

FOREIGN LANGUAGES AND VIETNAMESE

**IMPROVING STUDENTS' ENGLISH VOCABULARY
THROUGH MIND-MAPPING: AN ACTION RESEARCH
PROJECT AT A HIGH SCHOOL IN HUNG YEN PROVINCE****DANG NGUYEN GIANG* - NGUYEN THI NGUNG****

ABSTRACT: Vocabulary plays a very important role in English language teaching and learning because without sufficient vocabulary learners are not really able to understand others or express their own ideas and opinions. Indeed, vocabulary is a significant thing in communication. If the students do not know and understand the meanings of words, it will be difficult for them to speak, write or translate anything in English. The article is about an action research project carried out at a high school in Hung Yen province. The aim of the study is to improve the 12th graders' English vocabulary. In order to achieve the aim, the study is expected to reach the two objectives: (1) evaluating the effectiveness of mind-mapping applied to vocabulary teaching; (2) uncovering the 12th graders' attitudes towards mind-mapping used in vocabulary teaching. Both qualitative and quantitative methods are exploited in this study. The data are collected via tests and questionnaires from 92 samples. The findings of the study show that mind-mapping is one of the effective techniques to improve students' vocabulary, and that students have positive attitudes towards this technique.

KEYWORDS: English vocabulary; mind-mapping; action research project; attitudes; learning outcome.

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1. Introduction

In today's global world, the importance of English cannot be denied and ignored. It plays an important role in many sectors such as medicine, engineering, education, aviation, etc. It is the official language in several countries. Therefore, English language is believed to be used to access to every field of life. It is English that is used to communicate internationally.

In acquiring a foreign language, vocabulary plays a crucial part. It is one element that links the four skills (speaking, listening, reading and writing) all together. When referring to the importance of vocabulary, it is noted by Wilkins (1972) that "without grammar little can be conveyed, without vocabulary nothing can be conveyed.". Indeed, people need to use words in order to express themselves in any language. In order to communicate well in a foreign language, anyone should acquire an adequate number of words and should know how to use them accurately.

Before 1970, little attention was paid to vocabulary teaching and learning. It means that teaching vocabulary was just regarded as an addition to grammar teaching or simply a by-product of language teaching. However, some scholars of language acquisition no longer talk about the four language skills, but nine skills. These other five skills are vocabulary, spelling, grammar, pronunciation and study skills. Therefore, the role of vocabulary knowledge has been recognized by theorists and researchers since 1990 (Nunan, 1999).

We have worked as teachers of English for many years, and we have noticed that our students usually find it difficult to speak English fluently. They usually consider speaking and writing activities (productive skills) exhausting because they keep on using the same words and expressions, so very soon their conversations are abruptly interrupted due to missing words. For the same reason, their receptive skills (listening and reading) are not good either. The main reason for such problems is the lack of vocabulary. Some students have difficulty in remembering the new words. They usually

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forget the words right after the teachers have elicited their meanings or after having looked them up in the dictionary. In order to improve the students' English vocabulary, an action research project is carried out at a high school where one of the researchers works.

2. Literature review

2.1. Vocabulary

According to Neufeldt (1994), vocabulary is a word list which is often used in every aspect of life and words are usually arranged alphabetically with an equivalent definition. Lado (1994) defines vocabulary as a form of expression associated with the meanings and contents of words. Meanwhile, it is also defined by Scrivener (1994) that vocabulary could be considered as a powerful meaning carrier because when a student identifies the importance of the vocabulary in communication and learning, they may reasonably intend to get, receive and accept a working knowledge of a great amount of words.

Another significant thing for teachers when making work of vocabulary is the difference between receptive and productive vocabulary. According to Thornbury (2002), in general, there are several difficulties when learners access vocabulary of a foreign language. Actually, they are creating the accurate connection between the forms and meanings of words during the process of understanding the target language; for example, separating the meaning of the words related to the topic, and using the exact word form for the intentional meaning when producing language.

Vocabulary can be divided into two types, including productive (active) and receptive (passive) vocabulary (Scrivener, 1974). Particularly, productive vocabulary is the group of words which are often used in spoken language, or daily conversations. This type of vocabulary requires good pronunciation, saying the sounds and stress of the words correctly, so that the dialogues can be carried out smoothly. Meanwhile, receptive vocabulary is the use of words that we can identify and understand how to use but we do not use it intentionally in conversations or other purposes.

It is stated by Montgomery (2007) that there are 4 types of vocabulary: (1) the words we hear and understand; (2) the words we use when we speak; (3) the words we understand when we read text; (4) the words we can retrieve when we write to express ourselves. The first two constitute spoken vocabulary and the last two, written vocabulary. Children begin to acquire listening and speaking vocabularies many years before they start to build reading and writing vocabularies. Spoken language forms the basis for written language. Each type has a different purpose and, luckily, vocabulary development in one type facilitates growth in another.

2.2. Mind-mapping

"Mind-mapping" was created and made progress in the late 1960s by Tony, a British psychologist in an attempt to assist learners to do the note-taking more effectively. According to Buzan (1993), "mind-mapping is a powerful graphic technique, which provides a universal key to unlocking the potential of the brain". Additionally, it was also noted by McGriff (2000) that "mind-mapping is an excellent way to help learners organize knowledge, to empower themselves to better comprehend the key concepts and principles in lectures, readings or other instructional materials". Because of its visual specialty, mind-mapping is often full of colors, pictures and symbols like a small art. Buzan (1993) gave some advice to make or create a mind-mapping as follows:

- Taking a blank piece of paper and beginning in the center of this sheet with turning the paper sideways. Starting from the middle helps the brain to think freely due to numerous creative space, ideas from brain can spread in all direction so that they can be expressed in the most effective way.

- Taking pictures, photos or big shape drawn by the author for the main topic or ideas, with the biggest for the most important and smaller for the less significant. An image or picture put in the central of the Mind-mapping can be able to make the map to be more intriguing and keep the author of the map concentrated on the process and stimulate the imagination so that new ideas can be produced.

- Using colors, which are helpful to the imagination, to make the mind-mapping to be more vibrant, lively and energetic. Bright and impressive colors such as red, orange or blue are highly recommended.

- Using curved lines, which are less boring and more attractive to the maker, to connect the main ideas to the topic in the central position of the paper. When connecting ideas by lines, it creates the structural frame to the whole map and helps the brain link ideas and support evidence together.

- Using as least words as possible, the best way to convey ideas in mind-mapping is using one key word, which is proven to create the creativeness and flexibility to the mind-mapping and help the author to spark off novel thoughts, for each big branch, and more details can be added in further branches.

In general, mind-mapping illustrates the process of forming ideas happening in our mind. By using mind-mapping, a great amount of information can be presented by pictures, lines, colors or symbols. Furthermore, other components of a mind-mapping such as arrows, shapes, diagrams, etc will help our brain to remember information in a better way

2.3. Mind-mapping in vocabulary teaching and learning

It is undeniable that memory plays an important part in learning, remembering and acquiring a foreign language, especially in learning vocabulary, in which students are responsible for getting acquaintance and internalizing to the pronunciation and meaning of the words on the purpose of using them effectively. In order to achieving the aim of learning vocabulary efficiently, taking the advantage of the tool of mind-mapping, which use personal connection with a view to making the process of remembering new information to be more easily and visualizing the thinking process, a helpful method. As a result, mind-mapping is considered to be a very supportive teaching technique to use the vocabulary of a foreign language proficiently. Despite the possibility of being time-consuming to apply the technique, eventually, at the time students recognize and understand the way of using mind-mapping, the learning process will be speeded up. Basing on the viewpoint of Casco (2009), there are some applications of using mind-mapping in teaching vocabulary, including:

- *Engaging the students*: When taking a look at the mind-mapping, students can pay attention to the main topic and recognize what the subsequent piece of information is. Additionally, mind-mapping can supply necessary information to decrease the apprehension of the students when getting input data.

- *Activating previous background knowledge*: Mind-mapping is proven to activate prior knowledge of students because the use of pictures, colors and keywords can foster the memorization process of students' background knowledge about the topic.

- *Stimulating students to raise questions*: In a mind-mapping, the information is displayed and arranged in a clear way and it shows the background knowledge of the students about the topic by the density of branches on the mind-mapping. Therefore, mind-mapping can help to encourage learners to ask because visual attracts and interrogation marks widen the range of information and urge them to ask more to fulfill the need in the students to discover and answer unanswered questions.

- *Supporting the skills of reading, listening and speaking*: Owing to offering the students a very general view of the topic, mind-mapping is considered a powerful method to facilitate the skills of reading and listening comprehension of students. Accordingly, the embedded signals included in the mind-mapping prompt the students to create the link between the ideas summarized on it and the full content of these ideas, and in turn help them to understand. Additionally, mind-mapping also provides a method for the students to arrange their thoughts, because the great number of ideas and information on the mind-mapping, which are easily connected, allowed the students to make a discourse when using the mind-mapping.

- *Evaluating oral production*: In general, the method of implementing the same mind-mapping at different steps of the course can be taken as an example of the process of production of the students. They can show their level of comprehension of the new grammatical structures and lexical items by explaining the relation among elements on the mind-mapping. The production acquired with the aid from the mind-mapping will become an experience for teacher in their work in the future.

- *Supporting written production*: In writing, mind-mapping is proven to be an effective tool to form the ideas for the writing topic, because the more branches the mind-mapping has, the more evidence and supporting ideas the students can have to put into their writing production.

Because of its importance, vocabulary appears in almost every aspect of the language use, including reading, writing and speaking. According to Hofland (2007), reading is considered “a very linear process, a typical left-brain skill.” On the other hand, linear process is not the sole skill that the human brain is good at; it is also extremely strong in parallel processing skill. Obviously, when a word appears in students’ mind, it usually accompanies with related images, pictures, ideas or associations of this word, and the connection itself is also the advantage of mind-mapping. Learners can take advantage of it to use in their learning. Additionally, mind-mapping can be very useful in learning writing, which is considered to be the hardest skill for the students to learn because of the word limitation and the lack of ideas to express in a writing task. With the use of mind-mapping, students can have a creative way to brainstorm and forming ideas for the task. Besides, students can express their viewpoint by looking at the pictures, photos or colorful words and turn this opinion into sentence in the writing. Last but not least, mind-mapping can be used like a reminder tool for the speaking exercises. Students can prepare a mind-mapping about the topic that they are going to learn in the lesson. Key words and clues appear on the mind-mapping will be suggestions to them so that they will speak more naturally, fluently and confidently.

In the 1990s, mind-mapping was first applied in the language teaching (Casco, 2009). The function of mind-mapping at that time was a tool to activate the prior, or background knowledge from students in a particular theme and support them to memorize, recall and organize the meaning of the words and the vocabulary items themselves. In particular, the process of activating prior knowledge happens when students are being asked questions by the teacher about their own knowledge without any preparation to check what students actually know about the topic. Subsequently, when the vocabulary acquisition is taken place, teachers ask students to brainstorm the vocabulary related to the topic and basing on this process, instead of writing down new words to the notebook similar to the traditional approach, students create their mind-mapping individually with words on it. Another remarkable thing about mind-mapping could be mentioned here is the presence of symbols, colorful pictures which not only assists students in memorizing, comprehending the usage and meaning of the vocabulary but also makes them more creative when both sides of the brain are activated. Therefore, Mind-mapping brings interest in learning vocabulary to the students, and the model Mind-mapping presented in the figure below describes the way of assisting the vocabulary learning of mind-mapping to the students.

2.4. Previous research

Undeniably, mind-mapping is a very popular teaching technique not just only in Vietnam but also in several countries in the world. Accordingly, there have been many studies concerning mind-mapping. It is revealed in Naqbi’s research project (2011) that mind-mapping has an effect on students’ abilities to organize and arrange their arguments for writing tasks. Moreover, applying mind-mapping in teaching would improve the students’ cognition skills and help in the process of their information recovery in a situation of evaluation. Finally, the author concluded that mind-mapping is appropriate to help learners in making a plan for their writing since it stimulates learners to find out and adapt a deeper level of comprehension about the writing topics.

An investigation carried out by Hofland (2007) gives a conclusion that mind-mapping is an effective tool because using mind-mapping can bring a lot of benefits to English teaching, including reading, writing, speaking as well as vocabulary, and the use of personal associations of mind-mapping can become easier to memorize new information and visualize the thinking process. Sharing the same conclusion, Effendi (2004) emphasizes the effectiveness of mind mapping technique in increasing the second year students’ reading comprehension at SLTP Negeri 43 Palembang.

In Vietnam, several research projects have been carried out to improve students’ English vocabulary such as “*Vocabulary level and vocabulary learning strategies of first year ULIS English majors*” by Minh (2009), “*Using movies and videos to teach English vocabulary to the tenth form students*” by Lan Anh (2010), “*Techniques in teaching vocabulary to young learners at ILA school*” by Chi (2010), etc. Minh (2009) focused on how to improve the first-year students’ process of learning vocabulary at a university. The findings of the study show that he students requires a

different way of accessing, acquiring and learning vocabulary because they start to study in a new learning environment in which the requirement for learning is much more than that of the high school. Anh (2010) in her study states that using movies and videos is one of the ways to help students to learn vocabulary more effectively. Because of the characteristics of visualization of movies and videos, they can help students to memorize new words more easily and students can remember and use them in longer time. In a general perspective, Chi (2010) concentrated on the techniques that can be used to help the students at ILA School to learn vocabulary more effectively.

3. Methodology

The objectives of the present study are evaluating the effectiveness of mind-mapping applied to vocabulary teaching (the 12th graders' learning outcome) and uncovering the students' attitudes towards mind-mapping. In order to achieve the objectives, both qualitative and quantitative methods are exploited in this action research project. The data are collected via tests and questionnaires.

3.1. Research setting

The present study is carried out at a high school in Hung Yen province. The school was established in 1961. It is one of the most famous high schools in Hung Yen province. With over 100 teachers and officers, approximately 1360 students and 38 classes (school year 2020-2021), the school is noted for not only experienced teachers but also good and successful students. There are 11 graduate teachers in the English group. Some of the teachers have master degrees in English language. All of them are co-operative and enthusiastic in teaching.

It seems that many students at this school are interested in studying nature science subjects such as maths, physics and chemistry, etc. rather than English. They learn English because it is a compulsory subject. Therefore, the teachers face difficulties in teaching English, especially teaching vocabulary. Indeed, the students usually feel bored with learning vocabulary even though most of them are quite good at grammar. They find English vocabulary difficult to remember by writing words on papers or learning the word lists by heart through the teachers' explanations. Another reason is that students hardly have opportunities to use English outside the classes, and they soon forget the vocabulary they have learnt. Therefore, an action research project is carried out in order to improve the 12th graders' English vocabulary through mind-mapping.

3.2. Participants

One of the two researchers works as an intervener. She has been a teacher of English for more than 20 years. At present, she is responsible for teaching the 12th graders. The participants in this research project are 92 students who come from two classes (12A2 and 12A8) in the academic school year of 2020-2021. They are in their final year at high school and in their attempt to win a place at universities. They would take GCSE examination (General Certificate of Secondary Education Examination), the most important examination when the academic school year finishes. The researchers hope that after participating in this research project, the students could find a way to improve their English vocabulary, which can help them a lot in the coming tests, their further studies as well as their lives in the future.

3.3. Data collection instruments

3.3.1. Vocabulary tests

Before designing a test, it is vital to think about what to test and what its purpose is. As mentioned above, the goals of the study are to evaluate the effectiveness of mind-mapping technique applied to vocabulary teaching and measure the student's word retention, which means that how long a word is retained in students' long-term memory.

Vocabulary tests are used by the researcher to get information about the ability of learners in leaning and memorizing vocabulary. In total, a series of three tests (a pretest and two posttests) are administered to students at a six week interval and the target words in the previous test are included and tested again in the subsequent tests but in different linguistic contexts. Test items are multiple-choice questions, gap-filling, matching the words with the pictures, words that go together, matching the words with the definitions and error correction.

All the target words or lexical items that are taken from the text book are developed and tested. All the tests are designed in such a way that they were marked objectively. Specifically, the multiple-choice format with four options is used for all tests and they are piloted with the best students of other classes who all have good knowledge of the subject before they are administered to the students. This is to make sure that there are no ambiguities in the tests, i.e. no test item has two possible correct answers. In the tests, students are asked to choose the best answer by circling the letter A, B, C or D. Time allocated for each test was 15 minutes and mark allocation is 100 points in total.

3.3.2. Questionnaires

In this study, the questionnaire consists of six questions concerning the 12th graders' opinions about learning vocabulary and their feedbacks on the teacher's activities. All items in the questionnaires for students were both in English and Vietnamese so that the students could have intensive understanding in both languages and could follow and complete more easily.

3.4. Research procedures

There are four phases in the procedure of the study, and these whole procedures can be visualized as follows:

Phase 1: At this phase, the materials essential for the lessons are prepared, including questionnaires, lesson plans and vocabulary tests. Furthermore, at the beginning of the lesson, teacher should conduct the try-outs of questionnaires and vocabulary tests. Additionally, preparing lesson plans to teach in class is the most time-consuming task in this phase.

Phase 2: The second phase of the study takes the responsibility of reaching the objectives of the study. Survey questionnaires are delivered to 92 students coming from 12A2 and 12A8. Before handing out the questionnaires, the researchers spend some time clarifying and guiding students how to answer all of the questions. They are also told the purposes and instructed how to complete the questionnaire carefully. The rest of phase 2 involving pretest, trial lessons, posttest 1 and posttest 2 is designed and applied. First and foremost, the researchers deliver the pretest to 92 students of the two classes (12A2 and 12A8) before the trial lessons. Lessons with mind-mapping is in the next step. After completing lessons with mind-mapping, students take the first posttest to assess their memorizing ability of the language items taught in the lessons. Finally, three weeks after the first posttest, another posttest (to check the vocabulary retention of students) is distributed to students.

Phase 3: This is considered the most significant phase of the whole study because the result of data is used to address the objectives. The first step of this phase is gathering data from all the three tests, the semi-structured questionnaires and the interviews. Then, in the second step, all the data are processed, evaluated and analyzed to get the results in order to be used in the next phase.

Phase 4: After the researchers analyze data collected through tests, questionnaires, and interviews, reflection identifies the result of the research. This is the last phase of the study.

3.5. Data analysis

The data are analyzed to meet the requirements of this study. As stated in this action research project, both qualitative and quantitative methods are used by the researchers. For the tests, the scores from the pretest and two posttests are computed, calculated and converted into mean scores based on the total number of students participated. The steps of data analysis process involved determining the mean scores to check whether or not there are any significant differences between pretest and posttests; and/or differences between posttest 1 and posttest 2. Tables were used to display the data with clarity and ease of assessment. The score interval is divided into Excellent (85-100 points), Good (70-84 points), Average (50-69 points), Poor (30-49 points), and Very poor (0-29 points). For the questionnaires, one of the objectives of the study is to find out the students' opinions and attitudes toward the teacher's activities. Data gathered from the students' feedbacks are firstly read through, and then sorted out and interpreted to get the objective. Therefore, the students' opinions are counted and converted to percentage and illustrated in the form of figures and tables. Then, the researchers compare the valid percent of some agree opinions with some disagree options to determine the treatment.

In brief, the data is displayed, analyzed and interpreted to attain the findings of the study. The analysis and interpretations are based on pretest and posttest scores and students' opinions from questionnaires.

4. Findings and discussion

4.1. The results and analysis from tests

One of the objectives of the study is evaluating the effectiveness of mind-mapping on the 12th graders' English vocabulary outcome. Before and after the intervention, the students are given a pretest and 2 posttests. The aim of posttest 1 is to find out whether there is any difference in result between pretest and post-test 1 so that the researchers can draw out the effectiveness of mind-mapping in learning vocabulary. The purpose of post-test 2 is testing the students' retention of words under the treatment of mind-mapping.

The collected results of the tests are calculated, analyzed and presented in Table 1.

Table 1. Students' test results

Scores	Number of students		
	In pretest	In posttest 1	In posttest 2
5	0	0	0
10	0	0	0
15	1	0	0
20	6	0	0
25	6	0	1
30	8	0	1
35	8	1	2
40	35	2	3
45	10	2	4
50	5	18	14
55	5	10	11
60	3	14	14
65	2	14	15
70	1	8	8
75	1	6	6
80	1	6	5
85	0	6	5
90	0	3	2
95	0	2	1
100	0	0	0
Total	92	92	92
Mean scores (Average scores)	40.38	63.75	61.46

It can be seen from Table 1 that the minimum score of the pretest is 15, that of posttest 1 is 35, and that of posttest 2 is 25 whereas the maximum score of pretest is 80, and these of posttest 1 and posttest 2 are both 90. The gaps between the minimum score and the maximum score of pretest, posttest 1 and posttest 2 are 60 points, 60 points and 70 points respectively.

The gap between the minimum score and the maximum score of pretest and posttest 1 is both 60 points. The findings show that there is a rather strong improvement in quality of the pretest and posttest 1. This is clearly shown in the mean score of the pretest and posttest 1 (40.38 is the mean score of pretest and that of the posttest 1 is 63.75). It means that students' mean score increased by

23.37 after the treatment. Furthermore, the maximum score of the posttest 1 is higher than that of the pretest (95>80). The minimum score increased by 20 points from 15 points in the pretest to 35 points in the posttest 1. More importantly, there is little change in mean score between posttest 1 and posttest 2 (63.75 points compared to 61.46 points). It is indicated that there is a significant change in the students' vocabulary retention after the treatment.

Table 2. Comparison of distribution of test score range

Category	Pretest		Posttest 1		Posttest 2	
	Number of students	%	Number of students	%	Number of students	%
Excellent (85 - 100 points)	0	0	12	13.04	8	8.69
Good (70 - 84 points)	3	3.26	19	20.65	19	20.65
Average (50 - 69 points)	15	16.30	56	60.86	54	58.69
Poor (30 - 49 points)	61	66.30	5	5.45	11	11.97
Very poor (0 - 29 points)	13	14.14	0	0	0	0

It is revealed in Table 2 that before treatment, the majority of the students could not do the test successfully. In the pretest, up to 66.30% of the students get poor marks and 14.14% of them receive very poor marks. The number of the students who get between 50 and 69 points comprise 16.30%. Especially, only 3.26% of the students achieve good marks and none of them could get excellent marks. In posttest 1, the number of students who get average marks increase considerably (60.86% compared to 16.30%). Also, there are more students who get good marks in posttest 1 (19 students) than in the pretest (3 students). Notably, there are 12 students (accounting for 13.04%) who could obtain excellent marks. All this impressive result could be explained that maybe this test is done right after the treatment. Besides, there are still 5 students who get bad marks and happily, there are no students with very poor marks left. In posttest 2, there is little change in number of students who get average and good marks compared to those of posttest 1. In addition, the number of students getting excellent marks decrease by 4 students. The students with poor marks increase by 6. The change here may be due to the fact that the 3 week period is quite long for some students, which makes them forget some words learnt. In general, the results reveal that the use of mind-mapping in teaching and learning English vocabulary has positive effect on students' vocabulary retention.

4.2. The results and analysis from questionnaires

The questionnaires include 6 statements used to investigate the informants' attitudes towards the researcher's intervention. Items 1, 2 and 3 are to investigate the students' attitudes towards mind-mapping. Items 4, 5 and 6 expose the students' evaluation on the effectiveness of the mind-mapping in vocabulary retention.

Table 3. Students' opinions about mind-mapping

No	Opinions	(1) Strongly disagree		(2) Disagree		(3) Aagree		(4) Strongly agree	
		Number of students	%	Number of stuents	%	Number of students	%	Number of students	%

1	It is interesting to learn English vocabulary with what the teacher's done.	0	0	6	6.52	76	82.60	10	10.88
2	The activities give me more pleasure.	0	0	4	4.34	61	66.30	27	29.36
3	The activities applied to learn vocabulary are creative.	0	0	4	4.34	71	77.17	17	18.49
4	I find it easy to remember new words.	0	0	3	3.26	13	14.13	76	82.61
5	The activities help retain vocabulary longer.	0	0	4	4.34	76	82.60	12	13.06
6	The activities help to activate prior knowledge and link to new items.	0	0	3	3.26	32	34.78	57	61.69

Table 2 shows that there are 92 students involved in answering the questions. The students are firstly asked whether using mind-mapping to learn vocabulary is interesting or not. With this question, 86 out of 92 students (93.84%) agree or strongly agree that the technique applied by the teacher make the lessons interesting. The students are then asked about the pleasure that mind-mapping brings to them. Almost all the students (95.66%, equivalent to 88 students) approve that learning vocabulary with mind-mapping technique gives them more pleasure. Only four students disapprove with this view. With question 3, most of the students report that the activities with mind-mapping technique applied to learn vocabulary are creative. 88 out of 92 students agree that by creating branches out from the central idea, they can free their minds to think creatively on the vocabulary and knowledge related to the central idea. It means that 95.66% students share this view. The results of question 4 reveal that most the respondents (96.74%) find it easy to remember new words. Especially, a large number of students (76 students) totally agree with this opinion. From the data of question 5, it can be concluded that the majority of the students express positive attitudes toward the mind-mapping used in vocabulary learning, which helps lengthen the retention of vocabulary learnt. In total, there are again 88 students (95.66%) confirm that the activities with mind-mapping helps retain vocabulary longer. In question 6, the students are inquired whether using mind-mapping helps to activate learnt vocabulary/ knowledge and helps link to new items. Concerning this feature, more than 96.47 % of the students agree that they could activate the vocabulary knowledge thanks to mind-mapping used in the lessons. Only three of them (3.26%) did not think so. Also, in question 6, 89 out of 92 students (96.47%) agree and strongly agree that mind-mapping help them connect the prior knowledge with new information, which may help them transfer what they have learnt and apply it to new situations. Actually, when building a mind-mapping with a key word or phrase in the center, it activates learners with previous knowledge. In this way, the knowledge is revised repeatedly and retention ability would be better.

The results of the questionnaires have shown that learning vocabulary by using mind-mapping is considered effective. The feedback of students to questionnaire helps uncover the 12th graders' attitudes toward mind-mapping used in vocabulary teaching. Most of the students have positive assessment about the mind-mapping.

4.3. Implications

The findings of the study prove that the researchers are going in the right direction in order to meet the study's objectives. Therefore, the practical implications for not only the teachers of English and students at the school but also the others are given as follows:

Firstly, teachers have a crucial influence on the success of the students' learning. Teachers of English group can apply mind-mapping in teaching, especially teaching vocabulary. In the classrooms, the teachers need to design more activities with mind mapping to motivate the students' participation. Additionally, the activities with mind-mapping should be designed in a creative way by the teachers.

Secondly, students should develop their awareness in learning English, specially learning vocabulary because English is a compulsory subject in GCSE examination. They should be more active, creative during the lessons. They should apply mind-mapping not only in vocabulary learning, but also in acquiring other skills of English. On the other hand, they can use mind-mapping in studying other subjects.

Lastly, it is hopeful that the other researchers can take several advantages of this research. The findings of the study, to some extent, help them have a broad view of mind-mapping and apply it appropriately to their own action research projects.

5. Conclusion

The objectives of the study are evaluating the students' attitudes towards mind-mapping and checking the learning outcomes of the students after the treatment. In order to achieve the objectives, tests and questionnaires are used as the main tools to collect the data. Tests help to prove a remarkable improvement in the students' vocabulary retention. Questionnaires are used to uncover the students' attitudes towards the use of mind-mapping. From the main findings, it can be concluded that mind-mapping has many benefits. The students feel excited when mind-mapping is used in the class. The different colours and visual images of mind-mapping design make the students enjoy their learning and also assist them to memorize and recall learnt words more easily and for a longer period of time. In addition, the use of mind-mapping technique enrich the students' lexical items. They could realize connections between prior knowledge and new items. In other words, mind-mapping is a good alternative technique to enhance the students' vocabulary retention.

The findings of the study contribute to realization of the importance of mind-mapping in the English classes. Although there are many other techniques to teach vocabulary, mind-mapping is a good choice for teachers whose students have difficulties in learning vocabulary. The investigation into the effectiveness of mind-mapping in teaching English vocabulary for the 12th graders has made great contributions to the researchers' professional development as teachers of English. It also helps the authors realize the importance of designing more suitable activities for the students.

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Cải thiện vốn từ vựng tiếng Anh của học sinh thông qua phương pháp sơ đồ tư duy:

Dự án nghiên cứu hành động tại một trường THPT ở tỉnh Hưng Yên

Tóm tắt: Từ vựng đóng vai trò rất quan trọng trong việc dạy và học tiếng Anh bởi vì nếu không có đủ vốn từ vựng, người học khó có thể hiểu người khác hoặc diễn đạt ý tưởng và quan điểm của mình. Thật vậy, từ vựng là một phần có ý nghĩa rất lớn trong giao tiếp. Nếu học sinh không biết và hiểu nghĩa của từ, các em sẽ không thể nói, viết và dịch bất cứ thứ gì bằng tiếng Anh. Bài báo viết về dự án nghiên cứu hành động được thực hiện tại một trường trung học phổ thông ở tỉnh Hưng Yên. Mục đích nghiên cứu là nâng cao vốn từ vựng tiếng Anh của học sinh lớp 12. Để đạt được mục đích trên, nghiên cứu đặt ra hai mục tiêu: (1) đánh giá hiệu quả của phương pháp sơ đồ tư duy trong dạy học từ vựng; (2) tìm hiểu quan điểm của học sinh lớp 12 về phương pháp sơ đồ tư duy trong dạy học từ vựng. Đề tài sử dụng cả phương pháp nghiên cứu định tính và phương pháp nghiên cứu định lượng. Dữ liệu được thu thập thông qua các bài kiểm tra và bảng câu hỏi từ 92 mẫu (92 học sinh lớp 12). Kết quả nghiên cứu cho thấy sơ đồ tư duy là một trong những phương pháp hiệu quả để cải thiện vốn từ vựng của học sinh và học sinh có thái độ tích cực đối với phương pháp này.

Từ khóa: Từ vựng tiếng Anh; sơ đồ tư duy; dự án nghiên cứu hành động; thái độ; kết quả học tập.