The Impact of an E-mind Mapping Strategy on Improving Basic Stage Students' English Vocabulary

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Abstract

Vocabulary knowledge is a challenging assignment for foreign language learners. As such, the current paper investigated the effect of E-mind mapping method on dealing with such assignment in an EFL setting. To acquire the goal of the study, the quasi-experimental research format was observed via having an experimental crew entailing 25 students and a manage group consisting of 25 students. post vocabulary check was developed. The present find out about reported statistically large outcomes in the suggest scores of the E-mind mapping crew that are attributed to the instructional strategy; hence students in the E- thought mapping crew outperformed the control crew in their normal vocabulary overall performance as nicely as in the vocabulary sub-skills. The most developed sub skill was once precision, and the least developed sub ability was once on generalization.

Keywords: Vocabulary achievement, vocabulary sub skills, E-mind mapping, EFL.

1. Introduction

Language achievement, on the part of the learner, includes acquiring the vocabulary of the target language which will permit the learner to characteristic properly in in any given text. The variety of vocabulary, additionally, enriches second and foreign language acquisition. In the procedure of vocabulary learning, it is critical now not solely to know the meaning of a unique word, however also its utilization (August et al., 2005).

Due to its significance, vocabulary information is a prerequisite to understand more than a few textual contents. Specifically, vocabulary is now not only the information of words, but additionally is the know-how of word meanings. In the identical vein, Stahl (2005) pointed out that vocabulary know-how is extra than word definition, however rather it is how that phrase is used in context (Best et al., 2005).

To research vocabulary, it is important to use express guidance of vocabulary getting to know approach to facilitate their understanding and attention of vocabulary learning techniques that they can use backyard lecture room to analyze new words (Mukoroli, 2011).

The potential to apprehend vocabulary is important for fine English learning. However, gaining knowledge of and memorizing new vocabulary is a difficult task for college students getting to know English as an overseas language (EFL). Students' confined vocabulary has restricted their capacities in studying English, particularly in phrases of analyzing and writing competencies. The traditional way of instructing and vocabulary gaining knowledge of approach such as imparting word explanations and repetitive practices is now not positive for college students (Howida M.A. Masoud, 2017).

According to Nation (2001): "learning vocabulary is a cumulative technique and that it ought to be deliberately taught, learned, and recycled. This is imperative for quite a few reasons: 1) beginners need to come upon the words in a variety of wealthy contexts, regularly requiring up to sixteen encounters, 2) learners have in mind words when they have manipulated them in different ways, so variety is vital for vocabulary teaching, and 3) learners neglect words inside the first twenty-four hours after class, so it is important to follow up a vocabulary lesson with homework that recycles the words" (Howida M.A. Masoud, 2017).

In spite of this, Ghazal, (1997) mentions that "teaching vocabulary is by and large regarded an addition to teaching grammar or clearly a by-product of language educating and communicative features for many years. Since the mid- 1990s, things have changed. The function of vocabulary know-how has been recognized by way of theorists and researchers. Accordingly, several kinds of approaches, techniques, workout routines and exercise have been introduced into the discipline of instructing vocabulary. In different words, vocabulary has received a higher fame with increased pursuits from researchers, instructors and cloth designers".

Novak & Cañas (2007) argues that "the success in gaining knowledge of a language is decided through the measurement of the vocabulary one has learned." But it is not solely important how many phrases are learned however additionally how many words are remembered. Involving in word remembering, information of memory sensory has a vital value. Learning new items includes storing them first in short term memory, and afterwards in long-term memory. There are many elements affecting phrase storage such as the way phrases are presented, phrase frequency or how phrases are recycled. Wilkinson (2017) suggests reminiscence techniques to useful resource learning. These include:

•creating mental linkages (grouping, associating, setting new phrases into context)

•applying pictures and sounds (using imagery, semantic

•mapping, the usage of keywords and representing sounds in memory).

•reviewing well in structured way.

•employing motion (physical response or sensation or the use of mechanical techniques).

From these reminiscence strategies, words can be saved in one's long-term memory. Moreover, it is believed that language newbies only use their left-brain to collect vocabulary as

it is stated that left talent is for logical and rational thinking, which include words and languages. The proper talent is for feeling, imagination rules, symbols or images; in other words, it is for creativity and visualization. Therefore, novices want to balance the use of each hemispheres of the Genius to assume flawlessly and get the satisfactory outcomes of studying vocabulary (Jbeili, 2013).

Mind maps and diagrams are cautioned for each memory sensory strategies and the concept of left and proper Genius aggregate in getting to know language. To use thought maps and diagrams is to apply photographs so that language items can attain long-term reminiscence as properly as to stimulate the entire intelligence via appealing to each innovative and logical facets of the brain. Mind maps and diagrams permit students to clarify their ideas by means of categorizing and grouping associated ideas. As Wilkinson (2017) says," Acquiring a vocabulary requires now not only labeling but categorizing skills."

Mind mapping

What is Mind Mapping? Mind mapping is a particularly nice way of getting records in and out of the brain. It is an innovative and logical capacity of note- taking and note-making that literally "maps out" one's thoughts (Sabbah, 2015).

All idea maps have some matters in common. They have a natural organizational structure that radiates from the center and use lines, symbols, words, color and pics according to simple, brain-friendly concepts. Mind mapping converts a long list of monotonous information into a colorful, memorable and relatively prepared plan that works in line with the brain's herbal way of doing matters (Wheeldon & Faubert, 2009).

One easy way to recognize a mind map is with the aid of evaluating it to a map of a city. The metropolis middle represents the most important idea; the primary roads main from the center signify the key thoughts in the wondering process; the secondary roads or branches symbolize one's secondary thoughts, and so on. Special pictures or shapes can characterize landmarks of pastime or especially applicable ideas (Bawaneh, 2019).

The notable issue about idea mapping is that ideas can be put down in any order, as soon as they pop into the head. One is no longer constrained by using thinking in order. Simply, throw out any and all ideas, then fear about reorganizing them later. The Mind Map is the exterior mirror of your own radiant or herbal questioning facilitated by using a effective photo process, which presents the standard key to unlock the dynamic plausible of the talent (Mckeown et al., 1998).

Benefits of Teaching with Mind Maps:

Buran & Filyukov (2015) explain, Benefits of teaching with mind maps:

•They mechanically encourage pastime in the students, for this reason making them more receptive and co-operative in the classroom.

•They make lessons and shows more spontaneous, creative, and enjoyable, each for the trainer and the students.

•Rather than final pretty inflexible as the years go by, the teacher's notes are flexible and adaptable. In these instances of fast change and development, the teacher wishes to be able to alter and add to educating notes shortly and easily.

•Because mind maps existing solely applicable cloth in a clear and memorable form, the college students tend to get better marks in examinations.

•Unlike linear text, mind maps show now not just the facts but the relationships between these facts, for this reason giving the college students a deeper appreciation of the subject.

•The physical volume of lecture notes is dramatically decreased

How to Make a Mind Map

Buran & Filyukov (2015) also explain, benefits of educating with thinking maps:

•They routinely encourage interest in the students, for that reason Think of your typical foremost theme and write that down in the middle of the page. i.e., Food.

•Figure out sub-themes of your important thought and draw branches to them from the center, opening to seem like a spider web.

•Make certain to use very quick phrases or even single words. Add snap shots to invoke concept or get the message throughout better.

•Try to think of at least two foremost points for each subtheme you created and create branches out to these (Wright, 2011).

2. Method

The cutting-edge learn about followed a quasi-experimental graph by phrases of the use of one experimental group and one manage group. The impartial variable is the teaching method. It has two levels: the E-mind mapping vs. the conventional. The established variable is the students' vocabulary achievement with predictor references to its sub skills: generalization, precision, application, and breadth.

3. Participants

30 intermediate-level EFL students (female) were recruited for this study from two teacher education centers in Saravan that were selected based on an Oxford Placement Test. These participants divided into two groups: a control group (without subtitle) and an experimental group (with English subtitle).

4. Instrument

An additional dimension of word expertise is the consideration of the relationship a word might have with other phrases (Wright, 2011). students' draw close of one phrase is linked to their expertise of different words. In fact, mastering the vocabulary of a discipline have to be notion of as studying about the interconnectedness of thoughts and concepts indexed via phrases (Wheeldon & Faubert, 2009). encapsulated many of these dimensions, such as the following: Generalization: The ability to outline a word, application: Selecting an suitable use of the word, breadth: Knowledge of synonyms and more than one meanings, and precision: The capacity to apply a time period efficiently to all situations These skills have been proposed by using many authors (Novak & Cañas, 2007) to be delivered by means of the E-mind mapping with the aims of reaching improvement in students' reading comprehension and

vocabulary mastering and the use of brainstorming at the pre- ranges of both as a suggest to strengthen each. In other words, the vocabulary capabilities have been investigated; definition, synonyms and antonyms, usage as nicely as word phase of speech, and word's section (suffixes and prefixes). More specifically, the pre-post vocabulary test covered the four sub abilities of vocabulary that frequently correspond to the hints of the Jordanian Ministry of Education; application, generalization, breadth, and precision. The total mark of the take a look at is forty, with ten marks for every sub skill. It covered seven questions dealing with giving definition, matching, giving synonyms, filling the blanks, guessing the meaning from context and figuring out the suffixes, using word in meaningful sentences, deciding the pronunciation of words.

5. The Instructional Program

To achieve the reason of the study, the researchers designed an educational software for educating E-mind mapping to enhance seventh grade students' vocabulary knowledge. In order to observe E-mind mapping in this study, the researchers' content analyzed the vocabulary things to do to have a look at the extent of these activities protected in Action Pack 7 textbook and a Table of specification was once prepared. They also referred to the normal guidelines of the Jordanian Ministry of Education. Then, they redesigned these things to do in mild of E-mind mapping in a way to fit them in the academic program. The length of the program used to be seven weeks given in a 45-minute session frame, preceded and observed by way of pre-post vocabulary test. The study focused the vocabulary sub skills namely; generalization, application, precision, and breadth. The educational program has the following aims; facilitating the recalling of the indispensable vocabulary to recognize the message of passages, emphasizing how the usage of E-mind mapping can enhance students' overall performance in vocabulary sub skill, and incorporating technology into vocabulary syllabus.

In this study, E-mind mapping had a quantity of activities. Specifically, it involved typing a central notion and collectively with other relevant thoughts which radiate out from the center. It was very tons predicted that when college students focused on key ideas, they added their own words and then they looked for branches out and set up connections between ideas. The researchers accompanied Buzan's (1993) techniques and steps for growing mind maps however as built-in with a software the usage of a central image, greater than three colors, images, exclusive dimension of font, thickness of the lines and the scale of the graphs to make a clear idea map. Students have been supplied with colored papers, colors, shade markers to teach them on how to create paper- based mind maps. This helped them to apprehend the thought of E-mind mapping.

Students made their personal thought maps with the help of the researchers' demonstration and internet site and introduced them in the classroom. Then E- mind maps have been introduced in public to persuade the audience. Particularly, the researcher observed the following strategies to educate this group. 1- Introducing vocabulary skills; vocabulary definition and its sub skills; synonyms- antonyms, examples, description& definition, and word's section of speech, which can be categorized into 4 skills according to (Sabbah, 2015); generalization, application, breadth, and precision. 2- Introducing the mind mapping in the 2d

lesson: the phrase thought mapping on the white board was once written observed by questions on students' expectations concerning what thinking mapping is. Ideas were, in consequence, given and discussed them. Then 4 questions about idea mapping and defined each question in detail. The questions were:

A.What is mind mapping?

B.How do we use mind maps?

1.Identifying main and sub topics, and the concepts and ideas related to them.

2.Drawing a shape in the middle of the page and writing inside it the main topic or subject of the text.

3.Drawing lines with different colors out of this shape according the number of sub-topics, wide at the beginning, and then curling until they are pointed at the end. At the top of each sub topic, the sub ideas were.

4.The mind should be left as free as possible to make associations and connections.

C.What are the benefits of a mind map?

In every lesson, students created E-mind maps in three stages; pre reading, while reading, and publish reading. In pre-studying stage, students began developing E-mind maps for every object then imparting them to get feedback. After introducing the vocabulary, they moved to whilst analyzing stage in which there used to be extra focus on vocabulary, key ideas, sequence, and outlining.

Then they started out developing E-mind maps in publish studying based in the questions given after the text. Later on, they commenced developing E-mind maps on kidspiration in the first lessons, maps have been created in the study room laptop the use of the projector. Then, students had been requested to create their very own E-mind maps on their computer individually. At the cease of the session, the teacher requested college students to flip off their computers and assessed and evaluated students' vocabulary learning. 3- Timing: the fabulous time for developing every E-mind map for vocabulary was recognized 4- Practicing: the vocabulary items in six classes on modules 4 and 5 in Action pack 7 have been taught.

6.Data analysis

This study used to be carried out 30 intermediate-level EFL students in the public schools in Saravan, in the second semester of the academic year 2021- 2022. Additionally, the outcomes have been restricted to the posttest, which was once used to measure students' vocabulary. The take a look at measured only four vocabulary sub skills.

To perform one-way analysis of covariance (One Way ANCOVA), we must first check the assumptions of this analysis, because the accuracy of the results obtained from analysis of covariance is based on the acceptance of the following assumptions.

The assumptions that must be considered before performing ANCOVA analysis are as follows:

1.The research data in each group should follow the normal distribution (the rest of the model should have a normal distribution).

2.There is no outdated data between observations.

3.The variance is the same between the groups (assuming homogeneity of variances)

4.There is a significant linear relationship between pre-test and post-test scores.

5.The slope of the regression lines is the same for the two linear regression models of the control and experimental groups (assuming the homogeneity of the slope of the regression lines or the parallelism of the slope of the regression lines).

Now we turn to each of the defaults.

1.The research data in each group should follow the normal distribution (the rest of the model should have a normal distribution).

At first, we examine the normality of the data for each group. For this purpose, we use Kolmogorov-Smirnov and Shapiro-Wilk normality tests and the results of this test are as follows:

Table 1. Test of normality of research data

		Kolmogorov-Smirnov test			**Shapiro Wilk test**		
	group	Test statistics	Degrees of freedom(df)	Significance level(P)	Test statistics	Degrees of freedom(df)	Significance level(P)
Pre-test	control	124/0	15	2/0	967/0	15	807/0
	experimental	135/0	15	2/0	925/0	15	226/0
Post-test	control	163/0	15	2/0	918/0	15	180/0
	experimental	118/0	15	2/0	966/0	15	790/0

According to the above table, for pre-test scores, the significance level of Kolmogorov-Smirnov test for both control and experimental groups was equal to 0.2 and because this value is greater than 0.05, at the level of 5% error of normal scores The pre-test is not rejected for these two groups. Also, based on Shapiro-Wilk test, the significance level of this test for the two control and experimental groups was reported to be 0.807 and 0.226, respectively, and since both of these values are greater than 0.05, at the level of 5% normal error. The existence of pre-test scores for these two groups is not ruled out.

For post-test scores, the significance level of Kolmogorov-Smirnov test for both control and experimental groups was equal to 0.2 and because this value is greater than 0.05, the error level of post-test scores for these two groups was rejected at the error level of 5%. Does not work. Also, based on Shapiro-Wilk test, the significance level of this test for the two groups of control and experiment was reported to be equal to 0.180 and 0.790, respectively, and since both of these values are greater than 0.05, at an error level of 5% normal. The existence of post-test scores for these two groups is not ruled out.

Now we check the rest of the model as follows:

Table 2. Residual normality test of the model

		Kolmogorov-Smirnov test			Shapiro Wilk test		
	group	Test statistics	Degrees of freedom(df)	Significance level(P)	Test statistics	Degrees of freedom(df)	Significance level(P)
Remnants of the model	control	173/0	15	2/0	932/0	15	294/0
	experimental	145/0	15	2/0	941/0	15	401/0

The significance level of Kolmogorov-Smirnov test for both control and experimental groups was equal to 0.2 and because this value is greater than 0.05, at the error level of 5%, the normality of the residuals of the model for these two groups is not rejected. Also, based on Shapiro-Wilk test, the significance level of this test for the two groups of control and experiment was reported to be 0.294 and 0.401, respectively, and because both of these values are more than 0.05, at the level of 5% normal error. The existence of residuals of the model for these two groups is not ruled out.

Thus, the first default setting was examined.

2.The variance is the same between the groups (assuming homogeneity of variances)

To test the above default, we use a test of equality of variances called the Leven test. The result of this test is as follows:

	Statistics F	Significance level(P)
Post-test scores	384/0	54/0

As can be seen, the value of the reported significance level is equal to 0.54 and because this value is greater than 0.05, the homogeneity of variance of post- test scores between groups is not rejected at the error level of 5% and it can be said that the variance of post-test scores between the groups are the same and thus the establishment of this default was also checked.

3. There is a significant linear relationship between pre-test and post-test scores.

To test this default, we use the Pearson linear correlation coefficient test. The result of this test is as follows:

Table 4. Pearson correlation coefficient test

	N	Pearson correlation coefficient (r)	Significance level(P)
Pre-test and post-test scores	30	612/0	001/0>

The significance level of Pearson linear correlation test is less than 0.001 and because this value is less than 0.05, it can be said that there is a significant linear relationship between the two variables at the 5% error level and the strength and intensity of this linear relationship. Is

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equal to 61% and is also direct in relation to the relationship and this establishment of this default was also examined.

4.In the table below, descriptive statistics including mean statistical indices and standard deviation of post-test scores for each group are reported separately.

Table 5. Descriptive statistics of post-test scores

Group	Mean	Standard deviation
Control	80/54	453/11
experimental	80	402/11

The mean and standard deviation of the post-test scores of the control group were 54.80 and 11.453, respectively, and also the mean and standard deviation of the post-test scores of the experimental group were 80 and 11.402, respectively.

The results of analysis of variance are as follows:

Table 6. The results of analysis of variance

Source of changes	sum of squares	Degrees of freedom(df)	Mean square	Statistics F	Significance level(P)
Width of origin	246/1089	1	246/1089	638/184	001/0>
Pre-test	117/3497	1	117/3497	796/592	001/0>
Group	755/5106	1	755/5106	646/865	001/0>
Error	283/159	27	899/5		
Total	144702	30			

7.Findings and Discussion

The reported significance level for the pretest is less than 0.001 and since this value is less than 0.05, it can be concluded at the 5% error level that the pretest is significant, in the sense that there is a correlation between the pretest and posttest scores and There is a significant linear relationship. In other words, the hypothesis that it is not necessary to measure pre-test scores is rejected and we therefore accept that the measurement of pre-test scores has been effective in the study.

Also, the value of the reported significance level for the group is less than 0.001 and since this value is less than 0.05, it can be concluded at the error level of 5% that the group factor is significant. In other words, by applying the intervention, there is a significant difference between the scores of the experimental and control groups, and thus it can be concluded that the intervention based on teaching English words using the mind map method in increasing grades and in other words in increasing students' learning. It has had a significant effect.

8.Conclusions

From the findings and interpretations noted above, some conclusions should be presented. First, this learns about established that E-mind mapping accelerated students'

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vocabulary achievements in check scores. These consequences are similar to those with the aid of some different research. (e.g., Jebili, 2013; Sabbah, 2015; Mukoroli, J. (2011); Mohaidat, 2018).

The existing learn about proved that the digital idea mapping approach excelled the effect of the paper based totally mind mapping, because it was once easier, faster, and extra attractive. This conclusion is in congruence with different research findings (viz. Jebili, 2013; Sabbah, 2015; Mukoroli, J. (2011); Hooper, n.d).

Secondly, using E-mind mapping method in the existing find out about proved its capacity of transforming the classification into extra cheerful and colorful environment. The mind mapping method proved to be a nice approach in teaching. This is line with different research (e.g., Best, R. M., Rowe, M., Ozuru, Y., & Mcnamara, D. S. 2005).

Thirdly, mind mapping expanded students' ideas further and increased their self-confidence; to this end, interconnectedness among isolated units or items was created and enabled students to organize and manage knowledge learned. This conclusion is in congruence with other researchers (e.g., Mohaidat, 2018; August, D., Carlo, M., Dressler, C., & Snow, C. 2005; Buran & Filyukov, 2015) who stated that Mind Map helps students achieve a deeper understanding of their knowledge.

Finally, the usage of E-mind for teaching vocabulary activated the vocabulary sub-skills of generalization, application, breadth, and precision. Based on the consequences of the study, the following tips are put forth:

•Teachers are prompted to use thinking mapping integrated with any technological device or software, which helps to organize thoughts, make greater positive factors in vocabulary acquisition and more accuracy in vocabulary knowledge. It permits students to enhance phrase and notion knowledge.

•The Ministry of Education is invited to instruct teachers on making use of E-mind mapping, and it can undertake softwires that can be discovered on net to integrate it with thought mapping. Of feasible hobby is improving students' vocabulary information and developing other vocabulary skills, language competencies are integrative.

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