

**An-Najah National University
Faculty of Graduate Studies**

**The impact of Using Mental Maps on the 11th
Graders' English Vocabulary Learning at
The Public Schools in Ramallah**

**By
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Dr. Fawaz Aqel**

**This Thesis is Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Method of
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2020

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This thesis was defended successfully on 23/07/2020 and approved by:

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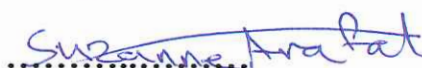
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Dedication

This thesis is dedicated to:

My family for their help, encouragement, and support. I would also like to thank my fiancée Shaima Roumeih for her continuous support to complete my Master's Degree.

Special thanks to my close friends: Hussam Salamah, Sami Mutair, Muhammed Sameeh, Oday Mutair and Fares Zaid who stand and support me when things get tough.

My colleagues and my wonderful students for their genuine support and love.

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Finally, I would like to extend my gratitude and respect to my family for their support, trust and encouragement.

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الإقرار

أنا الموقع أدناه، مقدم الرسالة التي تحمل العنوان:

أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب
الصف الحادي عشر في المدارس الحكومية في مدينة رام الله

The impact of Using Mental Maps on the 11th Graders' English Vocabulary Learning at The Public Schools in Ramallah

أقر بأن ما اشتملت عليه هذه الرسالة إنما هي نتاج جهدي الخاص، باستثناء ما تمت
الإشارة إليه حيثما ورد، وأن هذه الرسالة ككل، أو أي جزء منها لم يقدم من قبل لنيل أية درجة
علمية أو بحث علمي أو بحثي لدى أية مؤسسة تعليمية أو بحثية أخرى.

Declaration

The work provided in this thesis unless otherwise referenced, is the
researcher's own work, and has not been submitted elsewhere for any other
degree or qualification.

Student's Name: **Muhammed Musa M. Mutair** اسم الطالب:

Signature: Muhammed التوقيع:

Date: **23/07/2020** التاريخ:

Table of Contents

Subject	Page
Defense Committee Members	ii
Dedication	iii
Acknowledgement	iv
Declaration	v
Table of contents	vi
List of Tables	viii
List of Figures	ix
List of appendixes	x
Abstract	xi
Chapter One: Introduction and Theoretical Background	
1.1 Introduction and Theoretical background	2
1.2 Statement of the problem	4
1.3 Objectives of the study	5
1.4 Research questions	5
1.5 Hypotheses of the study	6
1.6 Significance of the study	6
1.7 Limitations of the study	7
1.8 Definition definitions of the terms	8
1.9 Summary	8
Chapter Two: Review of Related Literature	
2.1 Introduction	10
2.2 Vocabulary	10
2.3 Mental Mapping	17
2.3.1 Theoretical Framework	19
2.3.2 Mental Mapping and Vocabulary	21
2.4 Literature Review	23
2.5 Summary and commentary on the previous studies	29
Chapter Three: Methodology and Procedures	
3.1 Introduction	33
3.2 Methodology	33
3.3 Research Questions	34
3.4 Hypotheses of the Study	34
3.5 Population of the study	35
3.6 Sample of the study	35
3.7 Instrument of the study	35
3.7.1 The vocabulary test	36
3.8 Validity of the vocabulary test	37

Subject	Page
3.9 Reliability of the vocabulary test	37
3.10 Variables of the study	38
3.11 Statistical Analysis	38
3.12 Procedures of the study	38
3.13 Summary	39
Chapter Four: The Results of the Study	
4.1 Introduction	41
4.2 Results of the first question	41
4.3 Results of the second question	42
4.4 Results of the third question	43
4.5 Summary	44
Chapter Five: Discussion, Conclusions and Recommendations	
5.1 Introduction	47
5.2 Discussion of the results of the first question	47
5.3 Discussion of the results of the second question	49
5.4 Discussion of the results of the third question	49
5.5 Conclusions	51
5.6 Recommendations	52
5.7 Summary	53
References	54
Appendixes	62
الملخص	ب

List of Tables

Table No.	Title	Page
Table (3.1)	Study sample of Al-Bireh Secondary School	35
Table (3.2)	Distribution of test questions based on the level of objectives	37
Table (3.3)	The results of Cronbach alpha test	37
Table (4.1)	Result of the Paired Sample t-test for the experimental group	42
Table (4.2)	Eta square and d-Cohen	42
Table (4.3)	Independent T-test for pretest in Control and Experimental groups	43
Table (4.4)	Independent T-test for posttest in Control and Experimental groups	44

List of Diagrams

Diagram No.	Title	Page
Diagram (1)	Experimental Design	33

List of appendixes

Appendix No.	Appendixes	Page
Appendix (1)	Task facilitation document to the Ministry of Education	63
Appendix (2)	Task facilitation document directed from the Ministry of Education Ramallah	64
Appendix (3)	A proof paper of vocabulary test	65
Appendix (4)	English Vocabulary Test	66

**The impact of Using Mental Maps on the 11th Graders' English
Vocabulary Learning at The Public Schools in Ramallah**

By

Muhammed Musa Mutair

Supervisor

Dr. Fawaz Aqel

Abstract

This study aimed to investigate the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah. To achieve this, the researcher applied the quasi experimental approach. The sample of the study consisted of (60) male students from the eleventh graders at Al-Bireh Secondary School for boys in Ramallah. They were split into two groups (control and experimental). The control group consisted of (30) students and the experimental group (30) students. The two groups were randomly selected. The experimental group was taught using the mental maps strategy while the control group learnt the material through the traditional teaching. The researcher applied a pre-post vocabulary test to achieve the aims of the study. The vocabulary test consisted of five questions.

The data of the tests were analyzed using t-test independent sample to decide if there are significant differences between the two groups. Effect size and Eta square were also applied to measure the effect size of mental map strategy.

The results of the study showed that there are statistically significant differences in the mean scores of the control and experimental groups in

the vocabulary posttest in favor of the experimental group due to the use of mental map.

In the light of the results of the study, the researcher recommends teachers to apply mental maps in teaching different skills in English, to change the traditional way of teaching and present new methods in teaching vocabulary. The researcher also recommends decision makers and curriculum designers to add mental maps in curricula and instructional materials. Furthermore, supervisors are recommended to develop training courses, provide, and organize materials, books, and workshops for teachers about mental maps.

Chapter One

Introduction and Theoretical background

1.1 Introduction and Theoretical Background

1.2 Statement of the problem

1.3 Objectives of the study

1.4 Research questions

1.5 Hypotheses of the study

1.6 Significance of the study

1.7 Limitations of the study

1.8 Definition of the terms

1.9 Summary

Chapter One

Introduction and Theoretical background

1.1 Introduction and Theoretical Background

The world we live in has a variety of nationalities and languages. One of the most spoken and common languages is English. It is considered as a global and a widely spread language all over the world. Schools were originally established to teach students languages. The main concern of the (English as a Foreign Language) EFL teachers, lessons and courses in the Palestinian schools is to create competent students who are able to use the language effectively. Moreover, English language is the language of social media, knowledge, commerce and is spoken and written by most of the students around the world (Mourtaga, 2004).

Vocabulary is a crucial component of the English language. It is vital and fundamental toward developing skillful students and learners. There is no meaningful communication without vocabulary. As a result, good knowledge of vocabulary is a major and necessary factor in communication. Vocabulary study is usually a difficult process because students are accustomed to memorizing words alone without understanding or using them, so in order to grasp a language effectively, students should be provided with a great deal of vocabulary practice, knowledge as well as the teacher's guidance to help them acquire vocabulary easily (Mohammadi & Shakouri, 2014).

An example of the main difficulty that nearly all students face is remembering or applying vocabulary knowledge they have learned. As Karimi & Heidari (2015) stated that without developing a comprehensive system of vocabulary and creative strategies for acquiring the intended content, students generally will not be able to meet their full potentials and might lose their interest in learning the language effectively.

The difficulty of learning vocabulary is often caused by the students' negative perceptions regarding learning English that may have a terrible impact on the teaching learning process. The lack of training and practicing the language play a significant function as well. In the past, vocabulary got little attention since it was assumed that it would be acquired by natural means with the language itself.

The teaching strategy plays a crucial role in helping students retain vocabulary. Teaching English as a foreign language needs the usage of creative teaching and learning strategy that can enable students to master the necessary activities and tasks. Therefore, the question is what can educators do to enhance and support students' vocabulary retention or what strategies to apply? One of the strategies that can be applied is using mental maps strategy, they were first appeared and applied by the British psychology writer and Tv personality Tony Buzan in the late 1960s. It was developed to help pupils take notes effectively, brainstorm as well as solve problems.

Sahrawi (2007) argued that mental mapping is a strategy which promotes both parts of the human brain; the left side is employed for logical and rational thoughts while the right side is for innovative and critical thoughts. Furthermore, it is a strategy that is made up of a natural structure, which usually begins from the core of the topic and makes use of lines, colors, words, symbols, and images. Mental maps allow students to be involved in the material and its activities. Moreover, Casco (2009) stated that mental maps work as a playbill telling what happens next and attracts the student's attention to the intended content.

Mental maps improve pupils' ability to comprehend and grasp the meaning of words. Bahadori & Gorjian (2016) summarized the advantages of mental maps as follows, firstly they stimulate background knowledge, and secondly, they motivate students to raise questions and scaffold reading, listening comprehension, speaking and written production. Thirdly, they assist students with receiving a lot of English vocabulary items in fascinating strategies, fourthly they are eye-catching, finally they help students memorize and retain the words and phrases easily.

Finally, it could be assumed that teaching vocabulary using mental maps may be useful for both students and teachers in the language learning process.

1.2 Statement of the Problem

Teaching and learning vocabulary is a great challenge for both teachers and students in the Palestinian English classes. So, in order to use a language effectively, students need to learn words and their meanings, as

a result, they may encounter challenges and difficulties in comprehending, retaining, and using vocabulary. (Since the Palestinian educational system gives little attention to the visual elements such as maps, pictures, and videos). Furthermore, from the researcher point of view as a teacher in the Palestinian schools, he realized that a lot of strategies have been applied in the Palestinian classes to deliver English vocabulary easily but with no real improvements. Accordingly, after reviewing the literature relevant to the subject, the researcher found the lack of knowledge and research about the subject and it was not given enough attention in the Arab world in general and Palestine in particular, therefore the researcher will conduct a new strategy for teaching vocabulary formed in the following question: What is the impact of using Mental Maps on the students' English vocabulary learning?

1.3 Objectives of the Study

This study aims to achieve the following purpose:

To investigate the impact of using mental maps as a means for improving students' English vocabulary learning.

1.4 Study Questions

This study attempts to answer the following questions:

1. What is the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city?

2. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English vocabulary learning in the pre-test in both groups (experimental and control)?
3. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English vocabulary learning in the post-test in both groups (experimental and control)?

1.5 Hypotheses of the Study

The main question of the study highlights the following null hypotheses:

1. There are no statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city in the pre-test in both groups (control and experimental).
2. There are no statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city in the post-test in both groups (control and experimental).

1.6 Significance of the Study

It's hoped that this study will be beneficial to:

Firstly, for teachers, it helps them to identify the weaknesses and strengths of their students. It also helps them to create solutions for the

difficulties that encounter their students. Using mental mapping will create a joyful, positive, fun, attractive, supportive, and encouraging classroom environment. It attracts teachers' awareness and attention to the value of employing mental mapping in expanding student's vocabulary. Secondly, for the students, it makes the process of learning vocabulary easy and fun. It also encourages creativity and enables students to generate, connect and organize ideas. It makes the atmosphere of the class enjoyable, positive, and motivating. Finally, for the researchers, it encourages them to carry out more studies on the impact of mental mapping on different subjects, fields and languages since there is not enough research about it.

1.7 limitations of the Study

The study was steered within the following limitations:

1. The study was carried out on a sample from the eleventh-grade male students enrolled in the academic year 2019/2020 at AL - Bireh Boys' Secondary School at Al-Bireh city.
2. The study was conducted in the first term of the academic year 2019/2020.
3. The study was limited to teaching the vocabulary of English For Palestine Reading Plus 11A.
4. The study was limited to teaching vocabulary in unit (1)

5. The study faced a slowdown in the second semester due to the spread of (Covid-19) corona-virus throughout the world and Palestine.

1.8 Operational definitions of Terms

Mental Maps: They are graphic thinking instruments with a natural organizational structure, which starts and shines from the core. It employs symbols, lines, colors, and images (Casco, 2009).

Vocabulary: It is the vocabulary contained in units of English for Palestine (11) that are taught by using mental maps strategy.

11th graders: They are the students in grade 11 within Ramallah governmental schools in Palestine. They are about 17 years old.

1.9 Summary

In this chapter, the researcher clarified the basic components of the study. It dealt with the introduction that is constructed according to the title of the study: “The impact of Using Mental Maps on student’s English vocabulary Learning”. Besides, the researcher presented the purpose of the study, questions of the study, significance of the study, limitations of the study. The researcher, additionally, mentioned some vital definitions of terms related to the topic.

Chapter Two

Literature Review

2.1. Introduction

2.2 Vocabulary

2.3 Mental Mapping

2.3.1 Theoretical Framework

2.3.2Mental Mapping and Vocabulary

2.4 Literature Review

2.5 Summary

Chapter Two

Literature Review

2.1 Introduction

This chapter deals with literature review related to the topic in question, entitled; The impact of using mental maps on learning English vocabulary among the 11th grade students in public schools in Ramallah city.

This chapter is divided into two main sections; the first deals with the conceptual framework of the study, where the researcher discusses the main subject through the views and theories of a selected group of educational experts, scholars and specialized authors by exploring and discussing the most famous and important publications related to the study's subject matter. This section is divided into two main domains; vocabulary and mind mapping.

The second section addresses several previous related studies, similar in content with the study under research, throughout reviewing titles, tools, instruments, samples, approaches, and findings, in addition to the conclusions and recommendations of the researchers.

2.2 Vocabulary

In language teaching area, the great importance of vocabulary cannot be overlooked. For a beginner, vocabulary is the foundation from which he

or she can start, even if the individual does not have any grammar or linguistic skills related to the target language.

According to Ismail et al, (2017) “vocabulary stands as the basis for the language’, which constitutes the essential tool of humanity in communicating through forming complex linguistic structures.

This vision is compatible with a variety of views and opinions of English language teaching experts, who consider that vocabulary is “more than a set of single word units” (Schmitt, 2010). Others emphasize the great importance of vocabulary to the extent that “without grammar, very little can be conveyed, without vocabulary nothing can be conveyed” (Wilkins, 1972).

This opinion is supported also by Schmitt (2010), as he argued that “learners carry around dictionaries, not grammar books”, which reveals the intrinsic role that the vocabulary plays in the matter of communication, even if the individual of this vocabulary is not versed grammatically.

Regardless of the skills that a student should acquire to master English language as a second one, it is clear that the student’s lack of “vocabulary’ makes him completely unable to learn any skills else, in other words; no vocabulary means no language.

In this context, Mohammadi & Shakouri (2014) emphasized the meaning of impossibility of mastering a language without having the appropriate vocabulary. It makes sense that grasping or understanding the

different linguist structures or formations will not be possible unless the learner knows the words /terms that form these structures.

The significance of vocabulary is not limited to its own value in terms of obtaining and redeeming new words, but also extending to other essential language skills, where “a rich vocabulary makes the skills of listening, speaking, reading and writing easier to perform” (Pekka, 2013).

In line with the above, Laufer (1989) argued that there is a strong relation between the amount of L2 vocabulary that the learner has, and his proficiency in dealing with different texts, whether they were written or spoken. Hence, Sheridan & Markslag (2017) stated that there is a real direct correlation between the L2 vocabulary the learner owns and his ability to master the language he learns.

Perhaps, the exceptional importance of vocabulary in language learning opens the way to generate a wide variety of definitions attempting to convey the comprehensive and precise concept of the term.

Vocabulary can be defined as: “a set of words within a language that are familiar to a particular person” (Burgess, 2015). Sedita (2005) stated that “vocabulary encompasses all the words we must know to access our background knowledge, express our ideas ,communicate effectively, and learn about new concepts”.

Neuman & Dwyer (2009) argued that vocabulary is “words we must know to communicate effectively; words in speaking (expressive

vocabulary) and words in listening (receptive vocabulary)”. Ur (1996) stated that vocabulary can be defined, roughly, as the words we teach in the foreign language.

However, it seems that the issue of teaching vocabulary is not that simple, for it is not limited to the delivery of the famous and common meanings of words to the learner dealing with them as solid, static and unchanging templates. On the contrary, the diversity in vocabulary is critical, in addition to the skill related to the use of vocabulary to create the accurate expressions needed.

In order to deal with this issue more deeply, scholars have specified more than one type of the term “vocabulary”; active vocabulary; the vocabulary that the students have been taught and are supposed to have the ability to use, and passive vocabulary; consisting the words that the students will just recognize, without necessarily having the ability to use (Harmer, 1991).

According to Hatch and Brown (1995), there are two types of vocabulary:

1- Receptive Vocabulary:

The words the learners can recognize and understand as they are used in context, but they cannot use, i.e. learners can recognize them but do not have the ability to use them either in speaking or writing.

2- Productive Vocabulary:

This type stands for the words that the learners can understand and can pronounce efficiently, besides having the ability to use them in the linguistic formations in both writing and speaking skills. i.e., the productive vocabulary involves what is needed for receptive vocabulary in addition to the ability to speak and write appropriately.

Wafi (2013) pointed out another classification of vocabulary; listening, speaking, reading, and writing vocabulary, which simply refers to the words that the learner recognizes as he practices the associated skill. However, reading vocabulary is considered the most important, for the learner who is exposed to a great amount of words as he/she practices reading. Focal vocabulary is another type which refers to “a specialized group terms and distinctions that are particularly used by a specific group”.

Another classification was developed by Kailani & Muqattch (1995); ESP vocabulary, specialized in certain fields, used generally in connection with certain career or profession. The first type is content vocabulary that conveys meanings and contains verbs, nouns etc. The other type is function vocabulary which refers to all the necessary components for the sentence's structure, without having any role in conveying meanings, such as conjunctions, as a part of the grammatical system.

The researcher believes that despite the wide variety of classifications developed by experts of vocabulary teaching, the focus in

this study should be on the concept including words and terms that students of the 11th level are able to understand while reading, and to use in writing and speaking.

The researcher also believes that, despite the great importance of vocabulary element in EFL, and its high priority for language proficiency, teaching vocabulary for learners does not seem easy, which necessitates teachers to be innovative and creative to get the best possible results in this regard.

According to Ivone (2005), the traditional way of teaching vocabulary depends on recalling the meanings of the new words by searching for them in bilingual dictionaries, where the learners' role assigned by teachers is to translate the new words into their native language and to memorize them.

Two basic issues stem from attending such approach; the first is that correlation between the native and target languages is not guaranteed, which makes it more difficult for students to grasp the exact meaning of different words and terms. The second is the translation process slows down the acquisition process of the target language (Ivone, 2005).

Among the factors contributing to the difficulty of learning vocabulary is the lack of the sense of real context practicing of the new taught vocabulary. This sense seems to be normal due to the treatment of the new words as mere quantitative additions that are indoctrinated in dull

and frustrating classroom environments, devoid of any creativity, innovation, or positive participation.

According to Rahman (2016), one more difficulty of learning vocabulary is the ease of forgetting words which might be due to difficulties in pronunciation, spelling, idiomatic and overlapping meanings. Learner's interest is another problem encountering teaching vocabulary, it is the difficulty of how to attract learners' attention and concern of what is being explained at classroom. Traditional approaches of teaching seem to be the main factor of causing learners' carelessness and boredom.

In the same context, Thornbury (2004) confirmed that there are several technical factors that make some new words more difficult than others to be learnt, for example; pronunciation, spelling, length and complexity, grammar and meaning (overlapping meanings), concept and range.

In view of this difficulty mentioned above, it was reasonable for experts to develop a wide variety of means and techniques to teach vocabulary over the years, to facilitate vocabulary learning for the purpose of strengthening the learners' ability to obtain and recall words and terms. Such techniques included using objects, drawing, illustrations and pictures, contrast, enumeration, mime, expressions, and gestures.

Mental mapping, in particular, seems to have a promising future in facilitating and improving the teaching/learning of vocabulary as an

essential element of EFL (English as a foreign language). The main goal that that researcher seeks to achieve is to examine that mental mapping strategy has a real and deep impact on learning English vocabulary among the 11th grade students.

2.3 Mental Mapping

Although modern educational approaches have been locating mental mapping at the center of their focus decades ago and considering them as a key solution for better educational achievement, mental mapping, known also as mind mapping is not a new notion. According to Wang & Dostál (2018), the notion of mind mapping has been established in 1960s by Tony Buzan.

Buzan (1993) defined mind mapping as “a powerful graphic technique which provides a universal key to unlocking the potential of the brain”. Or it is “a graphic, networked method of sorting, organizing and prioritizing information using a key or trigger words and images, each of which will snap on specific memories and encourage new thoughts and ideas”.

Another definition developed by Krasnic (2011) as “a graphic tool used to collect, create, manage and exchange information. It represents information via the special organization of concepts, topics, ideas, words or other items linked and arranged in a radial pattern round a center concept”.

Mental mapping is known also as “clustering ideas”, Rico (1983) defines it as “a way of collecting ideas around a particular topic and defining connections, i.e., nonlinear brainstorming process akin to free association”.

Evrekli & Balim (2009) argued that mental mapping is a real effective technique in teaching students, for it enables students to master facts and thoughts, throughout setting them in an organized structure facilitating the recalling process. The main elements of such an organized structure contains a central image, main themes, branches with key images and key words, plus branches forming a connected nodal structure.

Mind mapping is a true educational experience that has proven to help students to overcome barriers and to improve academic achievement. Buzan (1993) started the notion of mental mapping in the first place as a tool of note-taking targeting underachieving students. The experience was successful, not only in achieving new good marks but also in the way they think with. The results were kind of promising (Wang & Dostál, 2018).

According to Keles, (2012), all educational grades can be taught using mental mapping technique, even the early ones.

Attempting to explain the main comprehensive concept, Buzan, (1993) imagined the mental map as a city map, where they both composed of a central object, with main and secondary roads in the city map representing the main and secondary routes of thinking in the mental map.

As said by Vitulli & Giles (2016), the essential elements of any mental map are as following:

- 1- The central image: which represents the core of the map and source from which all branches are radiated;
- 2- Radiating themes;
- 3- Branches consisting of key words or images;
- 4- The role played by visual effects in drawing attention and emphasizing the links between the mental map's components, especially colors.

They also argued that it is proven by experience that visual effects and objects strengthen the learners' memorization throughout facilitating concentration and stimulating memory.

2.3.1 Theories of Mental Mapping

The researcher believes that mental mapping concept's credibility comes not only from the tangible results of educational experiences adopted this technique in different places, but also is supported by a comprehensive conceptual framework involving the most interesting theories explaining the reason behind mental mapping's effectiveness.

One of the theories supporting this suggestion is "Information Processing Theory", according to Schunk (2012), "the deeper we process the information we receive through our senses, the longer it will stay in our

memory”. The use of mental maps is a real embodiment of the principle of the deep-level data processing, where the learner’s brain acquires the ability to associate memorable information with the targeted keywords through using such maps.

He also argued that “forming associations between bits of knowledge helps to facilitate their acquisition and storage in memory”, where Mental maps deal with information in a well-organized way. He points out to the fact that the information’s organization is considered as one of the most important memory stimulators, for associating pieces of information with visual and logical correlations facilitating the memorization of certain pieces of information only by recalling other linked ones.

Another supporting theory is Knowledge Visualization Theory, developed by Epper & Burkhard (2005), which states that “visualization is a means enabling complicated information and insights to be understood easily and quickly as well as a tool capable of transferring abstract information to concrete content.

Epper & Burkhard (2005) added that knowledge visualization designates all graphic means that can be used to construct and convey complex insights”. However, the knowledge visualization role is not limited to transferring facts only, but aims to transform insights, experiences, attitudes, values, expectations, perspectives, opinions, and predications, which enables the learner to master and use these insights professionally.

According to Sperry, (1961), the human brain is divided into two hemispheres, left and right. The left hemisphere carries out logic, mastery of language, ability to make judgments and decisions, while the right processes visual, spatial, auditory, and other effects.

The left hemisphere carries out logical thinking, while the right one is responsible for thinking in terms of images or symbols, considering the fact that right hemisphere has the ability to store much more information than the left one, in addition to be the source of creativity and that most of people use logical thinking much more than thinking of images, all of the above leads to the fact that the potentialities of right hemisphere of the brain are not fully exploited (Sperry, 1967). Here, the role of mental mapping becomes clear in improving educational achievement. In other words, the mental map as a visual map composed of lines, colors, and graphics, activates the right hemisphere into full play, and the synergy of both hemispheres in learning can improve learning efficiency (Wang & Dostál, 2018).

2.3.2 Mental Mapping and Vocabulary

According to Fitzpatrick (2000), the learner's vocabulary achievement has received more attention recently. This notice actually leads to the fact that new approaches should be developed by scholars – supposed to do their utmost effort- to help learners achieve the best results of acquiring new words and items as well as providing the necessary and

proper linguistic techniques of using them for the sake of accomplished educational mission (Tamjid and Moghadam, 2012).

Dóczy (2011) argued that vocabulary learning strategies (VLS) are distinguished from language learning strategies; one can claim that they are a subclass of language learning strategies.

Literature of ELT (English Language Teaching) has a wide variety of vocabulary teaching procedures, where mapping strategy is one of them, depending on building links and associations between different nodes of brain (Davis, 2010). In general, the basis of these procedures mentioned above, is the concept of “meaningful learning” which occurs when humans actively integrate thinking, feeling, and acting to construct meaning and knowledge (Ghanizadeh, 2011).

According to Cuthell & Perston (2008), mental mapping strategy is one of the most efficient existing mapping strategies attempting to achieve a meaningful learning, for utilizing visual effects in developing a visual thinking taking the advantage of all of its components; storing, processing, organizing and presenting information.

The researcher believes that the use of mental mapping in the process of vocabulary education is simple, easy, and effective, through the adoption of several strategies, including brainstorming and the design of vocabulary games and activities (Kacafírková, 2013).

2.4 Review of Related Literature

Despite the importance of the subject of this study – in general-, “The impact of using Mental maps on learning English vocabulary”, the studies that specialize in this area are rare.

In this section, the researcher examines some of the previous studies that dealt with the topic under consideration in one form or another, and reviews the most important findings and recommendations given by researchers.

Othman (2018), aimed to investigate the effectiveness of using mind mapping on the 3rd Graders’ vocabulary learning and improving their visual thinking at UNRWA schools. The researcher used the quasi experimental approach, the sample consisted of (79) students purposively chosen from the third grades at Al Amal Elementary Boys School in Western Khan Yunis and divided into two groups; experimental group (39) and control group (40) students.

The researcher used a pre-post vocabulary and visual thinking tests, the results revealed that for both vocabulary and visual thinking posttest, there are statistically significant differences at ($\alpha = 0.01$) in the mean scores of the experimental and control groups in favor of the experimental group.

Depending on the results mentioned above, the researcher recommends to adopt mind mapping strategy in curricula, should provide

the necessary materials, courses and workshops related with Mind Mapping strategy.

Hussein (2017), aimed to test the effectiveness of using Mind Mapping in developing creative thinking of pre-school children.

The sample included 60 students of both genders, divided into 30 students consisting the control group and the other 30 consisting the experimental one.

The researcher used several tools in this study including; socio-economic level scale, Goodenough Harris IQ scale, and Torrance test.

The results revealed that there were statistically significant differences in the mean scores between the control and experimental groups in the creative thinking posttest in favor of the experimental group.

Rahman (2016) conducted an analysis of students' difficulties in vocabulary mastery, in a survey study at second grade students of SMPN 19 Mataram in Indonesia in the academic year 2015/2016.

The sample of this study consisted of 35 students selected by using purposive random sampling. The researcher used two instruments for data collection; test and questionnaire, where the data were analyzed using the descriptive qualitative method.

Findings of the study showed that students face several types of difficulties in learning vocabulary due to; grammar difficulties, grasping

meanings, spelling, and other difficulties such as identifying noun-adjective vocabulary and translation. The findings also revealed some factors contributing to the difficulty that students face. For example; low students' interest, weak redeeming ability, difficulty of identifying past tense and pronunciation difficulties.

Hdii (2015) intended to investigate the impact of using mind mapping technology on writing performance of college students. The researcher used the comparative analysis. The sample of this study was two second year groups of 50 students each. While the instrument used in the study was a test of writing composition after a course of advanced composition writing, including using Mind mapping for experimental group only, with the analytic rating scale used as a system for scoring. In analytic scoring, scripts are rated on several aspects, which included: organization, content, and language in this regard.

The results revealed that using mind mapping did not have a significant role in improving students' language. The experimental group used mind mapping had a better performance than the control group. With regard to the organization aspect, the findings showed that the experimental group had passed the control group significantly in terms of organization.

Heidari and Karimi (2015) examined the impact of mind mapping on vocabulary learning and its retention. The sample of this study consisted of 40 Iranian first-grader high school male students. All the researchers

divided their sample into two groups, experimental and control group and each one has a number of 20 students.

The instrument of the study involved a researcher-made vocabulary pretest, posttest and delayed posttest. Vocabulary was taught with the help of mind mapping technique, while the control group received the vocabulary teaching/learning through the traditional techniques.

Data analysis was run by Multivariate Analysis of Covariance. Findings showed the positive impact of an experimental group in the posttest. In addition, using mind mapping strategy assisted students for better obtaining and retaining vocabulary, which led the researchers to recommend using mind mapping technique in various aspects such as acquisition of collocations and idioms and their retention.

In his study Madhi (2015) aimed to investigate the influence of applying map concept on improving student' writing skills. The sample of this study consisted of 60 students of 8th grade from Bitonyia public school boys in Ramallah, the sample was divided into experimental and control groups of 30 students each.

The researcher used the quasi experimental approach. The instrument used was a writing test, with a pretest and a posttest. Results revealed that concept maps had a significant positive impact on improving writing skills. The researcher recommended using map concepts by students and teachers

for better achievement, as well as the researcher recommended to have a concept map strategy adopted in the formal curriculum.

The study of Kusuma (2015) aimed to investigate the impact of using Mental mapping strategy on the vocabulary mastery of the second-grade students of elementary school. The quasi-experimental design with non-equivalent-groups pre/posttest approach was used. The sample consisted of two instructional classes. The findings did not support the impact of using Mental mapping in vocabulary teaching.

Another -Arabic- study was conducted by Abu Diak (2016), to investigate the impact of mind mapping and conceptual mapping on the achievement and development of creative thinking for the 6th grade students in Science in governmental schools of Qabatiya.

The Quasi-experimental approach was used in this study. The sample consisted of 70 female students of the 6th grade, divided into two groups, experimental and control groups, each of 35 students. The experimental group received teaching by using mind and conceptual mapping, while the control group received traditional teaching. The researcher applied an instrument of 34 items achievement test of creative thinking, 7 items were used to ensure the validity and reliability of the study tools. ANCOVA analysis was used to determine the impact of using mind & conceptual mapping.

Findings of the study revealed that there were statistically significant differences at ($\alpha = 0.05$) between the average scores in the achievement test in favor of the experimental group, which led the researcher to recommend using both Mind & Conceptual mapping in the education process.

Abdul Aziz & Yamat (2016) attempted to investigate the use of mind mapping technique in increasing students' vocabulary list. The study used the quasi-experimental approach, and the instrument included a pretest and posttest to measure the differences in performance of the sample before and after.

The sample consisted of 38 students of the year 6 UKM of SK Telok Kemang, Port Dickson, Negeri Sembilan in Malaysia, 18 females and 20 males distributed into two groups, experimental and control. It is worth mentioning that the sample was taken on purpose, where members meant to be of the same characteristics, and considered weak or below average in English due to their vocabulary list. Findings showed a considerable difference and enhancement in the students' scores in the posttest compared to the pretest, which made them to recommend highly the use of mind mapping technique in teaching vocabulary.

Qasrawi (2015) intended to investigate the influence of using context clues technique in the development of student's vocabulary knowledge, as well as the students' potentials and tools to infer meanings of unknown words just using the context course.

The researcher used the quasi-experimental approach. The sample of this study consisted of 40 students from Mohammed Bin Rashid Al Maktoom private school in Ramallah. The sample was divided randomly into experimental and control groups, where the experimental group's students were taught using context clues unlike control group's students who depended only on individual words strategy. The instrument of the study involved pretest and posttest, and data analyzed using a descriptive statistical analysis.

Findings showed all great significant of experimental group's students in the posttest, in addition to a difference between the means of the experimental group's students' scores of pretest and posttest in favor of posttest. These findings led to the conclusion that using context clues technique had a significant role in improving students' vocabulary. With regard to meaning inference aspect, the findings revealed an improvement in student's ability to infer the meaning of unknown words, however, this improvement was not that basic.

2.5 Summary and commentary on the previous studies

In this chapter, the researcher has dealt with the basic literature review of the study. This has been accomplished through the construction of a conceptual framework including the theoretical framework upon which the study is founded, by reviewing and discussing the related literature and linking it to the study subject, to construct a special framework that accurately matches the theme under consideration.

The researcher addressed the concept of mental mapping strategy, as a modern educational tool, despite being created in the seventies of the twentieth century, however, its real wide application was clearly delayed in the formal organizational education.

Mental mapping strategy is based on several educational and pedagogical theories, as well as purely scientific studies, which share and exchange views and opinions in pursuit of the optimal utilization and profiteering of mental and intellectual potential of learners, as well as finding out how to use scientific information to support the educational aspect of learners.

Mental mapping strategy also takes into account the psychological and pedagogical aspects of the students. According to a significant number of studies, this strategy has been shown to be very effective and functional in helping and assisting learners to overcome the boredom and carelessness that are usually found in classrooms during the traditional educational sessions, in addition to its role in stimulating the active participation of learners at the classroom.

One of the main objectives of this strategy is to focus on all types of obstacles and difficulties facing learners in their seeking to learn vocabulary, then, to utilize all possible senses and intellectual potential harmoniously to overcome all difficulties for better achievement.

The vast majority of studies reviewed in this chapter have concluded that mental mapping strategy has a real deep impact on improving learners' performance in learning different linguistic skills, specially vocabulary.

With regard to this study, the researcher considers it to be distinct from the others for two main points:

First, the purpose of this study is precisely defined and focused. It has one independent variable; mental mapping, and one dependent variable; learning vocabulary, which facilitates having well defined and directed findings.

Second, the population of this study is the students of 11th grade, a level that had not been much dealt with in previous studies, where the most of the focus was on learners at primary grades or college students. In addition to the fact that 11th grade students are subjected to an exceptional pressure, due to the stress of serious curriculum as well as considering 11th grade as a preparation level to the grade of high school diploma that requires a huge exceptional effort that constitutes a unique pressing factor, which may reveal the real impact of mental mapping strategy more realistically.

Chapter Three

Methodology and Procedures

3.1 Introduction

3.2 Methodology

3.3 Research Questions

3.4 Hypotheses of the Study

3.5 Population of the study

3.6 Sample of the study

3.7 Instrument of the study

3.7.1 The Vocabulary test

3.8 Validity of the vocabulary test

3.9 Reliability of the vocabulary test

3.10 Variables of the study

3.11 Statistical Analysis

3.12 Procedures of the study

3.13 Summary

Chapter Three

Methodology and Procedures

3.1 Introduction

This chapter aims to describe the methodology of this study. It contains items such as: approach of the study, sample and population of the study, variables and tools of the study, their reliability and validity and the statistical methods applied to analyze the data.

3.2 Methodology

The quasi experimental design was adopted to achieve the main purpose of the study as well as to answer the questions of the study which are based on finding the impact of the independent variable (mental maps) on the dependent variable (vocabulary). Two groups were randomly chosen for the goal of the study; the experimental group that studied using mental maps method and the control group which was taught in the traditional method. The design of the study can be explained as follows:

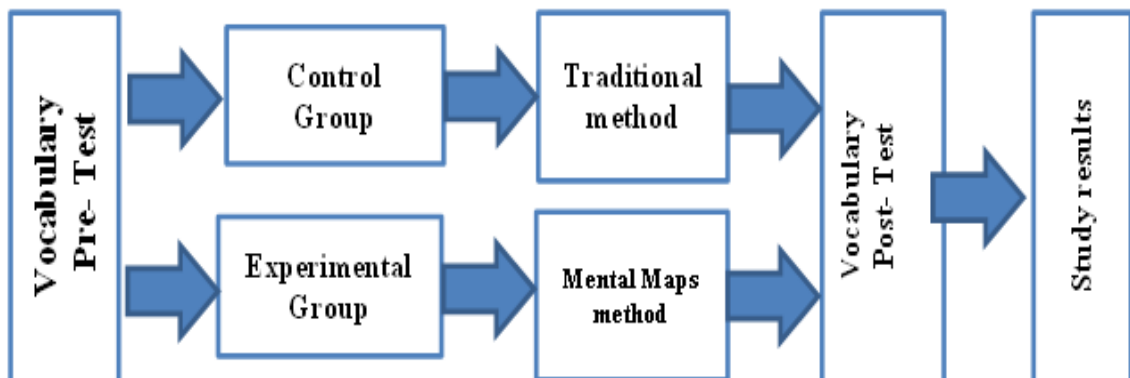


Diagram (1): Experimental Design.

3.3 Research Questions

This study aims to answer the following questions:

1. What is the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city?
2. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English vocabulary learning in the pre-test in both groups (experimental and control)?
3. Are there any statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English vocabulary learning in the post-test in both groups (experimental and control)?

3.4 Hypotheses of the Study

The main question of the study highlights the following null hypotheses:

1. There are no statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city in the pre-test in both groups (control and experimental).
2. There are no statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the 11th graders' English vocabulary learning at the public schools in Ramallah city in the post-test in both groups (control and experimental).

3.5 Population of the study

The population of the study consisted of the eleventh graders enrolled in the first semester of 2019/2020 at the governmental schools in Ramallah city.

3.6 Sample of the study

The sample of the study consisted of 60 students selected purposively since the study was conducted at Al-Bireh Secondary School for boys in Ramallah, where the researcher is a teacher working there. Eleventh graders represented the population of the conducted research.

Table (3.1): Study sample of Al-Bireh Secondary School

Group	No. of students
Experimental	30
Control	30
Total	60

Regarding the sample of the study as table (1) shows that the experimental group consisted of 30 students who were taught vocabulary through mental maps, and the control group also included 30 students who were taught vocabulary using traditional methods.

3.7 Instrument of the study

The main instrument of the study was the vocabulary test which the researcher used to achieve the objective of the study.

3.7.1 The vocabulary test

The researcher prepared a vocabulary pre-post test to measure up the achievement of students in vocabulary. The pretest was used before the intervention of both methods (mental maps and traditional) and the posttest was used after.

a) Description of the vocabulary test:

The vocabulary test contained different types of questions related to vocabulary;

1. Match the words with their meanings.
2. Choose the correct word to complete the sentences.
3. Complete the sentences using the words in brackets.
4. Classify.
5. Use this mental-map to answer the questions.

b) Table of specifications:

Table of specifications was designed for the vocabulary test based on the following criteria:

1. The objective of unit (1) and its plan.
2. The vocabulary of unit (1).
3. Bloom's taxonomy levels.

Table (3.2): Distribution of test questions based on the level of objectives

The Level	Title and No. of questions	Mark		Percentage
Remembering	2.Choose the correct word	8	8	26.67%
Comprehension	1.Match the words	6	6	20%
Application	4.Classify 3. Complete the sentences.	4 3	7	23.33%
Synthesis	5.Use these mental-maps to answer the questions.	4.5 4.5	9	30%
Total	5	30		100%

As Table (2) shows the vocabulary test was designed depending on the table of specifications. It contained four levels based on Bloom's taxonomy: remembering, comprehension, application and synthesis.

3.8 Validity of the vocabulary test

The test was presented to a group of English teachers, experts in English language and to educational specialists to ensure that the test is valid. The items of the test were modified according to their comments, suggestions, and recommendations; adding a mental map with question about it.

3.9 Reliability of the vocabulary test:

The researcher applied the Cronbach alpha to measure the reliability and it was high reliability as Table (3) shows.

Table (3.3): The results of Cronbach alpha test

Reliability Statistics	
Cronbach's Alpha	Points
0.740	30

3.10 Variables of the study

The study consisted of the following variables:

1. **Independent Variable:** The use of mental maps in teaching vocabulary.
2. **Dependent Variable:** The students' achievement in vocabulary.

3.11 Statistical Analysis

The following statistical measures were employed:

1. Cronbach's alpha coefficient to calculate and determine the reliability of the vocabulary test.
2. Independent Sample T-Test to calculate and determine the differences between the means of the control group and the experimental group.
3. Paired Sample T-Test to calculate and determine the differences between the pretest and posttest means.
4. Eta square to calculate the effect size on improving eleventh-graders' achievement in vocabulary learning.

3.12 Procedures of the study

1. Reviewing the literature regarding mind mapping strategy.
2. Collecting previous studies and examining the method of conducting the study.

3. Building a vocabulary achievement test.
4. Consulting referees regarding the validity of the test.
5. Preparing the study sample, one as an experimental and the other as control.
6. Giving the two groups the pre-vocabulary test. Preparing the teacher's guide that will handle the implementation of the strategy.
7. Teaching the content of the teacher's guide to the experimental group. While the control group was taught by the traditional method.
8. Giving the same test to the two groups.
9. Collecting and statistically treating the data of the test marks.

3.13 Summary

This chapter presented the methodology, the sample and population of the study, procedures of designing and applying the instrument, and the statistical methods the researcher employed in analyzing the vocabulary test.

Chapter Four

Results of the Study

4.1. Introduction

4.2 Results of the first question

4.3 Results of the second question

4.4 Results of the third question

4.5 Summary

Chapter Four

Results of the Study

4.1 Introduction

This study explores the impact of the use of mental maps as a means of improving students' English vocabulary learning. The design of the quantitative study is quasi-experimental. Participants were eleventh-grade students; who were divided into two groups: experimental and control.

The quantitative instruments used included the pretest and posttest, and the required descriptive statistical analyses were used. From this statistical analysis, the study is able to answer the main research questions of the study:

4.2 Results of the first question

- 1. What is the impact of using mental maps on the 11th graders' English Vocabulary learning at the public schools in Ramallah city?**

To test the impact of the mental maps on the 11th graders' English vocabulary learning, Dependent (Paired) samples and t-test were applied on the students' results of the experimental group. As seen in Table (1), this test was found to be statistically significant at ($\alpha \leq 0.05$); the absolute calculated (t) is (18.708), Sig. (P-value) = 0.000. And the means of the posttest in the experimental group was (20.97), while it was (12.7) for the pretest of the same group. These results indicate that individuals in the

experimental group were getting better results after using the mental maps method.

Table (4.1): Result of the Paired Sample t-test for the experimental group

	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre-Test	12.7	5.038	0.4418	-18.708	29	.000
Post-Test	20.97	5.56				

The value of Eta square, according to Table (2), is (0.385). This indicates that the mental map had a high impact on students' English vocabulary learning. The influence size is determined according to the (d Cohen value). The value of d Cohen is (3.415), which is larger than (0.8) (Rules of thumb on magnitudes of effect sizes, 2019), which indicates that there is a high impact of mental maps concept on improving students' vocabulary learning.

Table (4.2): Eta square and d-Cohen

	Eta	Eta Squared	Sig	d-Cohen for Influence Size
Post-test Group	0.621	0.385	0.000	3.415

4.3 Results of the second question

2. **Are there statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English Vocabulary learning in the pretest in both groups - the control and the experimental?**

To answer this question, the researcher assumes the following hypothesis:

H1: There is no statistically significant difference at ($\alpha \leq 0.05$) between the mean of the pretest within the control and the experimental groups.

To test the hypothesis (H1), Independent Samples T-Test was used to compare the means and the standard deviations. The analysis included the results of the experimental and control group in the pretest to ensure that there are no differences between the level of the students in both groups. From table (3), it is clear that there are no significant differences between the students of both groups, since the mean of the control group, is (12.33) and for the experimental is (12.7), while Significant (Sig) is (0.386) which is higher than (0.05); that makes evidence that there is no significant difference at ($\alpha \leq 0.05$) between the mean of the pretest within the control and the experimental groups, in other words, the two groups were equivalent in their vocabulary level.

Table (4.3): Independent T-test for pretest in Control and Experimental groups

Group	N	Mean	Std. Deviation	Std. Error Mean	t	Sig (2-tailed)
Experimental	30	12.7000	5.03881	0.91996	0.291	0.772
Control	30	12.3333	4.70021	0.85814		

4.4 Results of the third question

- 3. Are there statistically significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English Vocabulary learning in the posttest in both groups - the control and the experimental?**

To answer this question, the researcher assumes the following hypothesis:

H2: There is no statistically significant difference at ($\alpha \leq 0.05$) between the mean of the posttest within the control and the experimental groups.

To test the hypothesis (H2), Independent Samples T-Test was also used to compare the means and the standard deviations between the experimental and control groups in the posttest. From table (4), we can see that the means of the experimental group in the posttest (20.97) was higher compared to the control group (17.83).

Table (4.4): Independent T-test for posttest in Control and Experimental groups

Group	N	Mean	Std. Deviation	Std. Error Mean	t	Sig (2-tailed)
Experimental	30	20.97	5.56766	1.01651	2.371	0.021
Control	30	17.83	4.624398	.84430		

The value of Significant (Sig) is (0.0105), which is lower than (0.05), that makes evidence that there is a significant difference at ($\alpha \leq 0.05$) between the mean of the posttest within the control and the experimental groups, and that difference is for the experimental group. So, we reject the hypothesis (H2).

4.5 Summary

This chapter presented the results of the statistical analysis of this study. The results were shown in tables, and the comments followed on

each one. The results dealt with the descriptive analysis. Arithmetic means, standard deviations, paired, and independent sample T-Test were used. Also, calculated Eta square and d-Cohen to identify the impact of using the mental maps and influence size on the 11th graders' English Vocabulary learning at the public schools in Ramallah city.

The statistical methods used in this study indicate that the control group and experimental group were equivalent in the vocabulary level according to the results of the pretest. A positive impact of using mental maps on improving the outcomes of students' vocabulary learning was clearly visible on the experimental group posttest results.

Chapter five
Discussion of the Results,
Conclusion, and Recommendations

5.1. Introduction

5.2 Discussion of the results of the first question

5.3 Discussion of the results of the second question

5.4 Discussion of the results of the third question

5.5 Conclusion

5.6 Recommendations

5.7 Summary

Chapter five

Discussion of the Results, Conclusion, and Recommendations

5.1. Introduction

This chapter is divided into three sections. In the first section, a discussion of the results of the study questions and hypothesis is presented. The second section provides a conclusion. Finally, the third section presents the recommendations that have been put forward with the hope of helping in improving the teaching-learning process.

The current study is a quantitative study established on a quasi-experimental design.

Sixty students participated in this study. The participants were assigned into two groups -control and experimental. Mental maps strategy was used with the experimental group, whereas the traditional individual vocabulary learning strategy used with the control group. Pretest at the beginning of the research period was conducted on both groups - control and experimental, and a posttest was performed after applying the mental maps method on 11th-grade students to check any differences between them.

5.2 Discussion of the Results of the First Question

What is the impact of using Mental Maps on the 11th graders' English Vocabulary learning at the public schools in Ramallah city?

The value of Eta square was (0.385). It indicated that the mental maps had a high impact on 11th-grade students' English vocabulary learning. To get the size of the impact, it is determined according to the (d Cohen value), the value of d Cohen was (3.415), that was higher than 0.8, which indicated that there was an positive impact of mental maps concept on improving students' vocabulary learning.

This means that the concept of mental maps as a teaching strategy significantly improved students' vocabulary learning skills. These results support previous research findings mentioned in the literature review, which suggests that mental maps have a positive impact and that their use may improve students' vocabulary learning skills. Results showed that there was a positive impact of using mental maps in the experimental group in the posttest, some of the studies who agree with these results such as **Othman (2018), Heidari and Karimi (2015), Abdul Aziz, and Yamat (2016), and Qasrawi (2015).**

However, this result contradicts with the findings of **Kusuma (2015)**, whose findings did not support the impact of using mental mapping in vocabulary teaching.

The results of this question, as shown above, indicated an increase in the students' means in the posttest results. Also, mind maps have assisted students for better vocabulary obtaining and retaining, which the research refers to the positive impact of mental maps as a technique in teaching

vocabulary that helps the teacher to create enjoyable classroom conditions to give students positive outcome.

5.3 Discussion of the Results of the Second Question

Are there significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English Vocabulary learning in the pretest in both groups -the control and the experimental?

The participant's vocabulary level was tested in both groups with a pretest, then the results of the test were statistically analyzed using Independent Samples T-Test to get the means of each group and its standard deviation. The mean of the control group, is (12.333) and for the experimental is (12.7), while Significant (Sig) is (0.386) which is higher than (0.05); This confirms that there is no significant difference at ($\alpha \leq 0.05$) between the mean of the pretest within the control and the experimental groups, so we can apply the mental method on equivalent groups to get correct results.

5.4 Discussion of the Results of the Third Question:

Are there significant differences at ($\alpha \leq 0.05$) in the impact of using mental maps on the students' English Vocabulary learning in the posttest in both groups -the control and the experimental?

According to the Independent Samples T-Test, the means, and the standard deviations between the experimental and control group in the

posttest, the results showed that the means of the experimental group in the posttest (20.97) is higher compared to the control group (17.83). Since the value of Significant (Sig) is (0.0105), a value lower than (0.05), it makes evident that there is a significant difference at ($\alpha \leq 0.05$) between the mean of the posttest within the control and the experimental groups. That difference was for the experimental group. So, hypothesis (H2) was rejected.

The researcher addresses the improvement to the positive impact of mental maps and how they are used. The experimental group learned vocabulary through a method that focused on keeping the learning process enjoyable by using colors, symbols, images in addition to texts. This inspires the work of the brain to use more senses to remember vocabulary.

The improvement that is shown in the finding of the study might not be considered huge or dramatic improvement; the researcher claims that the improvement within the experimental group is due to the abilities that were given to the students by using the mental maps to remember vocabulary, also it might be due to the short period of applying a new method to a group of older students who are at 11th grade, all their educational methods in vocabulary learning were traditional. This method needs a more extended period and more students' awareness of its importance and benefits.

This result is in harmony with many previous studies, such as **Othman (2018)**, who found statistically significant differences at

($\alpha = 0.01$) in the mean scores of the experimental and control groups in favor of the experimental group. The result also agrees with **Heidari and Karimi (2015)** and **Qasrawi (2015)**, where they showed the positive impact of the experimental group in the posttest. Furthermore, the result agrees with **Abdul Aziz and Yamat (2016)** study that recommends mapping technique as a practical method in teaching vocabulary as the results showed a considerable difference and enhancement in the students' scores in the posttest compared to the pretest. It is also in agreement with the results of **Abu Diak (2016)** study, in which he recommends using mind mapping in the education process as the experimental group who used mental maps scored higher results than the control group.

While the result does not support with **Kusuma (2015)** study, where it did not notice any improvement of using mental maps in vocabulary learning within an experimental group regarding the control group.

5.5 Conclusion

In terms of the discussion of the results of the three questions, the researcher concluded the results as follows:

There is a positive impact on using mental maps strategy to improve the students' vocabulary learning skills for the eleventh graders in Ramallah public schools based on the statistically significant differences resulted by the posttest.

There are statistically significant differences at ($\alpha \leq 0.05$) in the mean scores of the experimental group and those of the control group on the pretest.

There are statistically significant differences at ($\alpha \leq 0.05$) in the mean scores of the experimental group and those of the control group on the posttest in favor of the experimental group

5.6 Recommendations

Based on the study results, the researcher suggests the following recommendations:

For curriculum designers:

The researcher recommends curriculum designers to provide the curriculum with more activities and pictures for vocabulary learning. Moreover, to train teachers and supervisors of the English language on the active usage of the mental maps for different learning and teaching objectives. Furthermore, to integrate and include mental maps in the Palestinian curriculum in most of the school's subjects.

For English Teachers:

The researcher recommends teachers to use new and advanced methods in vocabulary learning and teaching since it positively improves students' achievement. Besides Adopting and using more visual learning techniques

since it makes the students understand and organize information faster and better.

For Future Research:

The researcher recommends and urges other researchers to conduct more and further studies on the impact of mental maps regarding age by studying it on different school levels, with many groups as possible, to find the best way to increase students' vocabulary learning, thus offer more validation to the results. Moreover, the research period should be sufficient and long enough to apply the mental maps method on the students and ensure their readiness to implement the new technique. In addition to conducting more research about the impact of mental maps on other variables, such as multiple intelligence, retention of learning, gender, and method of displaying maps either manually or via computer or mobile devices, should be done. Furthermore, conduct a comparative study between the impact of mental maps and studying the impact of integration between mental maps on different variables other than those discussed in this study.

5.7 Summary

To sum up, the last chapter dealt with the study findings, the conclusions and the researcher suggested recommendations which can be useful to the teachers, supervisors, curriculum designers and researchers as they can assist and support the teaching learning process.

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Appendixes

Appendix (1): Task facilitation document to the Ministry of Education

Appendix (2): Task facilitation document directed from the Ministry of Education Ramallah.

Appendix (3): A proof paper of achievement test

Appendix (4): English Vocabulary Test

Appendix (1)

Task facilitation document to the Ministry of Education

An-Najah
National University
Faculty of Graduate Studies



جامعة
النجاح الوطنية
كلية الدراسات العليا

التاريخ: 2019/10/31

حضرة السيد مدير عام الادارة العامة للبحث والتطوير المحترم
الادارة العامة للبحث والتطوير
وزارة التربية والتعليم العالي

الموضوع: تسهيل مهمة الطالب/ محمد موسى محمود مطير ، رقم تسجيل (11659329)

تخصص ماجستير اساليب تدريس اللغة الإنجليزية

تحية طيبة وبعد ،،،

الطالب/ محمد موسى محمود مطير ، رقم تسجيل 11659239 ، تخصص ماجستير اساليب تدريس اللغة الإنجليزية في كلية الدراسات العليا ، وهي بصدد اعداد الأطروحة الخاصة به والتي عنوانها:
(أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب الصف الحادي عشر في المدارس الحكومية في مدينة رام الله)

يرجى من حضرتكم تسهيل مهمته في جمع بيانات ومعلومات من خلال توزيع ورقة امتحان قبلي وبعدي على طلاب مدرسة ذكور البيرة الجديدة الثانوية في مدينة رام الله ، وذلك لاستكمال مشروع البحث.

شاكرين لكم حسن تعاونكم.

مع وافر الاحترام ،،،

أ.م. ناجي قطناني

عميد كلية الدراسات العليا




Appendix (2)


Task facilitation document directed from the Ministry of Education Ramallah

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

State of Palestine
Ministry of Education
Educational Research & Development Center



دولة فلسطين
وزارة التربية والتعليم
مركز البحث والتطوير التربوي



الرمز: 33673/46/3
التاريخ: 2019/11/3
الموافق: 1441/6/38 هـ

السيد مدير التربية والتعليم المحترم
رام الله

تحية طيبة وبعد،،

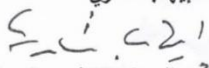
الموضوع: تسهيل مهمة بحثية

الباحث: محمد مطير


نهديكم أطيب التحيات، ونرجو التكرم التعاون مع الباحث الطالب: محمد موسى محمود مطير من جامعة النجاح الوطنية في تنفيذ بحث بعنوان: " أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الانجليزية لدى طلاب الصف الحادي عشر في المدارس الحكومية في مدينة رام الله"، حيث سيقوم الباحث بتنفيذ بحث تجريبي على طلبة الصف الحادي عشر في مدرسة ذكور البيرة الجديدة وما يتضمن من تنفيذ اختبارات قبلية وبعدية، وبما لا يتعارض مع سير العملية التعليمية.

مع الإحترام والتقدير،،

د. إيهاب شكري
مدير مركز البحث والتطوير التربوي



نسخة :
معالي وزير التربية والتعليم المحترم
عطوفة السيد وكيل الوزارة المحترم
السيد عميد كلية الدراسات العليا المحترم / جامعة النجاح الوطنية



هاتف (972-2-298-3290) Tel. فاكس (972-2-298-3207) Fax رام الله ص.ب. (576) Ramallah P.O. Box
www.moe.gov.ps

Appendix (3)

A proof paper of achievement test

<p>دولة فلسطين</p> <p>وزارة التربية والتعليم</p> <p>مديرية التربية والتعليم رام الله والبيرة</p> <p>مدرسة ذكور البيرة الجديدة الثانوية</p>	<p>State of Palestine</p> <p>Ministry of Education</p> <p>Directorate Of Edu. Ramallah & Al-Bireh</p> <p>Al- Bireh Al-Jadideh Boys School</p>	 <p>وزارة التربية والتعليم العالي</p>
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العقديس

الجامعة الإسلامية

al QUDS

الى من يهمه الأمر:

التاريخ: 2020/3/16



تحية طيبة وبعد،

تشهد إدارة مدرسة ذكور البيرة الجديدة الثانوية أن المعلم محمد موسى محمود مطير، قد قام بتطبيق اختبار قبلي
واخر بعدي على طلاب الصف الحادي عشر أثناء الفصل الدراسي الأول من العام 2020/2019 وذلك كأداة
دراسة قد قام بأجرائها بعنوان:

The impact of Using Mental Maps on the 11th Graders' English Vocabulary Learning at The Public Schools in Ramallah

أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب الصف الحادي عشر
في المدارس الحكومية في مدينة رام الله

مع الاحترام

مدير المدرسة
ضياء معلا



Appendix (4)

English Vocabulary Test

Vocabulary Test

Name:

Mark: /30

1. Match the words with their meanings.(6 marks)

WORDS	MEANINGS
1 remembering	a using something
2 understanding	b knowing the meaning of something
3 applying	c bringing something into your mind that you forgot
4 analysing	d making something new
5 evaluating	e looking at all the parts of something to understand it better
6 creating	f thinking carefully about something to make decisions about it

2. Choose the correct word to complete the sentences.(5 marks)

- She loves to write and paint. She's a very person.
(create / creative / creation)
- It is a difficult situation. We need to it carefully.
(evaluate / evaluating / evaluation)
- The scientists have finished their of the problem now.
(analyse / analytical / analysis)
- I know the successful for the new job. She is very good.
(apply / applicant / application)
- Our great leaders will always be
(remember / remembering / remembered)

3. Complete the sentences using the words in brackets.(6 marks)

vet - infect - characters - lift - knowledge - examined

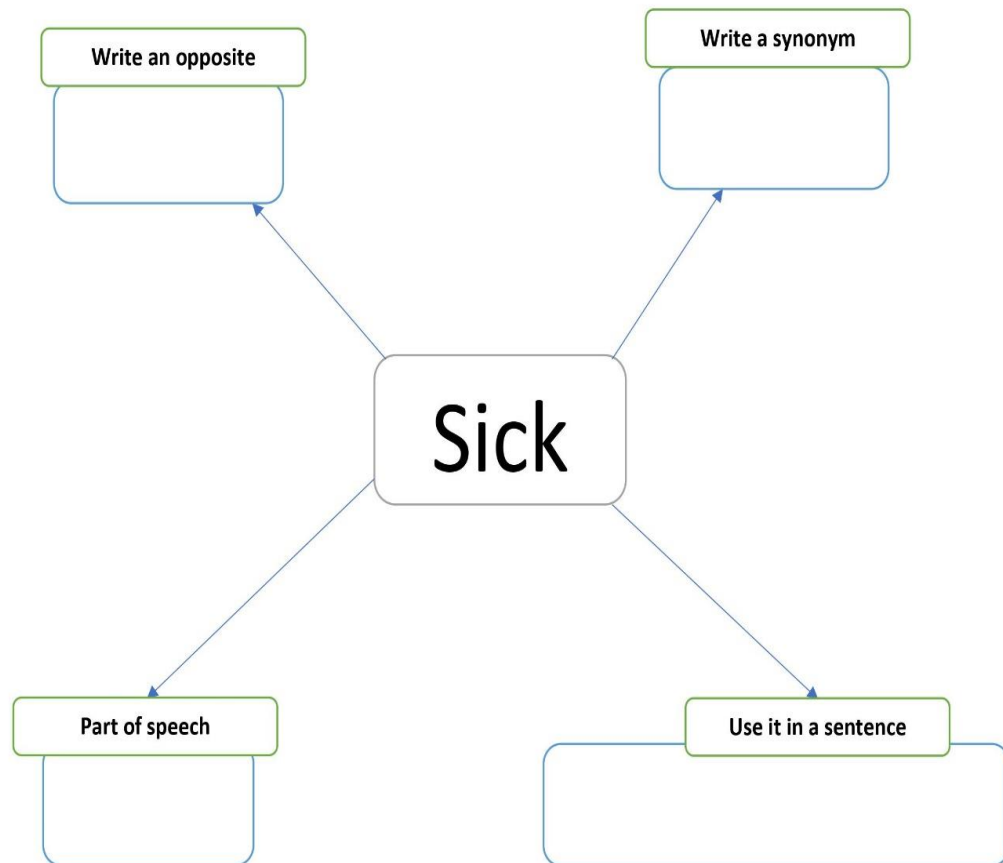
1. Thealone doesn't give us the ability to drive a car.
2. I tried to myself, but there was no strength in my legs.
3. A doctor me and said I might need a surgery.
4. A fable is a kind of story which has two or three.....
5. There is no evidence that this virus can humans.
6. The farmer called the because the horse was ill.

4. Classify.(9 marks)

(facts - think - use - practice - feel - respect - do- enjoy - information)

	Knowledge	Skill	Attitude
1.			
2.			
3.			

5. Use this mental-map to answer the questions.(4 marks)



جامعة النجاح الوطنية
كلية الدراسات العليا

أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب
الصف الحادي عشر في المدارس الحكومية في مدينة رام الله

اعداد

محمد موسى محمود مطير

اشراف

د. فواز عقل

قدمت هذه الأطروحة استكمالاً لمتطلبات الحصول على درجة الماجستير في أساليب
تدريس اللغة الانجليزية، كلية الدراسات العليا، جامعة النجاح الوطنية، نابلس، فلسطين.

2020

أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب الصف الحادي عشر
في المدارس الحكومية في مدينة رام الله
اعداد

محمد موسى محمود مطير

اشراف

د. فواز عقل

الملخص

هدفت الدراسة الحالية إلى التعرف على أثر استخدام الخرائط الذهنية على تعلم مفردات اللغة الإنجليزية لدى طلاب الصف الحادي عشر في المدارس الحكومية في مدينة رام الله، ولتحقيق هذا الهدف، اعتمد الباحث المنهج شبه التجريبي وطبقه على عينة بلغت (60) طالباً من الصف الحادي عشر من مدرسة ذكور البيرة الثانوية في مدينة رام الله، حيث تم اختيارهم وتقسيمهم بشكل عشوائي إلى مجموعتين: ضابطة وأخرى تجريبية، تكونت المجموعة الضابطة من (30) طالباً، والمجموعة التجريبية من (30) طالباً. تلقت المجموعة التجريبية التعليم عن طريق استخدام الخرائط الذهنية بينما درست المجموعة الضابطة باستخدام التعليم التقليدي، استخدم الباحث أداة واحدة لتحقيق أهداف الدراسة وهي: اختبارين قبلي، وبعدي للمفردات، حيث تكون اختبار المفردات من خمسة أسئلة.

تم تحليل بيانات الدراسة باستخدام اختبار (الفرق بين وسطين لعينتين مستقلتين) لمعرفة إذا كان هنالك أي فروق ذات دلالة إحصائية بين المجموعتين، وقد تم أيضاً تطبيق اختبار (حجم الأثر) وذلك لقياس حجم تأثير الخرائط الذهنية.

وقد أظهرت نتائج الدراسة عن وجود فروق ذات دلالة إحصائية بين متوسطات المجموعتين التجريبية والضابطة في اختبار المفردات البعدي لصالح المجموعة التجريبية.

في ضوء نتائج الدراسة، أوصى الباحث المعلمين والمعلمات بضرورة استخدام الخرائط الذهنية في تدريس المهارات والجوانب المختلفة في اللغة الإنجليزية، وأن يكونوا قادرين على العمل

على طرق التدريس التقليدية وتقديم طرق جديدة في تدريس المفردات، كما أوصى أصحاب القرار ومصممي المناهج بإضافة استراتيجية الخرائط الذهنية في المناهج والمواد التعليمية، ومن ناحية أخرى أوصى المشرفين بتطوير دورات تدريبية، وتقديم وتنظيم المواد، والكتب، وورشات العمل للمعلمين والمعلمات عن الخرائط الذهنية.