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Using E- Mind Mapping Strategy in Developing EFL Middle School Students' Vocabulary Use and Metalinguistic Awareness Skills

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Abstract

This study purpose was to investigate the effect of E-mind mapping strategy on vocabulary use and metalinguistic awareness skillsof middle School Students. To accomplish the purpose of the study, the quasi- experimental designwas adopted.Participants wereforty (40) students at AbdelWahab Elgoharymiddle School, Egypt. The participants were allocated in two groups. The treatment group was taught using E-mind mapping strategymeanwhile the control one was taught by the old-style method in the first semester of the scholastic year 2019-2020. The experiment sustained for ten (10) weeks in which the instruments of thestudy were implemented to examine the impact of E-mind mapping strategy. The outcomes were statistically analyzed by SPSS. The results revealed that there were statistically significant differences at ($\alpha = 0.05$) between the mean scores of the control group and those of the treatment one on the vocabulary use and metalinguistic awareness posttest in favor of the treatment group. This positive result was attributed to the effect of using the E-mind mapping strategy. According to the findings, the researcher recommends that EFL teachers need to activate E-mind mapping strategy throughout teaching vocabulary to develop their students‟vocabulary useandmetalinguistic awareness skills.

*Keywords:*E-mind mapping,vocabulary use, metalinguistic awareness

1. INTRODUCTION

Vocabulary is considered an essential element of education that forms thebackbone of language. It is a vital part of EFL proficiency and offers a great deal of the basis for how learners will successfully perform listening, reading, speaking, and writing. Some scholars have viewed vocabulary as the most basic aspect of English language learning which begins

with learning words, whether first or second. Becauseno message can be expressed without vocabulary. Thus, vocabulary is a critical aspect in language competence. During the process of vocabulary acquiring, it is vital not only to determine the meaning of a certain word, but also its usage (Nation,2013). Because of its relevance, vocabulary acquaintance is a prerequisite to grasp texts in various conditions. Specifically, vocabulary learning is not only the knowledge of words, but also is the knowledge of word senses. In the same vein, Stahl (2005) stated that vocabulary knowledge is more than word definition, but rather it is how it is used in different context.

As Read (2004) pointed out after a long time of being worriedabout the developing of grammatical competence, language instructors and applied linguistic researchers now generally recognize the importance of vocabulary learning and try to discover ways of promotingit more effectually.

Schmitt (2000) claimed that people learn words receptively first and then achieve productive knowledge. He introduced the following list of the different kinds of knowledge that a learner has to master in order to know a word:

- The meaning of the word.
- The written form of a word.
- The spoken form of the word.
- The grammatical behavior of the word.
- The collocations of the word.
- The register of the word.
- The associations of the word.
- The frequency of the word.

According to Nation (2009), vocabulary knowledge comprises three dimensions: meaning, use and form. This covers classes such as meaning-meaning relationships, communication medium, internal word structure, and form meaning relationship, and the occurrence in real life language usage. Nation likewise added two types of vocabulary knowledge which are productive and receptive, the former meansexpressing meaning through speaking or writing, while the later means comprehending the meaning and the form of a word while reading or listening. In addition, Hedgcock and Ferris (2009) found that learning a word comprises processing meaning, a set of syntactic rules, word‟s grammar and social rules

governing how, where, and when to use the word correctly. That is because words are saved and connected in our mind thematically, sociolinguistically, phonologically, morphologically and conceptually

Therefore, vocabulary learning is far more than just learning the meaning of a word (Nation,2001). Additionally, Gombert (1992) confirmed that learning a new word is a metalinguistic practice. As such it encompasses a variety of metalinguistic abilities many of which are still in the course of developing throughout the primary school years. Koda(2000)argued that metalinguistic awareness is a term utilized to define the knowledge of rules about certain language, parts of language, and how it works, or even a simple self-appreciation of one's native language and the using of its procedures. Kuo and Anderson(2006) argued that "whereas in ordinary language use, attention is given to the message conveyed through language, metalinguistic awareness entails directing attention to language itself,to the means that conveys the message "

Thus, metalinguistic awareness embraces the notion that learning a word is more than knowing its dictionary definition, but also comprises knowing the word's spelling, morphology, parts of speech, pronunciation, variant meanings, collocations, specific uses, and register related contexts of use. Likewise, metalinguistic Awareness is reported as a core element of the language learning process, in some research publications, metalinguistic awareness is understood as consisting of component abilities such as morphological, phonological,semantic, syntactic, grapho- phonological,and grapho-morphological awareness.)Kuo& Anderson2006)

Biemiller(1999) found out that recognizing the metalinguistic demands of vocabulary instruction can rise its efficacy and allow teachers to recognize what improvements can be required while trying to meet younger children 's vocabulary needs. According to Oxford (1990) a specific strategy can make learning more efficiently. And according to Buzan &Buzan (2010) the human brain sporadically functions, hopping from thought to thought. Therefore, a multi-dimensional outline method is better to use than a linear outline one. This enables learners to transform their ideas in the form of free diagrams. This form is called mind mapping.

Mind mapping was first introduced by Tony Buzan, built on his research of the way the brain functions.It is a thinking tool which illustrates how the brain functions various and pieces of information that are correlated to each other. Buzan (2006) mentioned that a mind mapping is a powerful graphic tool which offers a universal key to unlock the potential of human brain. It is a visual map of ideas, laid out in a radial format around a central idea. It comprises a unique combination of pictures, colors and visual-spatial arrangement which is proven to improve recall when compared to traditional methods of note- taking and learning by rote. It demands imagination and association to stimulate the brain in remembering and memorizing. In teaching with E-mind mapping technique, Buzan (2005) suggests some procedures, as follows:

Step 1: starting with the keyidea or topic in the center to allow the brain to spread in all directions and to freely express ideas.

Step 2: Using an image for the main idea to help learners concentrate on all associated ideas.

Step 3: Using colors to encourage creative thinking and let learners cooperate with each other with fun, instructor gives any suggestions and explanations if required.

Step 4: Sub-ideas of main branches are connected to the main idea or picture and connect the third level of lines with the second, and so on to be easy for the brain to remember.

Step 5: Using curved lines because they are more attractive than the straight lines.

Step 6: writing one key word on each curved line in this way, the mind map is more flexible and powerful.

Step 7: Using or drawing pictures as possible because each picture conveys the meaning of a thousand words.

According to the above-mentioned theoretical background, the researcher found that the relationship between vocabulary use and metalinguistic awareness, which is relevant

and crucial in language learning, has been neglected.So, she tries to fill in this research gap and contribute to the literature by investigating the effect of e- mind mapping strategy not only on vocabulary use but also on metalinguistic awareness skills.

2. LITERATUREREVIEW

2.1.Vocabulary use:

In English as a second language (ESL) and English as a foreign language (EFL) learning vocabulary items plays a vital role in all languageskills. the parents want their children to acquire English vocabulary as early as possible to take benefit from English as an important source of academic and business career. Vocabulary learning is a challenging process because to learn a language, learners must equip themselves with a good amount of vocabulary knowledge (Nation,2011).Pikulski and Templeton (2004) claimed that, "it is almost impossible to overstate the power of words; they literally have changed and will continue to change the course of the world history. Perhaps the greatest tools we can give students for succeeding; not only in their education but more generally in life, is a large, rich vocabulary and the skills for using those words."

Nation(2016) claimed that word families facilitate second language learning.The lexical items in any language are related to each other in various ways and the appreciation of these relationships can provide structure to the comprehending of vocabulary. Moreover, realizing the complex nature of vocabulary needs understanding that word meaning does not always map on form and much vocabulary comprises formulaic sequences. Moreover, function and content words behave differently as words have semantic, grammatical, morphological and syntagmatic relationships. They also noted that learners have to learn a great number of lexical items that enable them to operate in English. This is of great challenges that facing learners in learning English. Additionally, many learners fail to achieve or meet their vocabulary-acquiring goals through language tasks and explicit learning approach needs to be utilized in promoting vocabulary learning. (Schmitt and Schmitt, 2020)

2.2.Metalinguistic Awareness

Metalinguistic awareness is defined as the ability to distance oneself from the content of language to manipulate and reflect upon its structure (Ramirez et al., 2013). It is a set of

multiple skills which are related to the formal aspects of language: phonological, morphological, syntactic and lexical awareness. Metalinguistic awareness requires the speaker to focus on the structure and form of the language and mostly develops in later stages of children‟s language acquisition at the age of 5–6, building on earlier linguistic knowledge.(Bialystok et al., 2014).

Roberts (2011) considered metalinguistic awareness as “the ability to reflect on language as a symbolic system in its own right”. It can be typically defined as the learners' capability to describe, explain and detect second language errors. Additionally, it is one's ability to consciously, think about language and its nature by having awareness of the skills detailed bellow: (Roehr, 2007):

1. Language is not merely the symbols of that language, but it may go beyond the meaning.
2. Words and their referents are rather separate (meaning is in the language speaker‟s mind, not in the words).
3. Language is based on rules and its structure can be manipulated in different ways.

Moreover, metalinguistic awareness relates to the perception that language is a communication device, associated to the rules, and shapes the basis for the ability to discuss different behaviors of language usage (Kuile, et al., 2010). Additionally, metalinguistic ability refers to the opportunity of using language above the surface structures, in an abstract way and thinking deeply it while making use of it. Metalinguistic is mainly an awareness of a language, its syntax, structures and functions that let the user of that language consciously use and think about the language. It comprises the awareness and knowledge of phonemes, morphology, syllables, and rhyme. Metalinguistic awareness is described as the capacity to focus and reflect upon the language properties. It is also the awareness of the language features that enables the speakers not only to produce utterances, but also check the linguistic structure and form underlying the meaning of these utterances (Malakoff, 1999). However,Jessner (2006) defines it as „the ability to focus attention on language as an object in itself or to think abstractly about language and, consequently, to play with or manipulate language‟. Undoubtedly, evaluating the link between the form and the meaning of an L2 word is an act which involves a certain amount of metalinguistic awareness.

2.3.E-Mind mapping strategy:

According to Springer (2014) A mind map is a means for learning new things such as words or expressions. Mind maps principally work in a parallel method that human brains do by classifying and sorting a list of issues into groups. Electronic mind maps are computer-generated mind maps which can represent complex information in an ordered, easy-to-understand visual form. In addition, E- mind mapping is a powerful e-learning and organizational technique that can visually present main topics, subtopics, concepts, images and the interrelationships among them (Ruffini, 2008). They are multi-sensory instruments that help learners use images and information relationships to assimilate, and retain information. The use of this method in taking notes allowed recall of events that transpired and the overall experience. Mind maps are utilized for several purposes and professional disciplines. These include brainstorming, presentations, note-taking, organizing flow thoughts, planning events, teaching and learning aids, classroom tasks, decision-making and critical thinking. (Budd, 2004; Edwards & Cooper, 2010).

E-Mind Maps could be applied to describe the overlapping relations among the different items and details of the data of any subject. Thus, saving and retrieval of information can be an easy process by using mind maps software. It can save EFL learner time and effort by creating associations among information, relating old and new knowledge, and correcting mistakes without repetition. Accordingly, E-Mind Maps are a creative method that improve memory, and generate ideas by operating both brain hemispheres. In this way, they assist memorization, and connect information using images or phrases that are written on the lines that connect many concepts. They can be utilized as methodological or educational means as well as an assessment way (Elsaeed, 2012). So, mind mapping makes students get engaged, works as a playbill demonstrating what comes next and draws learners‟ attention directly to the important points of the subject.

3. THEPRESENTSTUDY

Developing the middle stage students‟ vocabulary use and metalinguistic awareness is the main purpose of using E-mind mapping strategy in this present study. The researcher modeled it to the treatment group. The steps and procedures, students were going to do, were explained. And then, they were told how, when and why theyutilizeits materials.

1)Administering the pre-test for both the control and treatment groups to make sure that the participants‟ level in vocabulary use and metalinguistic awareness skills are equivalent. A comparison of the two groups‟results showed that there was no statistically significant difference in their levels of the two groups.

2) A lesson plan for the chosen units was prepared. The lesson plans were in accordance with the Teacher Guide of English for the first prep grade and the electronic mind maps were used in teaching these lessons.

3) Creating the mind maps by using the IMindMap software.

4) The researcher trained the treatment group on the use and design of the computer mapping technology (IMindMap) and how to utilize them in various classroom situations.

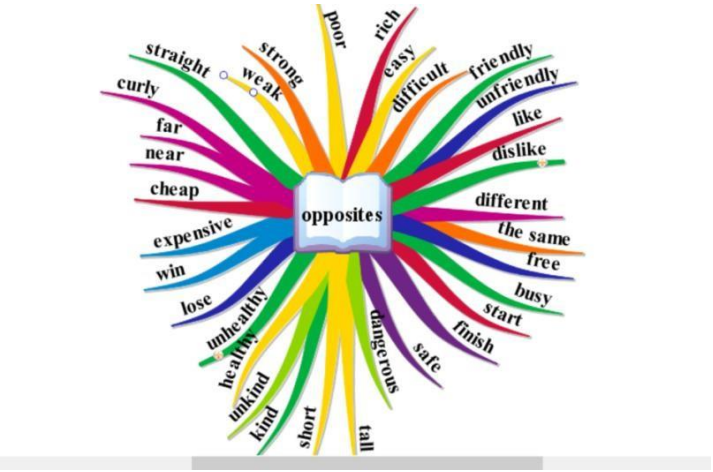
5) The researcher taught the targeted vocabulary and the metalinguistic awareness activities to both groups, control and treatment. The treatment group was taught in the computer lab using (IMindMap) software, which was pre-installed on computers, but the control group was taught in their class using the regular method. During teaching the units, the treatment groupwas put in pairs to prepare mind maps using (IMindMap).

6) The vocabulary use and metalinguistic awareness tests were administered again as a posttest to measure participants‟ achievement in both groups.

7) The answer pieces were corrected of both groups following an answer key which was prepared for this purpose. The test consisted of (25) items, one mark for every correct answer and zero for the incorrect answer. The entire score ranged from (0 to 25).

The researcher added a kind of competition by letting the participants to choose different samples of E- mind mapping. It helped a lot and even low- level ones participated and did their best because they felt encouraged through using colors, images and curved lines to learn vocabulary, use them in different contexts and develop their metalinguistic awareness skills. Figure (1) shows one example of the E- mind mapping made by the researcher and the participants in the treatment group.

Figure (1) opposites,original



4. METHODOLOGY

4.1.Design of the Study

The present study adopted the quasi – experimental design. fortymiddle school participants were assigned to two groups, treatment and control, (20) participants each. The treatment group participants received instruction through using E-mind mapping strategyfor developing EFLvocabulary use and metalinguistic awareness skills. On the otherhand, participantsin the control groupreceived regular instruction. Avocabulary use and metalinguistic awareness skills pre-posttest were administered to the two groups before and after the experiment.

4.2.Participants

The participants comprised (40) middle school participants, first year in (2019-2020) Abdel Wahab ElGoharymiddle School, Egypt. They were assigned into two groups, treatment (20 participants) and control (20 participants). It was assumed that the participants formed a homogenous group. Accordingly, they were expected to have a lot in common and wouldn‟t differ much regarding the academic quality of experience or their age.To be sure that the development of some of the participants' vocabulary use and metalinguistic awareness skillswas attributed only to the effect of the E-mind mapping strategy, the researcher attempted to control some variables to be sure that both the treatment and control groups were equivalent. These variables were:

- Age: all participants' aged 11-13 years.

- Grade: All participants were in first year middle school.
- The vocabulary use and metalinguistic awarenessskills targeted in the present study was also controlled before the study experiment.

Table 1: Both groups‟ pre results in vocabulary use test

Group	N	Mean Scores	Standard Deviation	t-value	Sig.value
Control	20	8.88	1.241	1.052	0.352
Experimental	20	8.82	1.352		

Table 1 displays that there was no considerablevariation between the mean scores of the treatment and that of the control groups of thevocabulary use pretest, t value being (1.052). This indicates homogeneity between the two groups. Consequently, the two groups were at almost the same level of performance in the vocabulary use skills. Therefore, any variance between the two groups that might happen after the experiment could be due to the effect of the experiment. The pre-test scores revealed the participants had an average low proficiency in vocabulary use skills.

Table 2: Both groups‟ pre results in Metalinguistic Awarenesstest

Group	N	Mean Scores	Standard Deviation	t-value	Sig.value
Control	20	1.825	.747	0.522	0.674
Experimental	20	1.900	.841		

Table 2indicates that there was no considerablevariation between the mean scores of the treatment and that of the control groups of themetalinguistic Awareness pretest, t value being (0.522). This indicates homogeneity between the two groups. Consequently, the two groups were at almost the same level of performance in themetalinguistic Awarenessskills. Therefore, any variance between the two groups that might happen after the experiment could be attributed to the effect of the experiment. The pre-test scores revealed the participants had an average low proficiency in metalinguistic Awareness skills.

4.3. Instrument and Procedures

Three instruments were utilized as follows:

- A questionnaire of vocabulary use skills.
- A pre posttest of vocabulary use skills.
- A questionnaire of metalinguistic Awareness skills.
- A pre posttest of metalinguistic Awareness skills.

5. RESULTS

It was hypothesized that; there is a statistically significant variance between the treatment and control groups posttest scores in the vocabulary use test, favoring the treatment group.To verify this hypothesis, the Independent sample t-test was used to compare the mean scores of the treatment group students who used the E-mind mapping strategywith those of the control group students who were taught through regular instruction, in the post-test. Results are showed in table 3.

Table 3: Comparing both groups post vocabulary use test results

Group	N	Mean Scores	Standard Deviation	t-value	df
Control	20	16.38	3.15	23.65	24
Experimental	20	21.74	2.03		

*Significant at (0.05)

Table 3 indicates that there is a statistically significant variance between both groups in favor of the treatment group in the post administration of vocabulary use test, t-value being (23.65) is significant at (0,05) level. So, the first hypothesis was verified, and it is concluded that the treatment group outperformed the control one in the posttest.

It was hypothesized that; there is a statistically significant difference between the mean scores of the treatment group at the pre-posttest scores of the Vocabulary Usetest,favoring the post test scores. A paired samples t-test was used to verify this hypothesis as shown in table4.

Table 4: Comparing the treatment group pre to post Vocabulary Usetest results

Test	N	Mean Scores	Standard Deviation	t-value	df
Pre	20	8.87	2.228	24.33	24
Post	20	22.67	1.474		

*Significant at (0.05)

Table 4 indicates that there is a statistically significant variance between the pre and the post administrations of Vocabulary Use test of the treatment group favoring the post results, t-value being (24.33) significant at,0.05. Therefore, the second hypothesis was verified, and it is concluded that the post administrating outperformed the pre one of the EFL Vocabulary Use test.

It was hypothesized that; E-mind mapping strategy has a positive effect on developing Vocabulary Use for EFL middle school students. Cohen's formula was applied to verify this hypothesis as indicated in table 5.

Table 5: Results of Cohen's formula comparing the pre to post administrations of the treatment group

Test	N	Mean Scores	Standard Deviation	t-value	df	Effect Size
Pre	20	9.14	3.14	24.01	24	0.72
Post	20	23.24	1.93			

Cohen's formula was utilized to verify the effect of the strategy. The impact was measured through the Cohen's equation. As indicated in table (5), it is obvious that the final value of Cohen's equation for the treatment group, comparing its pre to post administrations of the vocabulary use result is (0.72) significant at (0.05). Built on that, it is concluded that there is a positive effect of the E-mind mapping strategy in developing vocabulary use skillsfor participants at the middle school.

It was hypothesized that; there is a statistically significant difference between the treatment and control groups posttest scores in the metalinguistic awareness skills test, favoring the treatment group.To verify this hypothesis, the Independent sample t-test was utilized to compare the mean scores of the treatment group students who used the E-mind mapping strategywith those of the control group students who were taught through regular instruction, in the post-test. Results are presented in table 6.

Table 6: Comparing both groupsmetalinguistic awareness skills post test results

Group	N	Mean Scores	Standard Deviation	t-value	df
Control	20	7.49	1.36	18.6	19
Experimental	20	17.98	3.59		

*Significant at (0.05)

Table 6showed that there is a statistically considerable difference between both groups favoring the treatment group in the post administration of themetalinguistic awareness skillstest, t-value being (18.6) is significant at (0,05) level. Subsequently, the hypothesis was verified, and it is concluded that the treatment group outperformed the control one in the posttest.

It was hypothesized that; there is a statistically considerable difference between the mean scores of the treatment group at the pre-posttest scores of the metalinguistic awareness skills,favoring the post test scores. A paired samples t-test was utilized to verify this hypothesis as indicated in table7.

Table 7: Comparing the treatment group pre to post metalinguistic awareness skillstest results

Test	N	Mean Scores	Standard Deviation	t-value	df
Pre	20	6.98	.51	11.98	19
Post	20	3.78	5.01		

*Significant at (0.05)

Table 7 indicates that there is a statistically considerable difference between the pre and the post administrations of metalinguistic awareness skillstest of the treatment group favoring the post results, t-value being (11.98) significant at,0.05. So, the hypothesis was verified, and it is concluded that the post administrating outperformed the pre one of the EFL metalinguistic awareness skillstest.

It was hypothesized that; E-mind mapping strategy has a positive effect on developing metalinguistic awareness skillsfor EFL middle school students. Cohen's formula was used to verify this hypothesis as shown in table 8.

Table 8: Results of Cohen's formula comparing the pre to post administrations of the treatment group

Test	N	Mean Scores	Standard Deviation	t-value	Effect Size
Pre	20	6.97	0.51	2.38	0.65
Post	20	3.98	5.12		

Cohen's formula was used to verify the impact of the strategy. The impact was measured through the Cohen's equation. As showed in table (8), it is noticeable that the final value of Cohen's equation for the treatment group, comparing its pre to post administrations of the metalinguistic awareness skillsresult is (0.65) significant at (0.05). Built on that, it is concluded that there is a positive effect of the E-mind mapping strategy in developing metalinguistic awareness skillsfor participants at the middle school. At the end of the present study, the results of the study proved that:

1) the treatment group outperformed the control group in the post administration of the vocabulary use test as there is a statistically considerable difference at (0.01) level between the mean scores of the control and treatment groups in the postvocabulary use test results, favoring the treatment group.
2) The post administration outperformed the pre one of the EFL vocabulary use test as there is a statistically significant difference at (0.01) level between the mean scores of the pre-post vocabulary use test results of the treatment group, favoring the post results.

3) E-mind mapping strategy has a positive effect on the participants' vocabulary use. This means thatE-mind mapping strategy contributed to an improvement in the participants'vocabulary use skills.
4) the treatment group outperformed the control group in the post administration of the metalinguistic awareness test as there is a statistically considerable difference at (0.01) level between the mean scores of the control and treatment groups in the postmetalinguistic awarenesstest results, favoring the treatment group.
5) The post administration outperformed the pre one of the EFL metalinguistic awareness test as there is a statistically significant difference at (0.01) level between the mean scores of the pre- post metalinguistic awareness test results of the treatment group, favoring the post results.
6) E-mind mapping strategy has a positive effect on the participants' metalinguistic awareness skills. This means thatE-mind mapping strategy contributed to an improvement in the participants'metalinguistic awareness skills.

6. DISCUSSION

It was found that E-mind mapping strategyproduced good results to the learners‟vocabulary use and metalinguistic awareness skills. E-mind mapping strategy improved the students‟ utilizing of vocabulary. This result supports Wang and Dostal (2018) who state that E-mind mapping strategyis an excellent strategy for teaching vocabulary.

E-mind maps were utilized in presenting vocabulary by using Imind map software by drawing mind maps with the main topic in the center of the page and presenting each word with its usage and related words. They also were used as a brainstorming tool to elicit words, designing activities, home assignments, revision and feedback. Moreover, they help learners identify words as parts of speech, recognize parts of sentences, kinds of sentences, and detect the grammatical errors. This leaded to the improvement of their metalinguistic awareness which is a byproduct that relates to the vocabulary use improvement.This finding is matching with the study result of Bahadori&Gorjian (2016)saying that mind mapping software help learners classify vocabulary, arrange their ideas visually, activate their background knowledge,and remember prior information. The colorful nature of mind mapping enables learners to memorize vocabulary easily and guessing unknown words by looking at the related picture or the word antonym. Moreover, this supports the saying that a picture is worth a thousand words.It was obvious that when the learner face passive vocabulary, his

brain immediately associated it with the vision of the related mind map. Thus, E-mind mapping strategy gave significant effect on the students‟ vocabulary use and metalinguistic awareness. This finding agrees with the result of previous studies conducted by Abdul Aziz &Yamat (2016),Rabea (2016), Qasrawi (2015), Abu Rezeq (2014), Eid (2014), Awad (2013) and Wafi (2013)

During the experimentation, it was noticed that the participants had a positive attitude towards E- mind mapping strategy. For participants, the vocabulary use and metalinguistic awareness activities using the strategy progressed their attitudes towards them, increased their motivation and involvement and improved their performance.

7. CONCLUSION

The results of the present study evidenced that there is a statisticallysignificant variance at (0.01) level between the mean scores ofthe pre- and post- measurements of the treatment group in thevocabulary use and metalinguistic awarenesstest favoring the post-measurement. Also, there is astatistically significant difference at (0.01) level between the meanscores of the control and treatment groups in the post measurementsof the vocabulary use and metalinguistic awareness test favoring the treatmentgroup.This result showed that the E-mind mapping strategy has a positive effect on the participants' vocabulary use and metalinguistic awareness. The students in the treatment groupoutperformed the students in the control group in the post-vocabulary use and metalinguistic awarenesstest results. This means that the E-mind mapping strategy contributed to an improvement in the students' vocabulary use and metalinguistic awareness. Based on the results attained throughout the present study, it can be concluded thatE-mind mapping strategy:

1) Improved students' vocabulary use and metalinguistic awarenessas their test results show.
2) Enabled students to use their own prior knowledge to make connections.
3) Considered the individual differences and create a cooperation environment among learners.
4) Provided variety of visual attractionsthat reducestudents' boredom and let them have sense of creativity.

8. RECOMMENDATIONS

Depending on the results of the present study, the followingrecommendations can be assumed:

1) Instructors should avoid dominating the classroom. They should deliver the responsibility to the learners to administrate their own learning processin order to build self-confidence and self-autonomy.
2) Developing E-mind mapping for each level in basiceducation schools is a good move that would positively affect EFL teaching process in Egypt.E-mind mapping is anappropriate implementation for Egyptian students starting from the beginnerlevel onwards.
3) E-mind mapping strategy takes into consideration the that students learn better through visualization and they feel relaxed and inspired when using colors. Teachers should be aware of their students' needs and abilities to include appropriate activities that go in harmony with students' abilities.
4) Applying E-mind mapping strategy as an alternative to regular way in teaching vocabulary because it can help the students in comprehending in an easier way.
5) Encourage teachers to implement activities that require this kind of group work strategy which activate and motivate students to learn.
6) Have Training sessions on how to use and build up E-mind mapping strategy in teaching.
7) Encourage learnersto learn new vocabulary metalinguistically. That will help improve their vocabularyuse and acquisition skills.
8) Provide support for the learners to be able to obtainlifelong learning through using new strategies such as E-mind mapping strategy.

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