17		4	7	23	14	3.97	0.88
%		8.3	14.6	47.9	29.2		

Frequency and Mean of Monitoring Strategies

Item no.	1	2	3	4	5	MEAN	S.D
9	2	9	14	18	5	3.31	1.03
%	4	18.7	29.1	37.5	10.4		
19	2	5	12	22	7	3.56	1.00
%	4.2	10.4	25.0	45.8	14.6		
26	1	3	4	25	15	4.04	0.92
%	2.1	6.3	8.3	52.1	31.3		
27		8	8	23	9	3.68	0.97
%		16.7	16.7	47.9	18.8		

Frequency and Mean of Revision Strategies

Item	1	2	3	4	5	MEAN	S.D
31	1	4	6	25	12	3.89	0.95
%	2.1	8.3	12.5	52.1	25.0		
33		6	19	18	5	3.45	0.84
%		12.5	39.6	37.5	10.4		
34	2	9	9	11	17	3.66	1.26
%	4.2	18.8	18.8	22.9	35.4		
35	2	9	9	22	6	3.43	1.07
%	4.2	18.8	18.8	45.8	12.5		
36	2	8	16	13	9	3.39	1.1
%	4.2	16.7	33.3	27.1	18.8		
37	2	12	14	13	7	3.22	1.11
%	4.2	25.0	29.2	27.1	14.6		
38	1	4	19	24		4.35	0.811
%	2.1	8.3	39.6	50.0			
39	1	5	10	22	10	3.72	0.98
%	2.1	10.4	20.8	45.8	20.8		

Frequency and Mean of general online Strategies

Item	1	2	3	4	5	MEAN	S.D
6	2.0	1.0	7.0	21.0	17.0	4.04	0.98
%	4.2	2.1	14.6	43.8	35.4		
16	6	14	6	12	10	3.12	1.37
%	12.5	29.2	12.5	25.0	20.8		
21	1	5	8	21	13	3.53	1.01
%	2.1	10.4	16.7	43.8	27.1		
22	1	5	22	16	4	3.35	0.86
%	2.1	10.4	45.8	33.3	8.3		
23		3	12	19	14	3.91	0.89
%		6.3	25.0	39.6	29.2		
24	16	13	5	9	5	2.45	1.39
%	33.3	27.1	10.4	18.8	10.4		
25	2	2	5	25	14	3.97	0.97
%	4.2	4.2	10.4	52.1	29.2		
30	1	2	2	13	30	4.34	0.92
%	2.1	4.2	4.2	27.1	62.5		
32	11	10	6	17	4	2.85	1.35
%	22.9	20.8	12.5	35.4	8.3		