The Effect of Using Concept Mapping as a Pre-Writing Stage Strategy on Iraqi EFL College Students' Achievement in Essay Writing

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Abstract

This study is an attempt to investigate the effect of using concept mapping as a prewriting strategy on Iraqi EFL college students' achievement in essay writing. To fulfill the aims of the study, the researcher has adopted two null hypotheses. The first states that there is no statistically significant difference between the achievement mean scores of the students who are taught essay writing through concept mapping as a pre-writing strategy and those who are taught essay writing through the conventional way. The second hypothesis states that there is no statistically significant difference between the experimental group students' achievement mean scores in the organization, content and quality of expressions in the pre and posttests. To achieve the aim of the study, a ten-week experiment was conducted using the pretest-posttest non-equivalent groups design. Two groups of 105 students were selected from the population of third year students/College of Education for Women-Department of English during the academic year (2013-2014). One group was selected as the experimental group (namely section B) and another group was selected as the control group (namely section C). Both students of the experimental and control groups were exposed to pre and posttests. Using the t-test for two independent samples, it is found that there is a statistically significant difference in favour of the experimental group; whereas, by using t-test for two dependent samples, it is found out that there is a significant development in the experimental group students' achievement in organization, content and style and quality of expression. This indicates that using concept mapping as a prewriting strategy is more effective than the presentation- practice- production teaching or the Lecture Method teaching. Conclusions, recommendations and suggestions for further studies are put forward.

Section One: Introduction
1.1 The Problem and its Significance

Writing is one of the means of communication. It is viewed as a "continuum of activities that range from the more mechanical or formal aspects of "writing down" on the one end, to the more complex act of composing on the other end" (Hadley, 1993 cited in Myles, 2002: online).

For many learners and teachers, writing is academic agony because it is a boring task and routine, a lonely job and even a difficult mission (Canilao, 2009: online). As far as essay writing is concerned, Villalon and Calve (2011:17) state that "writing academic essays is challenging. It requires much more than good surface writing skills such as producing grammatically correct sentences". According to Myles (2002, online), "academic writing demands conscious effort and much practice in composing, developing, and analyzing ideas" .

Any piece of writing is the result of cognitive complicated operations (Hedge 2008:303). This complex cognitive activity requires a number of processes and strategies (Chien, n.d. : 45). According to Flower and Hayes (1980;1981;1996 cited in ibid.), planning, composing, and reviewing are three major processes that a writer may undergo in the course of writing. Other writers like Seow   (2002: 315) state that writing comprises four main stages: planning(prewriting), drafting (writing), revising (drafting) and editing in addition to other three external obligatory stages, like: responding, (sharing), evaluating and post writing suggested by the teacher.

Pre writing, as an important part of the writing process, facilitates and plays an important role in the construction of writing, as well as it helps writers in setting goals, brainstorming, organizing ideas and deciding text structure (Lin et al, 2004: online).   In the classroom, the stage or phase of pre -writing is known as any activity that encourages students to write, stimulates their thoughts for getting started and moves them away from facing a blank page to generating ideas and collecting information for writing (Seow, 2002:315). It involves a number of strategies: brainstorming, free writing, outlining, clustering, etc.

Flower and Hayes (1981:367) have stated that "without doubt, the wide acceptance of pre-writing has helped improve the teaching of composition by calling attention to planning and discovery as legitimate parts of the writing process". Moreover, Brown (2007: 394) states that "it was found that language 2 writers did less planning and they were less fluent (used fewer words) and made more errors and less effort in setting good and

organized material…". Kroll (2001:223) has highlighted the importance of
pre writing stage for many writers and asserts the importance of investing a
lot of class time in this stage, because many novice or inexperience writers
fear to confront the blank page since they little know about how and where
to begin. She (ibid.) also states that those writers should avoid wasting time
drafting their papers because there could be no paper in progress if they do
not have away into the topic of assignment. Despite the importance of this
phase in providing a basis of successful writing in second or foreign
language learning, it has been ignored (Lin, 2003 cited in Lee and Cho, n.d.
: 56).

   As far as the cognitive aspect in the writing process is concerned, Sturm
and Rankin-Erickson (2002 cited in Negari, 2011: 299) state that "parts of
the students' difficulties in writing are related to difficulties in applying
various cognitive strategies". Flower and Hayes (1980b cited in David,
2009:7) suggest that there is need to develop effective strategies for
managing the writing process by writers in order to avoid cognitive
overload. Also, and Gentner (1980 cited in Lee and Cho, n.d. : 48)
recommend to practice fewer task components at any point in time when
teaching foreign language writing to help lessen the cognitive load
demands during the writing process. Accordingly, Flower and Hayes (1980
cited in ibid.: 48-49) propose planning strategies and activities as ways to
reduce the number of cognitive demands on their conscious attention
during composition.

  Recently, the impact of strategy training on language learning skills is
being highlighted by many researchers in the field of language teaching.
But a special emphasis was given to receptive skills more than productive
skills. In this respect, Nobahar et al. (2013: 2118-2119) state "In recent
years, there has been a great body of research on the effect of strategy
training on language learning …Strategy training has been applied to
language learning skills such as reading, and listening... However, little has
been done on writing and speaking".

   Generally speaking, concept mapping has been used as a tool for learning
and teaching. It is revealed that it helps in various aspects; according to
Novak and Cañas (2008: 29) concept mapping "helps learners learn,
researchers create new knowledge, administrators to better structure and
manage organizations, writers to write, and evaluators assess learning". In
teaching and learning, concept mapping is a visual representation of the
relationships between concepts and ideas which help students to organize

and structure their thoughts to understand or discover new information (From Concept Mapping - Inspiration, 2014: online).

In writing, Kellogg (1990 as cited in Lee and Cho, n. d. : 55) emphasizes that that concept map, as a strategy, can be used to assist memory in the prewriting phase to reduce the attention load during composition. It, as Avery et al. 1996 and Sinatra, 2000 (cited in Lin et al., 2004: online) have highlighted, "encourages students to map out their ideas prior to composing, and it allows students to translate ideas and concepts into a visual, graphical representation for writing assignments". Furthermore, concept mapping is advocated as a natural tool for prewriting activities because of its fluency and organizing nature   (Margerum-Leys, 1999 cited in ibid.). More importantly, Lee (2013: 254) emphasizes that "the structural format of concept maps may help students' cognitive processing channels which enhance main idea concepts and aid the organization of ideas for recall". Also, it is believed that it has a positive psychological effect because of its role in promoting students' ability and making them feel less worried to commit a mistake and encourages students to develop ideas, words, concepts, or statements on a writing topic (ibid.).

Unfortunately, English as foreign language Iraqi learners are proved to be very weak in writing despite the long time learning English in the schools and at colleges. By examining many samples of their writing assignment as well as theirs marks in writing and by asking many teachers who teach writing at the first and second stages and essay writing at third stage about their students' level in writing, it is found out that they agree on the low levels of writing. The quality of their paper does not match the academic standards in writing an essay. The researcher suggests improving their achievement in writing through raising their awareness to the importance of language learning strategies and suggesting the concept map as a cognitive learning strategy to improve their writing process by focusing on the prewriting stage due to its role in promoting in the quality of their writing.

1.2 Aims

The present study aims at:
1. empirically investigating the effect of using collaborative self-generated concept map as a pre-writing strategy on EFL college students' achievement in essay writing.
2. improving students' writing in the following aspects: organization, content and quality and style of expression.

1.3 Hypotheses

The following null hypotheses are postulated:

1. There is no statistically significant difference between the achievement mean scores of the students who are taught essay writing through concept map as a pre-writing strategy and those who are taught essay writing through the conventional way.

2. There are no statistically significant differences in the experimental group's students' achievement mean scores in the organization, content and quality and style of expressions in the pre and posttests.

1.4 Limits

The present study is limited to:

1. concept maps samples adopted from different internet articles to serve the aim of the study,

2. third- year students at the Department of English, College of Education for Women/University of Baghdad, during the academic year (2013-2014), and

3. essay writing textbook of third-year students *Essay and Letter Writing by Alexander, 1967*.

1.5 Definition of Basic Terms

1.5.1 Concept Mapping Strategy

- Concept mapping is "a technique which is used for organizing and representing knowledge that includes concepts that are enclosed in circles or squares, and lines connecting the concepts. Concept maps are graphics organizers that are structured hierarchically, presented in a two dimension diagram, and shows relationships between concepts indicated by linking words" (Novak & Gowin, 1984 cited in Wan_Mohamed and Omar, 2008, online).

- Concept mapping, as a learning strategy is "a visual representation of an individual's knowledge structure on a particular topic as constructed by the individual; it is assumed to be an excellent exercise for the promotion of creative thinking and identification of new problem-solving methods" (Cañas et al., 2003 cited in Nagiri, 2011: 300).

- The operational definition is that concept mapping is a strategy used in the pre writing stage of essay writing to represent the students' knowledge and to map out their ideas collaboratively before composing. This process is done by drawing a graphic tool, where concepts usually enclosed in circles or boxes are connected with linking words to form propositions.

1.5.2 Achievement

- Achievement is defined as "knowledge attained or skills developed in the school subjects, usually designated by test scores or by marks assigned by teachers, or by both" (Good, 1973:7).

- Achievement is what language learners have successfully learnt with specific reference to a particular course, textbook, or program of instruction (Richards and Schmidt, 2002:7).

- The operational definition of achievement is that it refers to the scores gained by applying an essay writing test on the students who have been involved in an experimental study.

1.5.3 Pre- writing Stage:

- It is a stage in the writing process which encourages the generation of ideas in numerous ways or strategies, like: brainstorming, clustering, free writing, etc…(Brown, 2007:404).

- Richards et al. (1992:70) defines it is a stage in the writing process which includes activities in which writers look for a topic or for ideas and language related to the topic before beginning to write.

- The operational definition is that it is a stage in writing which encourages the learners to brainstorm, plan and organize ideas before composing. Thus, a good piece of writing is produced.

1.5.4 Essay Writing:

- Essay writing: "Essay writing is considered "a unique way of learning because it involves en-active (learning by doing), iconic (learning by depiction in an image) and symbolic learning (learning by restatement in words)" (Villalon and Calvo, 2011: 17).

- Essay writing is a kind of assignment at university that requires mental exploration of a topic such as looking at different arguments, evidence and developing the writer's viewpoint. Writing essay is an indication of learners' ability to explore a topic, weigh arguments, organize and express thoughts logically, coherently and critically an finally reach to conclusion (from Writing Essays, 2011: online).

- The operational definition of essay writing is an academic activity which requires a higher level of thinking and control of all stages of writing to produce a long piece of writing which consists of three parts introduction, middle and conclusion. Essay is often organized according to a number of recognizable rhetorical forms.

Section Two
2.1 Theoretical Background and Related Studies
2.1.2 Concept Mapping
    Concept map was first used by Novak (1972) when he tried to follow
and understand the changes in the children's knowledge of science in his
research programme (Novak and Cañas, 2008:3). The idea of concept map
emerged when there was a need to find a better way to represent children's
conceptual understanding. Thus was born a new tool not only for use in
research, but also for many other uses (ibid.).

    The concept mapping technique branches from Ausubel's (1968)
meaningful learning theory which is opposite to rote learning. According
to his theory, to learn meaningfully, individuals must relate new knowledge
to relevant concepts they already know (Learning Theories, n.d.: online). It
also stems out of Ausubel's cognitive psychology which states that
"learning takes place by the assimilation of new concepts and propositions
into existing concept and propositional frameworks held by the learner.
This knowledge structure as held by a learner is also referred to as the
individual's cognitive structure" (Novak and Cañas, 2007:29).

    According to Daly's (2010: 31) point of view which is based on
Ausubel's , Novak and Hanesian's (1986) interpretation of cognitive
learning, "when learners create concept maps they are focusing on
determining relationships between and among concepts within their
cognitive structures".

 2.1.2.1 Purposes behind Using Concept Map
     The following are the some of the purposes behind concept map using:
1. Concept mapping enables meaningful learning because it is considered
    as a kind of template or scaffold which help to organize knowledge
    (Novak and Cañas, 2008:7).
2. Concept map enables students to express their knowledge freely on a
    given topic (Gouli, Gogoulou, & Grigoriadou, 2003 cited in
    Wan_Mohamed and Omar, 2008: online).
3. As a tool to represent knowledge, concept map is used to reflect the
    relationships which exist between concepts thus it will be inherited in
    the learners' long memory (Jacobs-Lawson & Hershey, 2002 cited in
    Chiou: 2008: 376).
4. Concept mapping assist the process concept learning, which is vital for
    the learner's cognitive development (Moreira, 2011:6).

5. Concept map provides a creative psychological atmosphere for learning and helps the learner to do a task and organize material (Weinstein & Mayer, 1986 cited in Talebinezhad and Negari, 2007: 70).

Moreover, it is proved that concept map is helpful in accomplishing the following:

"Helping students brainstorm and generate new ideas; encouraging students to discover new concepts and the propositions that connect them; allowing students to more clearly communicate ideas, thoughts and information; helping students integrate new concepts with older concepts; enabling students to gain enhanced knowledge of any topic and evaluate the information" (From Concept Mapping - Inspiration, 2014: online).

2.1.2.2 The Steps of Concept Map Construction

Novak and Cañas (2008:10-12) and Cañas and Novak (2009, online) state that there are different strategies which can be followed to build a concept map. The latter can either be achieved through listing a set of concepts or directly placing a root concept to be later linked to other concepts. They (ibid.) further suggest a few steps for concept map construction. They are shown below:

1. **Highlighting a focus question:** A focus question clearly specifies the problem and helps issue the concept map that needs to be resolved. Every concept map should respond to a focus question; the best focus question leads to a richest concept map. Learning to construct concept maps involves learners to deviate from the focus question and build a domain-relative concept map; however, it does not necessarily answer the question.

2. **Identifying key concepts (parking lots):** The starting point for the construction of a concept map can be a list of concepts that wait to be later added to a concept map. Some concepts may remain in the parking lot as the map might be complete; especially when the mapmaker sees no good connection of these concepts with other concepts in the map. Important additional concepts might be identified as the map is being built.

3. **Rank ordering the concepts:** Concept maps tend to be hierarchical by nature, with more general concepts at the top and more specific ones at the bottom. It is much easier to begin building hierarchical concept maps using a single root concept. The listed concepts in the parking lot can be ranked and ordered from the most general to the most inclusive concepts. Such a rank order represents the first approximation of concept organization, and helps begin the process of map construction.

Ranking can be in the form of a list, or an approximate location for some of the concepts on the map.

4. **Constructing an initial concept map:** This step consists of two phases:

5. **Constructing a preliminary concept map:**   The next step is to construct a preliminary concept map. This involves starting connecting the concepts, using linking words or cross linkage. Every two concepts need to be carefully linked with a selected linking word to clearly define the resulting proposition.   In concept mapping, there is no predetermined list of linking words as this might limit the expressive ability of the user. However, linking words usually consist of, or include, a verb. But, it is recommended to be as specific as possible when expressing the relationship between the two concepts.

6. **Revising the concept map:** As the concept map is created, concepts are moved around, added, removed, and redefined. It is common to try several possible linking words when linking two concepts. Such a technique helps construct the clearest, most easily understood proposition.

2.1.3 The Process Approach to Writing

  In the field of teaching English a foreign or a second language, many trends or approaches have appeared. Each approach has merits and demerits. In this respect Negari (2011:299 -300) states "teaching writing in a second or a foreign language has passed different trends, each of which has had benefits and shortcomings".

  "Process-writing arose in the late 1960s and the early 1970s in reaction to the dominance of a product-centered pedagogy" (ibid.). The process approach to writing is viewed as thinking and discovery (Hedge, 2008:302). Writing is the outcome of using strategies to accomplish the composing process, which requires different activities like: setting goals, generating ideas, organizing information, selecting appropriate language, making a draft, reading and reviewing, and, finally, revising and editing (ibid.).

  According to Richard et al. (1992:290) the process approach to writing is "an approach in teaching composition which emphasizes the composing processes writers make use of in writing (such as planning, revising and drafting) and which seeks to improve students' writing skills through developing their use of effective composing processes". According to Fujieda (2006 cited in Negari, 2011: 299-300), this approach to writing stems from process- based research in the first language composition; it is considered to be important since it brought meaningfulness to learners. In

addition, "one of the strengths of the structure of the writing process is its usefulness for a wide range of diverse learners" (The Writing Process: The Steps to Writing Success, n.d.: online.). In this approach, the product and its accuracy and grammar are important; however, priority are not given to them at the beginning (Richard and Renandya, 2002:308).

The process approach of writing is advocated by many educators. Due to this, various stages in writing are highlighted (Harmer, 2007:326). The major activities that characterize the writing process according to Hedge (2008, 305-307) are:
1. Planning(prewriting)
2. Revising
3. Producing

2.1.4 Related Studies

The purpose behind the limited number of previous studies is that the researcher focused on EFL in her study which is similar to the studies mentioned below. Additionally, the contribution of concept mapping strategy to learners' achievement is another reason why these two studies are only chosen.

2.1.4.1 Pishghandam and Ghanizadih (2006):

This study aimed at investigating the impact of using concept mapping as a prewriting activity on EFL learners' writing ability in terms of product and process. The sample of this study consisted of 20 female upper intermediate students who were assigned into two equal groups. The control group was not instructed to use concept mapping in the prewriting phase and the treatment group used concept map in preparation for writing task. Pretests and posttests were used and they were scored by two different raters. It was found out that using concept mapping enhances learners' writing ability. To find out the quality of improvement, learners' writings were compared and analyzed every two sessions in addition to interviewing students. The results indicate an improvement in the quantity and quality of generation, organizing and associating ideas.

2.1.4.2 Al-Shaer (2014):

This study aimed at examining the impact of employing concept mapping at a pre-writing stage on EFL students' ability to generate better argumentative essays. Thirty-eight participants were randomly assigned to two groups participating in a writing course at Al-Quds Open University. Both groups were taught by the same teacher. The control group was taught as required in the textbook, and the experimental group was required to construct concept maps at the pre-writing stage and compose essays based

on the constructed maps. All participants were required to sit for pre- and post-tests to check the progress of their writing performance before and after the experiment. After the implementation of concept mapping, comparison of the students' mean scores of the pre- and post-tests showed a statistically significant improvement in the experimental students' ability to generate better argumentative essays in terms of point of view, unity and coherence, development, organization, and thinking.

2.1.4.3 Discussion of Related Studies

Aims, participants, experimental design, instrument, and concept map construction are going to be used for comparison. According to aims, Al-Shaer's study was to examine the impact of concept mapping as a prewriting strategy on students' ability to generate better argumentative essays, in terms of point of view, unity and coherence, development, organization, and thinking, i.e. in process only, whereas that of Pishghandam and Ghanizadih's study was examining the effect of concept mapping strategy on learners' ability in term of product and process. The aim was in investigate the overall achievement and in terms of organization, content and style and quality of expression, especially. As for the participants, Al-Shaer's agree with the present one only by choosing college level students. Both studies agree with the present one in the experimental design. As for the instrument, Al-Shaer used two achievement tests which were developed from the question database of the textbook, whereas that of Pishghandam and Ghanizadih's was a validated teacher made test. In the present study, the pre and the post tests are two descriptive essay questions. Al-Shaer's used 16 one-hour meetings and that of Pishghandam and Ghanizadih's was 20 hours. The present study used 10 two- hour sessions excluding the pre and the post tests.

There is a difference in the steps of using concept mapping construction. In previous studies, the learners were asked to start drawing the map without depending on a list of concepts which are then moved to the map, whereas in the present study the learners were asked to start brainstorming a number of key concepts related to the topic and include them in a list called parking lot list before the process of concept map construction.

Section Three: The Procedures

3.1 The Experimental Design

In order to fulfil the aims of the study and to examine the effect of using concept map on students' achievement in descriptive essay, the researcher has chosen a pre-posttest non-equivalent groups design. The form of this design is shown in Table 1.

Table 1 The Experimental Design

Groups	Pretest	Treatment	Posttest
Experimental Group	T1	Concept map as pre writing strategy	T2
Control Group	T1	Conventional way(Presentation, practice and production)	T2

(Isaac and Michael, 1977: 44)

The design of the experiment includes the selection of the two groups randomly. Both groups were submitted to a pre-posttest. In the experimental group, a concept map was used as a pre –writing strategy whereas the control group was taught according to the conventional way. The scores of the posttest of both groups were compared to see if there is any significant difference between the two groups or not.

3.2 Population and Sample Selection

The population of this study is the third-year students from the Department of English/ College of Education for Women/University of Baghdad, during the academic year 2013-2014.

The sample has been chosen randomly from the population mentioned above. There were 105 students distributed alphabetically into four sections. Two groups were randomly selected. One group was selected as the experimental group (namely section B) and the other group as the control group (namely section C). The number of the experimental group is 27 and the control group is 26. After excluding those who failed to attend the pretest and those who couldn't pass the subject of writing in the second year, the total number of the sample was 40, 20 students in each group.

3.3 Equivalence of the Sample

In order to achieve better equivalence of the two groups, the researcher has tried to control some of the variables, which may affect the findings of this experiment statistically. These variables are age, parents' level of education, and scores on the pretest. All these differences were tested at 0.05 levels of significance by using the t-test formula for two independent samples and Chi-square formula. It is found out that the subjects of the experimental and control groups are equivalent in all these variables. Tables 2 and 3 summarize the results of the statistical treatment of the sample equivalence.

Table 2 t-Test Statistics for the Study Subjects' Ages and Scores in the Pretest

Variables	Group	N	$\overline{X}$	SD	Df	t-Value		Level of Significance
						Calculated	Table	
Pretest	E	20	44.1500	16.53155	38	0.34	2.021	0.05

scores	C	٢٠	42.500	13.85071				
Ages in Years	E	20	21.3000	0.57124	38	0.44	2.021	0.05
	C	20	21.2000	0.83350				

Table 3   Chi-Square Statistics for the Fathers' and Mother's Level of Education Variables

Variable	Group	N	Primary	Intermediate	Secondary	Diploma	B.A	M.A.	df	Computed Chi-Square	Tabulated Value
Fathers' Education	E	20	1	1	5	5	7	1	5	1.16	11.7
	C	20	2	2	3	5	7	1			
	Total	40	1	8	6	9	14	2			
Mother's Education	E	20	1	10	3	4	2	0	5	9.35	11.7
	C	20	2	2	3	6	5	2			
	Total	40	3	12	6	10	7	2			

3.4 Instructional Programme
3.4.1 Instruction

The study was conducted over ten –hour sessions. The actual application of teaching started in November 28, 2013; it lasted 6 weeks and ended in January 23, 2014. The researcher taught both groups to control the teacher variable. The control group was taught by using the conventional way. The lectures were arranged for both groups as two hours per week. The participants in both groups wrote descriptive essays on eight different topics.

One week after the pre-test, the experimental group was given a 4–hour concept mapping training session; it involved a presentation of concept map technique (what is meant by concept, the importance of this technique in writing and samples of concept map) and the method or the steps for constructing and using concept map as a prewriting strategy followed by one guided practice session; whereas the control group was taught according to the lecture method. However, the researcher made sure to explain for both groups (treatment and control) that the process of writing involves a number of tasks: planning, drafting and editing.

3.4.2 Instructional Material and Strategy Instruction:

The instructional material was chosen from essay writing textbook. However, different references were used and were given for both groups (treatment and control group).

3.4.3 Strategy Instruction

In the present study, the researcher followed the strategy instruction approach to teach this strategy. The strategy is taught following Harris and Graham model (1996 cited in Talebinezhad and Nagiri, 2007: 76). In

addition, the steps of concept map construction mentioned in 2.1.2.2 have
been adopted by the researcher.

Step 1: Introduction to the target strategy through examples:
　　　Before the actual use of concept map in the essay writing lessons as a
pre writing strategy, it was described to the students; they were told that
they are going to learn about the strategy of concept mapping which is one
of the strategies of writing. It was described for them as a strategy that
could be used to categorize information in a graphic form through drawing.
It is also described as a strategy that could help them with vocabulary
development, reading comprehension, study skills, and prewriting
activities. They were showed a number of concept map samples to make
sure that they are fully aware how these maps look like. Finally, the
sequence of steps for creating a concept map was described.

Step 2: Modeling the strategy:
　　　The first step is to choose the subject by the teacher and write it on
the board. This topic is labeled the main idea. The teacher starts asking a
number of questions in a loud voice which help in the brainstorming and
concept map construction. After that, with the assistance of the whole class,
she prepares a list of concepts waiting to be added to the map. This list is
prepared by brainstorming all the concepts which are related to the topic on
the board. Later on, she constructs the map by following the hierarchical
order (i.e. hierarchal map places ideas and information in order of
importance with the most important idea at the top). She puts the main idea
on the top center of the board. Here, the teacher chooses the concepts from
the parking lot to be included in the map. She starts creating a map by
using arrows to connect the main topic and the subtopics using suitable
linking words to be written on the line or the arrows. Later, details are
generated and added to the subtopics. Finally, she makes sure to revise the
map to add more concepts if necessary and to move around other concepts
or to replace the linking phrases and add other crosslinks. Students may
participate in the process by giving possible categories and details
(propositions or ideas) chosen from the parking lots or by brainstorming
other possible concepts during the map construction. The teacher explains
how the subtopics may act as different paragraphs; then transfers the
information from the map into complete sentences. Later on, the sentences
are put into clear, well organized paragraphs; i.e. showing introduction,
body and conclusion parts (starting with the top level structures; i.e. topic
and subtopics).

Step 3: Student mastery of strategy steps:

During this stage, students rehearsed and memorized the sequence of activities for concept map construction.

Step 4: Guided practice and feedback:

Working as group with a leader for each group, the researcher suggests a descriptive topic by depending on the main types of the descriptive essay. The students start to use the strategy as it is mentioned in the modeling phase. Here, the teacher gives support and feedback whenever necessary. Later, independent practice begins (See model lesson plan Appendix 1).

3.5 The Test

3.5.1 Test Construction

The researcher has constructed an essay test which consists of two questions. To avoid the remembrance factor, the researcher constructed a pretest which is different from the post test. Both tests consisted of two questions. The students were asked to choose one topic to write about. (See appendix 2).

3.5.2 Test Validity

Validity of the test means "the extent to which it measures what is supposed to measure"(Heaton, 183:153). In order to ensure the face validity, both tests was exposed to a number of experts to provide the researcher with their opinions. The jurors[*] agreed upon the tests validity and suitability.

3.5.3 Pilot Administration of the Test

On October 24, 2013, a pilot administration of the pretest was carried out. A week later; i.e. on October 31, 2013 the post test was piloted.. The tests were experimentally tried out on a sample of 20 students of the same department at the College of Education for Women. The purposes behind this pilot study were to estimate the time needed to answer the test, get information about the ease of administering the test, check the clarity of instructions and finally calculate the reliability coefficient of the tests.

The pilot study revealed that the time needed to complete the test was one hour. As for the clarity of instructions, the students faced no difficulty

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[*] The jurors' members, arranged alphabetically and according to their academic titles, are:
1.   Prof. Shatha Al-Sa'adi (College of Education for Women, University of Baghdad)
2.   Prof. Nejat Al-Jubuory (College of Education for Women, University of Baghdad)
3.   Asst. Prof. Maysaa Rasheed(College of Education for Women, University of Baghdad)
4.   Instructor Rana Hameed, Ph.D (College of Education for Women, University of Baghdad)
5.   Instructor Huda Hadi (College of Education for Women, University of Baghdad)

understanding them. However, they asked about the limit of the paragraphs and of the words of the essay. Because of this, it was included in the instructions.

3.5.4 Test Reliability

Reliability "measures the degree to which a test gives consistent results" Richards et al. (1992:314). In order to find out the test reliability, two methods were used: the intrascorer and interscorer reliability. In the first one, the researcher scored the test by herself, then she scored it again after ten days. After that, the test was given to another scorer who was an essay writing teacher. The same steps were followed for both the pre and the post tests. A rubric adopted from Brown (2004:244-245) and suggested by one of the juror was used to score both tests.

The rubric consists of five major categories of five different levels in each category, ranging from no college level work to excellent:

Table 4The Rubric for Scoring the Tests

Categories	Marks
Organization: introduction, body and conclusion	20
Logical development of ideas(content)	20
Grammar	20
Punctuation, spelling and mechanics	20
Style and quality of expression	20
	100 (total)

Levels	Marks
Excellent-Good	20-18
Good to- Adequate	17-15
Adequate-Fair	14-12
Unacceptable	11-6
Not college level work	5-1

Each category is given 20 marks as a maximum value, thus the total mark of the test is 100. Using Pearson's formula, the intra scorer reliability of the pretest is found to be 0.947; whereas the inter scorer reliability of the pretest is found to be 0.968. Using the alpha Cronbach, the rubric's reliability is found to be 0.84. This shows that the pretest is acceptable and reliable

As for the post test, after using Pearson's correlation formula, the intrascores reliability is found to be 0.835; whereas the interscorer reliability is found to be 0.854. Moreover, using the alpha Cronbach, the rubric's reliability is found to be 0.81. The resulted reliability coefficients

are considered statistically significant because they are greater than the table value of correlation coefficient at0.01 level of significance. This shows that the posttest is also acceptable and reliable (see Appendix 3).

3.5.5 Final Administration of the Test

At the end of the experiment, the post test was administered to both groups on January 30, 2014. The students were asked to answer one of the descriptive essay questions (see Appendix2).

Section Four

Results, Conclusions, Recommendations, and Suggestions

4.1Presentation and Interpretation of the Results

4.1.1 Results Related to the First Aim

In order to find out whether there is any significant difference between the two mean scores of the experimental and control groups in the posttest, the t-test formula for two independent samples is used. It is found out that the calculated t- value is 4.66, which is greater than the table value (2.02) at level of significance 0.05. This means that the difference between the two mean scores is statistically significant in favour of the experimental group. This means that concept mapping as prewriting strategy has an effect on students' achievement in essay writing. Therefore, the first null hypothesis presented earlier is rejected.

Table (5) t-Test Statistics for the Study Subjects' Scores in the Posttest

Group	N	$\bar{X}$	SD	df	t-Value		Level of Significance
					Calculated	Table	
Experimental	20	73.950	8.882	38	4.66	2.02	0.05
Control	٢٠	60.250	9.683				

4.1.2 Results Related to the Second Aim

Second, to find out whether there is a significant development in the study experimental group's subjects achievement in the organization, content and quality and style of expression, the t-test for two dependent samples is used to test the significance of differences in achievement between the pre and post essay writing test in the aforementioned areas. It is found out that the computed t-value for organization, content and style and quality of expression are 10.204, 9.199 and 10.691, respectively, which are greater than the table value (2.09) at level of significance 0.05. This means that the second null hypothesis presented earlier is rejected and there is a significant increase in the students' achievement in the organization, content and style and expression in post essay writing test.

Table (5) t-Test Statistics for the Experimental Group's Achievement in the Pre-Post in Three Categories (Organization, Content and Style and Quality of Expression)

Areas/ Categories	Test	N	M	SD	Df	t-Value		Level of Significance
						Calculated	Table	
Organization	Pre	20	8.55	2.300	19	10.204	2.09	0.05
	Post		16.15	4.695				
Content	Pre	20	8.8	2.05	19	9.199	2.09	0.05
	Post		15.7	4.42				
Style and quality of expression	Pre	20	7.9	2.23	19	10.691	2.09	0.05
	Post		15.4	4.30				

4 .1.3 Interpretation of the Results

As mentioned in 4.1.1, it is found out that using concept map has a noticeable effect since the experimental group's achievement in essay writing is significantly higher than that of the control group in the same subject. It is also found out, as mentioned in 4.1.2, that there is a significant development in the experimental group's subjects' scores in organization, content and style and quality of expressions, which indicates that using concept mapping strategy has positively contributed in developing the students' ability in these areas in essay writing.

A. As for the result which is related to the first aim, concept mapping strategy has positively affected students' achievement because it has helped both weak and good students to write in an academic way. Second, it reduced the cognitive load that students may confront in the planning phase because it assisted them to brainstorm ideas and organize information in a better way prior to writing.

B. As for the results related to the second aim, it appears that concept mapping strategy has influenced the way the students tend to organize their essay because of its organizing nature. As for the improvement in style and word expression, concept mapping strategy enabled the students to generate ideas related to the topic. Finally, the progress in the content aspect may be interpreted by the concept map ability to enhance the students to address the assigned topic and develop ideas and to reflect thoughts.

4.2 Conclusions:

According to the findings of the study, it is concluded that concept map is an effective pre writing strategy, thus it improved the students' composition in various ways:

1. Using concept mapping strategy supported the students' writing, thus the result of their writing matched most of the academic standards of essay writing.
2. The graphical representation of their thinking through concept mapping helped the students to reflect on their writing.
3. Using concept map prior to writing helped the students to generate ideas, focus on what is going to be written, plan their writing and organize their knowledge or thoughts.
4. It also helped them to concentrate their attention to choose appropriate ideas for their writing, which in turn improved the quality of their work and prevented them from going off the topic.
5. It assisted their memory and lessened the overload during composition.
6. Finally, the collaborative nature of concept mapping strategy helped the students to communicate ideas and negotiate meaning with each other which led to better achievement. It also helped to create a good psychological atmosphere.

4.3 Recommendations:

On the basis of the findings arrived at, the following recommendations can be stated:

1. More attention should be given by English writing teachers to writing process since most teachers are not aware of the process approach of writing believing that teaching writing is only a matter of improving linguistic skills.
2. The use of different learning strategies in writing by students should be encouraged through raising their awareness of the importance of such strategies in improving the quality of their writing.
3. The strategy instruction approach in writing lessons is recommended through explicit instruction, implicit or both.
4. Every step in the writing process is important; however, special emphasis should be given to the pre writing stage due to its role in improving their composition process.
5. Instructors should be given training sessions for using concept mapping strategy in their writing class.

4.4 Suggestions for Further Studies
   The following suggestions for further research can be put forward:
1. A study is needed to investigate the effect of using concept map on students' attitudes and motivation towards learning writing.
2. A study is suggested to investigate the effect of using concept map on students' achievement in vocabulary.
3. A further study is required to investigate the effect of using concept map as an assessment tool.
4. A further study is required to compare between collaborative concept map strategy in writing and individual formed concept map to help students and teachers visualize the direction or focus of a research paper.

References

- Al-Shaer, Ibrahim M. R. (2014). "Employing Concept Mapping as a Pre-writing Strategy to Help EFL Learners Better Generate Argumentative Compositions". In: International Journal for the Scholarship of Teaching and Learning". Retrieved November1, 2014, from: http://digitalcommons.georgiasouthern.edu/ij-sotl/vol8/iss2/10.
- Alexander, L.G. (1967). Essay and Letter Writing. Hong Kong: Longman, Green and Co LTD.
- Brown, H. Douglas. (2004).Language Assessment: Principles and Classrooms Practices. USA: Pearson Education. Inc.
- Brown, H. Douglas. (2007). Principles of Language Learning and Teaching, 5th ed. USA: Pearson Education. Inc.
- Daley, Barbara J. (2010). "Concept maps: Practice applications in adult education and human resource development [Perspectives on Practice]". In: New Horizons in Adult Education and Human Resource Development, Volume 24, Numbers 2 – 4. Retrieved from: http://education.fiu.edu/newhorizons
- Cañas, Alberto J. and Joseph D. Novak. (2009). "Constructing your First Concept Map". Retrieved September 17, 2012, from: http://cmap.ihmc.us/docs/ConstructingAConceptMap.html
- Canilao, Maria Luz Elena N. (2009). "Mission Possible: How to Make Writing More Meaningful and Fun for Learners". Retrieved September 17, 2013, from: http://blog.nus.edu.sg/eltwo/2009/08/05/mission-possible-how-to-make-writing-more-meaningful-and-fun-for-learners/.
- Chien, Shih-Chieh. (n.d.). "A Cognitive Analysis of the Relationships between Chinese EFL Writers' Strategy Use and Writing Achievement Performance". Retrieved: September 17, 2013, from: http://www.ling.cam.ac.uk/copil/papers/3-chien.pdf.
- Chiou, Chei-Chang. (2008). "The Effect of Concept Mapping on Students' Learning Achievements and Interests". In Innovations in Education and Teaching International", Vol. 45, No. 4. Retrieved September 17, 2013, from: http://www.informaworld.com.
- "Concept Mapping-Inspiration". Retrieved September 17, 2012, from: http://www.inspiration.com/visual-learning/concept-mapping.

- David, Galbraith. (2009). "Cognitive Models of Writing". In gfl-journal, No. 2-3. Retrieved September 17, 2013, from: http://www.gfl-journal.de/2-2009/galbraith.pdf.
- Flower, Linda and John R. Hayes. (1981). "A Cognitive Process Theory of Writing". Retrieved September 17, 2013, from: http://www.jstor.org/discover/10.2307/356600?uid=2134&uid=2&uid=70&uid=4&sid=21104939098637.
- Good, Carter V. (1973). Dictionary of Education, 3rd ed. New York: McGraw-Hill Book Co.
- Harmer, Jeremy. (2007).The Practice of English Language Teaching, 4th ed. China: Pearson Education Limited.
- Heaton J.B. (1983). Writing English Language Tests, 7th impression. Singapore: Longman Group limited.
- Hedge, Tricia. (2008). Teaching and Learning in the Language Classroom. Oxford: Oxford University Press.
- Isaac, S. and W. B. Michael. (1977). Handbook in Research and Evaluation, 8th printing. New York: Robert R. Knapp.
- Kroll, Barbara (2001). "Considerations for teaching an ESL/EFL Writing Course". In: Teaching English as a Second or Foreign Language,3rd ed. Edited by Marianne Celce-Murcia: USA: Heinle and Heinle Publishers.
- "Learning Theories". Retrieved August 3, 2014, from: http://fpmipa.upi.edu/data/report_activity/9875881844.pdf
- Lee, Yongjin and Sungdai Cho. (n.d.). "Using Concept Map Prewriting Strategies in Korean Writing Classes". In: Korean Language in America, Volume15 . Retrieved August 3, 2014.
- Lee, Yongjin. (2013). "Collaborative Concept Mapping as Pre-Writing Strategy for L2 Learning: A Korean Application". In: International Journal of Information and Education Technology, Vol. 3, No. 2. Retrieved August 3, 2014, from: http://www.ijiet.org/papers/275-IT0038.pdf.
- Lin, Shu-Yuan; Jane Strickland, Beverly Ray, and Peter Denner. (2004). "Computer-Based Concept Mapping as a Prewriting Strategy for Middle School Students". In: A Middle School Computer Technologies Journal Volume 7, Issue 2. Retrieved August 5, 2013, from: http://www.ncsu.edu/meridian/sum2004/cbconceptmapping Meridian.
- Moreira, Marco Antonio. (2011). "Why Concepts, Why Meaningful Learning, Why Collaborative Activities and Why Concept Maps?" In: Meaningful Learning Review, Vol. 3. Retrieved August 5, 2013 from: http://www.if.ufrgs.br/~moreira/v1n3a1.pdf.
- Myles, Johanne. (2002). "Second Language Writing and Research: The Writing Process and Error Analysis in Student Texts". In: TESFL-EJ. VOL.6, No.2. Retrieved August 5, 2013, from: http://tesl-ej.org/ej22/a1.html.
- Negari, Giti Mousapour. (2011). "A Study on Strategy Instruction and EFL Learners' Writing Skill". In: International Journal of English Linguistics Vol. 1, No. 2. Retrieved August 5, 2013, from: www.ccsenet.org/ijel 2 .
- Nobahar, Behnaz; Amir Reza Nemat and Masoud Shaghaghi. (2013). "The Effect of Concept Mapping on Iranian Intermediate EFL Learners' Self-efficacy and Expository Writing Accuracy". In: Theory and Practice in Language Studies, Vol. 3, No. 11. Retrieved August 3, 2014, from:

http://www.ojs.academypublisher.com/index.php/tpls/article/download/tpls0311211
72127/8055.

- Novak, Joseph D. and Alberto J. Cañas. (2007). "Theoretical Origins of Concept
  Maps , How to Construct Them, and Uses in Education" . In: reflecting Education,
  Vol. 3, No.1Retrieved 5, Augest 2013, from : http://www.reflectingeducation.net
- --. (2008). "The Theory Underlying Concept
  Maps and How to Construct Them". Retrieved August 5, 2013,
  from:http://cmap.ihmc.us/Publications/ResearchPapers/TheoryUnderlyingConceptM
  aps.pdf
- Pishghadam, Reza and Afsaneh Ghanizadeh.(2006). "On the Impact of Concept
  Mapping as a Prewriting Strategy on EFL Learners' Writing Ability". In: Iranian
  Journal of Applied Linguistics,Vol.9, No.2. ". Retrieved August5,2013,from:
  http://www.sid.ir/en/VEWSSID/J_pdf/87620060204.pdf
- Richards, J. C., J. Platt and H. Platt. (1992) Dictionary of Language Teaching and
  Applied Linguistics, 2nd ed. Harlow, Essex: Longman.
- Richards, Jack and Willy A. Renandya (eds.). (2002). Methodology in Language
  Teaching: An Anthology of Current Practice. Cambridge: Cambridge University
  Press.
- Richards, Jack C. and Richard Schmidt. (2002). Longman Dictionary of Language
  Teaching and Applied Linguistics,3rd ed. England: Pearson Education Limited.
- Seow, Anthony. (2002). "The Writing Process and the Process Writing".   In:
  Methodology in Language Teaching: An Anthology of Current Practice, edited by
  Jack C. Richards and Willy A. Renandya. Cambridge: Cambridge University Press,
  pp 315-320.
- Talebinezhad, Mohammad Reza and Giti Mousapour Negari. (2007). "The Effect of
  Explicit Teaching of Concept Mapping in Expository Writing on EFL Students'
  Self-regulation". In Linguistics Journal Volume 2 Issue 1. Retrieved,September17,
  2012, from: http://webcache.googleusercontent.com.
- "The Writing Process: The Steps to Writing Success". Retrieved August 2, 2013,
  from: http://www.time4writing.com/writing-resources/writing-process.
- Villalon, Jorge and Rafael A. Calvo. (2011). "Concept Maps as Cognitive
  Visualizations of Writing Assignments". In: Educational Technology& Society, 14
  (3). Retrieved August 5, 2013, from: http://www.ifets.info/journals/14_3/3.pdf.
- Wan_Mohamed, Wan Azlinda and Badrul Omar.(2008). "Using Concept Map to
  Facilitate Writing Assignment". Proc. of the Third Int. Conference on Concept
  Mapping.   ".   Retrieved   August   5,2013,
  from:http://www.ifets.info/journals/14_3/3.pdf.
- "Writing Essays". (2011). Retrieved August 5, 2013, from:
  https://www5.plymouth.ac.uk/uploads/production/document/path/1/1723/Writing_E
  ssays.pdf.

Appendix 1
Model Lesson Plan for The Experimental Group

Time: Two hours.

Topic: Describe a clown toy.

Level: third- year college students

Material: a worksheet including four papers: the first one is allotted for brainstorming the concepts that will be included in the map; the second one is allotted for the concept map that will be generated by the group members; the third one is for the first draft of the essay and the last one for the final version of the essay. All papers should include the name of the group. Data-show is also required.

Goal: to enable the students to write a descriptive essay, which describes a thing; for example a "toy clown".

Behavioral objectives:

Working as groups, they brainstorm and list all the concepts and themes that are related to that descriptive topic on a piece of paper.

Using the concepts, students will be able to generate the map using bubbles or boxes around the topic in a hierarchical fashion with the most inclusive, most general concepts at the top of the map and the more specific, less general concepts arranged hierarchically below.

Working collaboratively as groups, students will be able to put each of these items in the bubbles into grammatically correct sentences.

Working collaboratively as groups, students will be able to combine the sentences and put them in paragraphs showing the introduction, body and conclusion and focusing on mechanics of writing and coherence starting with the top level structures i.e. topic and subtopics.

First Stage: Concept Mapping:

- **Focus question Phase**: The teacher divides the class into groups of four or five students. Then she assigns a leader for each group. A descriptive essay topic is suggested by the teacher; then students are asked to start the process of brainstorming the main concepts and concept map construction based on the following focus question as shown below:

1. What is your reason for writing your description?
2. What are the particular qualities that you want to focus on?
3. What sights, sounds, smells, tastes, and textures are important for developing your description?
4. Which details can you include to ensure that your readers gain a vivid impression imbued with your emotion or perspective?

- **Parking lot phase:** Students in each group work collaboratively to brainstorm and list all the key concepts and themes that are related to that topic (toy clown) on a separate piece of paper to show the precise descriptive details like: connotation, sense and metaphor words end expressions to show or create a vivid experience for the reader in addition to any concepts that suit the topic. These key concepts are listed from the most general to most inclusive ones.

- **Mapping phase:** Students are asked to write the concepts in bubbles around the toy clown (the main concept) using the top down approach. First, they put the main concept (the general topic which is the toy clown) on the top then they put ideas that support the general topic. They continue the process of and branching for each subtopic. Then, they use arrows to show the relationship among the concepts, i.e. they use linking words such as: verbs or linking phases as cross links to show the connection between the concepts to form a proposition. The order of ideas is not required, but they arrange concepts in groups that make sense to them and they place any relevant subcategories under each concept.

- **Revision of the map:** At this stage, the students revise the map to add more concepts and to move around other concepts or to replace the linking phrases and to add other crosslinks if necessary.

Second Stage: Sentence stage: With the assistance of the group members, the leader of the group puts all concepts which are related to the same descriptive essay topic (toy clown) into grammatically correct sentences. Ideas and concepts which are closely related should be put together in meaningful sentences. For example, they mention everything about the clown's head in the first five to six sentences, then they allot the other paragraph(s) for further description that describes in five to six sentences his body and finally they describe the last part of the toy clown .

Third Stage: Paragraphs stage:

After that, they are asked to join all these sentences into paragraphs to show the divisions of the essay clearly. The introduction, middle and conclusion in no more than one paragraph for each part of the essay

Fourth stage: Proofreading and revision stage:

At this stage, students work collaboratively as groups to revise and proofread their essay to eliminate any unnecessary information or to check the mechanism of their writing, coherence, and to make sure that the topic sentence and concluding sentence are clearly stated. Then, they rewrite the essay in its final shape to be submitted to the teacher who in turn checks it

and gives her feedback about each assignment at the beginning of the next
lecture by using the data show.

Appendix 2
The Test
Pre test
**Q1/ In no more than 150 words, Write a descriptive essay on one of the
following topics:**
1. Your favorite teacher according to appearance and personality.
2. Your memory of a place that you visited as a child.

Post test
**Q1/ In no more than 150 words, Write a descriptive essay on one of the
following topics:**
1. A morning view of rain.
2. A treasure belonging.

Appendix 3

Pilot of the Pretest

Students' No.	First scorer	First scorer/ after ten days	Second Scores
1.	41	54	43
2.	47	35	43
3.	60	69	65
4.	73	79	68
5.	28	24	25
6.	49	52	49
7.	56	66	52
8.	42	48	45
9.	27	29	28
10.	50	54	51
11.	23	11	20
12.	86	88	76
13.	34	41	32
14.	53	52	42
15.	24	22	25
16.	60	66	62
17.	60	65	58
18.	43	40	40
19.	53	62	55
20.	47	57	44

Pilot of the Posttest

Students' No.	First scorer	First scorer/ after ten days	Second Scores
1.	45	42	41
2.	49	41	37
3.	74	72	82
4.	29	25	28
5.	30	28	34
6.	59	59	62
7.	60	57	56
8.	32	30	31
9.	53	25	32
10.	49	53	42
11.	45	32	57
12.	54	54	51
13.	42	45	30
14.	75	60	73
15.	43	21	24
16.	24	12	16
17.	32	36	41
18.	46	56	44
19.	25	14	7
20.	48	48	29

The Effect of Using Concept Mapping as a Pre-Writing Stage Strategy on Iraqi EFL College Students' Achievement in Essay Writing ………………..

Narmeen Mahmood Muhammad

Appendix 4

Students' Scores in the Pre and Posttests
in Organization, Content and Style and Quality of Expressions

Student's no.	Pretest scores			Posttest scores		
	Organization	logical development of ideas(content)	Style and quality of expression	Organization	logical development of ideas(content) content)	Style and quality of expression
1	8	10	8	16	15	16
2	2	12	12	17	15	17
3	17	18	17	20	18	18
4	2	2	2	14	14	12
5	10	8	6	16	18	17
6	15	10	12	20	18	18
7	13	15	8	18	17	18
8	8	6	6	18	15	17
9	8	6	6	15	15	17
10	11	6	12	16	17	17
11	15	10	10	17	17	15
12	12	12	6	18	18	15
13	6	12	6	18	19	16
14	15	15	16	18	17	17
15	5	11	6	15	14	15
16	4	4	2	12	12	12
17	6	6	3	14	14	12
18	6	6	11	15	15	15
19	5	5	5	14	14	12
20	3	2	4	12	12	12

اثر استخدام خريطة المفاهيم بوصفها استراتيجية تسبق مرحلة الكتابة على تحصيل طالبات الكلية العراقيات الدراسات للغة الانكليزية بوصفها لغة اجنبية في مادة المقالة

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المستخلص :

يهدف هذا البحث الى التحقق من اثر استخدام خريطة المفاهيم بوصفها استراتيجية تسبق الكتابة على تحصيل طالبات الكلية العراقيات الدارسات للغة الانكليزية بوصفها لغة اجنبية بالمقارنة مع الطريقة التقليدية. تم صياغة فرضيتين صفريتين من اجل تحقيق هدف البحث. تشير الفرضية الاولى بان ليس هناك فرق ذو دلالة احصائية بين تحصيل الطالبات اللاتي درسن كتابة المقالة باستخدام خريطة المفاهيم بوصفها أستراتيجة تسبق الكتابة واللاتي درسن نفس المادة بالطريقة التقليدية اما الفرضية الثانية فتشير بانه ليس هناك فرق ذو دلالة احصائية بين الاختبار القبلي والبعدي للمجموعة التجريبية في نواحي التنظيم , المحتويات , والمفردات . اجريت تجربة لمدة ١٠ اسابيع باستخدام التصميم التجريبي ذي الاختبار القبلي– البعدي للمجاميع غير المتكافئة من اجل تحقيق هدف الدراسة. اختيرت مجموعتان من105 طالبه من المرحلة الثالثة/كلية التربية للبنات–قسم اللغة الانكليزية للعام الدراسي 2013– 2014. اختيرت احدى المجموعتين (المسماة Section B) كمجموعه تجريبية، واختيرت الاخرى (المسماة Section) C كمجموعه ضابطة، تم اختبار كلتا المجموعتين قبليا وبعديا. باستخدام الاختبار التائي لعينتين مستقلتين ، وجد بان هنالك فرق ذو دلالة احصائية لصالح المجموعة التجريبية وباستخدام الاختبار التائي لعينة واحدة وجد بان هناك زيادة ملحوظة في نواحي التنظيم والمحتويات والمفردات للمجموعة التجريبية . لذاك ينصح باستخدام خريطة المفاهيم بوصفها استراتيجية تسبق الكتابة في تدريس مادة المقالة. تم وضع الخاتمة، التوصيات والاستنتاجات.