

# Using mind mapping to improve English vocabulary learning for the 10<sup>th</sup> Graders

*Nguyễn Quỳnh Trang\**; *Nguyễn Thị Nhung\*\**

*\*TS. Trường Đại học Y - Dược, ĐH Thái Nguyên*

*\*\*GV. Trung tâm GDNN-GDTX tỉnh Bắc Ninh*

*Received: 03/10/2023; Accepted: 06/10/2023; Published: 09/10/2023*

**Abstract:** *The study aimed to evaluate the effectiveness of mind-mapping technique applied to vocabulary learning for the 10th graders' students. A combination of quasi-experimental research and research design was employed for collecting data. The findings revealed significant positive effects of mind mapping techniques on vocabulary learning for students. Furthermore, results from the pre-and -posttests between the experimental group and the control one pointed out that this technique brought back positive academic performance in teaching and learning English.*

**Keywords:** *Mind Map, Vocabulary for 10th Graders, vocabulary learning, improving vocabulary*

## 1. Introduction

Vocabulary is known as an integral component of learning English, exerts a substantial influence on students' reading comprehension capabilities. As Taylor (1990) aptly noted, "The development of a sufficient vocabulary is essential for successful second language learners because without an extensive vocabulary, they will be unable to use the structures and functions they may have learned for comprehensible communication" [34, p. 103]. The acquisition of language and, by extension, an extensive vocabulary, is a formidable challenge for Vietnamese pupils, especially those in high school. Various factors contribute to this challenge, including resource constraints and school infrastructure inadequacies. Notably, the traditional instructional approach bears significant responsibility for this predicament, as it allocates a disproportionate emphasis to grammar instruction at the expense of vocabulary development. In this archaic method, teachers typically provide Vietnamese equivalents for new words, instructing students to record them. However, this practice falls short in cultivating a lasting and effective vocabulary repertoire.

Mind mapping, as elucidated by DePotter and Hernacki (cited in Abdurrahman, 2008: 152), utilizes visual and sensory cues to construct meaningful patterns from interconnected ideas. It enables students to clarify their thought processes by categorizing and structuring their thoughts into coherent clusters [11]. Mind mapping, as a pedagogical tool, serves as an invaluable catalyst for inspiring students to generate

novel ideas and engage in substantive discussions. Moreover, it fosters natural modes of thought, proving particularly beneficial in the writing as well as speaking process.

## 2. Content

### 2.1. The importance of learning vocabulary

Vocabulary is the backbone of language learning, especially when striving to master English or any foreign language. It serves as the primary vehicle through which we convey our thoughts, feelings, ideas, and experiences. To put it simply, if you aspire to learn English effectively, your journey must commence with building a robust vocabulary.

Vocabulary is considered as a puzzle, with each word representing a piece. Without a substantial vocabulary, your puzzle remains incomplete, and your message doesn't fully come together. Each word is a tool in your linguistic toolbox, and the more tools you have, the more proficiently you can construct sentences and express yourself.

Vocabulary extends far beyond mere communication. It is intertwined with academic success, job opportunities, and personal growth. As a high school student, you are undoubtedly aware of the importance of standardized tests like the SAT or ACT for college admissions.

Furthermore, vocabulary is a vital element in academic achievement. It facilitates comprehension of textbooks and instructional materials across various subjects. A rich vocabulary enables you to grasp complex concepts and theories, making your learning journey smoother and more enjoyable.

## 2.2. *Mind mapping types*

### \*Multi-flow maps

According to Sabarun et al. (2021), Flow diagrams are utilized to demonstrate the steps of a procedure. They are used to denote an object's location as it moves through a space. These maps can be used to identify animal migrations, human mobility, money circulation, and trade flow, etc. In a flow chart, the arrows point in a specific direction, while the width shows the total amount. Consumers can use it to keep up with the newest fashion trends, disease transmission patterns, and disaster progression. There are variety of situations how it can be applied in writing, including, a classification essay, an exemplification essay, and an illustration essay.

### \*Brace maps

According to Dunn, R.S., Dunn, K., & Price, G.E, the brace map aids in the discovery of relationships between individual pieces and the entire structure. It refers to something that is decomposable into smaller, more manageable components. In a different kind of way, brace maps are intended to assist in the breakdown of physical things into their functional components so that they can be examined in greater detail. Users write the name of the entire thing on the line on the left, then write the major components of the object on the lines within the first brace to the right, followed by the minor parts of each major component within the next set of braces.

## 2.3. *Findings and Discussion*

### \*Results of the Tests

-Analysis of Pretest Means Scores Comparison of the Control and Experimental group

Based on the results of the English vocabulary test, we can see that two groups of classes, including the Control group and the Experimental group, participated in this test. Looking at the statistics, we can draw some important observations.

First of all, the average score of the Control group (6.08) was higher than the average score of the Experimental group (5.67). This implies that, overall, the Control group scored higher on the test of English vocabulary. Based on this score, it can be seen that the Control class has better academic performance than the Experimental class

Second, the standard deviation of the Control group (0.75) was lower than that of the Experimental group (1.03). Standard deviation represents volatility

in data. The Experimental group had higher volatility, indicating a greater dispersion in their learning outcomes. This may show that the Experimental group has more diversity in academic performance, with some students scoring high and some scoring lower.

Third, while the highest score for both groups was 8.5, the lowest score for the Experimental group (3.5) was lower than the lowest score for the Control group (4). This suggests that there is a disparity in the results of the Experimental group, with some students not achieving good

- Analysis of Post Test Means Scores Comparison of the Control and Experimental group

Based on the new results of the English vocabulary test, we can see a marked difference between the two class groups, the Control group and the Experimental group, after applying the mind map in the learning process.

First of all, the average score results show the positive influence of using mind maps. The Experimental group averaged a much larger score than the Control group. The average score of the Control group was 5.72 while the Experimental group had an average score of 7.9. This implies that the use of mind mapping may have helped improve the Experimental group's performance in learning English vocabulary.

When looking at the standard deviation, we see that the Experimental group had lower volatility (0.27) than the Control group (0.73), indicating more stability in their learning outcomes.

However, it should be noted that the score range of the Experimental group is also wider, from 5.8 to 10, while the Control group ranges from 3.5 to 9. This shows the diversity in the results of the Experimental group, with some students scoring the highest while there are others scoring lower grades.

### 2.4. *Results of Questionnaire*

The data indicated that 10th-grade students generally have positive perceptions of the psychological impact of mind mapping techniques on their learning. They believed that mind mapping enhanced critical thinking, encouraged active participation and idea contribution, aided in organizing thoughts, fostered creativity, and improved reasoning skills. While there were some disagreements on the impact of mind mapping on the roles of teachers and learners, students, in general,

did not find lessons using mind mapping to be boring.

Mind mapping provides me with a wider perspective on critical thinking: With a mean score of 3.52 and a relatively low standard deviation of 0.621, it is evident that students generally believe that mind mapping contributes positively to their critical thinking abilities. The high interpretation suggests that the majority of students find that mind mapping broadens their perspective and aids in critical thinking.

Mind mapping draws my attention to contribute ideas to the lessons: The mean score of 4.06, along with a standard deviation of 0.630, indicates a high impact. Students highly value mind mapping as a tool that actively engages them in lessons and encourages them to contribute their ideas. This is reflected in the high interpretation.

Mind mapping helps me organize my thoughts: The mean score of 3.87, coupled with a low standard deviation of 0.515, demonstrates that students generally perceive mind mapping as an effective technique for organizing their thoughts. The high interpretation suggests that the majority of students find this aspect of mind mapping beneficial.

\*Results from Interview

Question 1: How do you find the teacher's activities?

The majority of students find the teacher's activities beneficial, engaging, and effective in enhancing their vocabulary. These activities are seen as valuable tools for making vocabulary learning more interactive and enjoyable. While there is a minor point of confusion mentioned by one student, it doesn't significantly detract from the overall positive perception of the teacher's activities.

Question 2: What effects do the teacher's activities have on your vocabulary learning in the lessons?

The majority of students perceive the teacher's activities as having a positive impact on their vocabulary learning in lessons. These activities aid in vocabulary retention, understanding, and overall effectiveness, making the learning experience more enjoyable. However, there is a minor concern about the pace of the activities mentioned by one student, indicating that some individuals may require adjustments in this regard to fully benefit from the activities.

### 3. Conclusion

This study set out to investigate the effectiveness

of using the mind mapping technique to enhance vocabulary learning among 10th-grade students in Bac Ninh, as well as to gauge their attitudes towards this innovative approach. The research findings detailed across the preceding chapters, have provided valuable insights into these areas.

In response to our first research question, the results strongly indicated that employing mind maps as a teaching tool for English vocabulary in 10th-grade classrooms could yield positive outcomes when compared to traditional teaching methods. Notably, the post-test results revealed significant underscore the importance of considering students' proficiency levels before implementing any educational intervention, as these levels could significantly influence the outcomes.

Regarding to the second research question concerning students' perceptions of using mind mapping for vocabulary acquisition, our data indicated a favorable reception among the majority of students. They found mind mapping to be a clear and comprehensible method that facilitated vocabulary learning. Moreover, it was seen as a means to expand their vocabulary and inject interest into the otherwise mundane process of vocabulary acquisition. However, there were some drawbacks associated with this method, including concerns about potential time inefficiency and difficulties in retaining vocabulary words. Nonetheless, the overall sentiment was positive, with most students expressing their intent to continue using mind mapping in their future studies.

### References

- Azura Binti Abdul Aziz (2016). *The use of mind mapping technique in increasing students' vocabulary list*. *Journal of Education and Social Sciences, Vol. 4, (June)*
- DePorter, B., Reardon, M and Singer-Nourie. (1999). *Quantum Teaching: Orchestrating Student Success (1st edition)*. Georgia: Pearson
- Dunn, RS., Dunn, K., & Price, G.E. (1979). *Identifying individual learning styles*. National Association of Secondary School Principals.
- Oldfather, P., Bonds, S., & Bray, T. (1994). *Stalking the "fuzzy sunshine seeds": constructivist processes for teaching about constructivism in teacher education*. *Teacher Education Quarterly* 21(5), 5-14.
- Taylor, L. (1990). *Teaching and learning vocabulary*. London: Prentice-Hall.