International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

Optimizing English Learning with Mind Mapping: A Classroom Application at SMPN 7 Muaro Jambi

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Abstract

This study investigates the application of the mind mapping technique as a teaching strategy to optimize students' English vocabulary learning. This qualitative research involved one English teacher as the subject, and the data were collected through observations, interviews, and documentation. The data were then analyzed using descriptive analysis. The findings reveal that the teacher's strategy in implementing mind mapping plays a significant role in improving students' vocabulary mastery. However, several challenges emerged, such as limited explanation, time constraints, and the lack of additional materials, which caused difficulties in spelling and memorization. To overcome these problems, the teacher combined multiple strategies, including presenting vocabulary items with diagrams, using visual aids, and emphasizing clear word structures. Furthermore, the teacher applied essential mind mapping principles, such as using colors, images, keywords, associations, and central images to present ideas more effectively. These strategies ultimately made vocabulary learning more engaging, creative, and effective, enabling students to memorize words more easily, quickly, and enjoyably.

Keywords: English Learning, Mind Mapping Technique, Vocabulary Mastery

INTRODUCTION

Language has a significant role in broadening students' knowledge and supporting their achievement across all school subjects. In today's globalization era, English functions not only as an international language but also as a medium of communication, both spoken and written, to

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access and convey information, ideas, emotions, science, technology, and culture (Puspita, 2023). According to Chen (2023) English becomes one of the essential subjects taught in Indonesian schools. Within the process of teaching and learning English, students are expected to master four fundamental skills, namely listening, speaking, reading, and writing .

However, many students still encounter challenges in the process of learning English. One of the key factors contributing to these difficulties is the teaching technique applied by the teacher (Kusuma et al., 2024). Teaching English as a foreign language demands the implementation of appropriate and effective techniques. As stated by Wang (2025) the term *technique* serves as an umbrella concept that connects theoretical foundations with practical classroom applications. They further emphasize that most language teaching methods assume that classroom activities can be standardized into a set of procedures applicable to all contexts (Wahyuningsih, 2024). This highlights the fact that teaching techniques directly affect students' learning outcomes. In other words, the techniques chosen by teachers play an essential role in helping students comprehend learning materials since they reflect the integration of theory and practice during the classroom interaction.

Another major obstacle in learning English lies in the students' limited mastery of vocabulary. Many learners lack an adequate stock of words, which hinders their ability to understand both written and spoken language (Akbar et al., 2024). Tupalessy et al., (2024) said that concentrating too much on grammar alone will not significantly improve one's English skills. While grammar remains important, vocabulary acquisition is fundamental because it is the core component that enables communication. Students with poor vocabulary knowledge will inevitably face greater learning barriers. Improvement becomes more visible when learners acquire a wide range of words and expressions, since grammar alone allows us to say very little, but vocabulary enables us to say almost anything (Sani et al., 2025).

In line with this, Asror et al., (2024) asserts that the level of success in mastering a language is largely determined by the size of the vocabulary acquired by learners. Similarly, Anggraini et al., (2023) points out that learners are required not only to learn numerous words but also to retain them in memory for effective use. Thus, vocabulary learning is not merely about recognition but also about long-term retention so that words become readily accessible when needed.

To achieve proficiency in all language skills, a strong foundation of vocabulary is indispensable. Therefore, English teachers are expected to employ teaching techniques that can stimulate students' interest and motivation in learning vocabulary (Asror et al., 2024). Various methods and techniques may be applied to create engaging learning experiences, particularly in vocabulary development. Laila et al., (2023) notes that techniques refer to specific classroom

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activities that are consistent with teaching approaches and aligned with learning objectives. Choosing the right technique is therefore crucial, as inappropriate techniques may hinder the teaching process (Sirait et al., 2020). On the other hand, effective techniques contribute positively to students' learning achievement and classroom engagement. Ultimately, the success of English instruction relies heavily on the teacher's ability to select and implement suitable techniques that foster vocabulary mastery and overall language competence.

Sensory memory plays a crucial role in the process of vocabulary learning. To optimize this ability, students are encouraged to balance the use of their left and right brain functions. The left hemisphere is associated with logical and analytical thinking, while the right hemisphere supports creativity and visualization (Sudibyo, 2022). Effective learning requires the integration of both sides of the brain. One of the techniques that stimulates whole-brain learning is mind mapping, as it engages both logical and creative processes simultaneously. According to Kadek & Lastari (2018) mind mapping employs visual reminders and sensory associations to organize related ideas into meaningful patterns. In this way, mind mapping not only facilitates students in remembering and organizing vocabulary but also assists teachers in delivering lessons more effectively.

Through mind mapping, students can structure their thoughts by grouping and categorizing related concepts. The process begins with a central theme or key idea placed at the center, from which main branches emerge to represent core points. These branches are then expanded with sub-points, colors, images, and symbols that stimulate both hemispheres of the brain, making the learning process more engaging (Mukaddamah et al., 2022). Silvia et al., (2023) emphasizes that acquiring vocabulary is not limited to labeling words but also involves categorization skills. This indicates that learners must not only memorize words but also develop the ability to organize and use them effectively in communication. Therefore, mind mapping is chosen by researchers as a strategy to help learners enhance vocabulary retention and improve their overall proficiency.

Vocabulary teaching, however, cannot rely solely on explanation or presentation from teachers. As Alkhazaleh & Abusal, (2024) points out, vocabulary is ultimately acquired by learners through experience, practice, and associations rather than direct instruction. Thus, mind mapping is seen as a valuable tool in vocabulary learning because it promotes active engagement, encourages personal connections with new words, and simplifies the memorization process. By transforming abstract vocabulary into visual and structured patterns, students can absorb new information more effectively and recall it when needed.

To address students' difficulties in mastering new vocabulary, teachers need techniques that not only introduce words but also help learners internalize and use them in context. Mind

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mapping serves this purpose by enabling students to express ideas, organize words into meaningful sentences, and enhance memory retention. Silvia et al., (2023) describes mind mapping as an effective and creative note-taking strategy that literally maps out ideas, making it easier for learners to process and retrieve information. This method also enhances creativity and generates a positive learning atmosphere through the use of colors, images, and keywords, making the study of vocabulary more enjoyable.

The advantages of mind mapping in vocabulary learning are manifold. First, it enables teachers to explain the meaning of words more clearly and systematically. Second, it fosters students' comprehension by presenting vocabulary in structured categories. Third, it provides contextualized exposure to numerous vocabulary items, making them easier to remember (Sudibyo, 2022). These benefits are achieved through the integration of images, keyword associations, and categorization, which all contribute to more effective vocabulary learning. As such, mind mapping is not only beneficial for students but also supports teachers in creating interactive and meaningful classroom activities.

At SMPN 7 Muaro Jambi, English education aims to equip students with the ability to use the language in daily life. The curriculum covers the four essential skills listening, speaking, reading, and writing which are integrated to achieve communicative competence. Writing, in particular, is emphasized as a vital skill, since it allows students to express ideas coherently in written form. However, based on classroom observations, many students still struggle with limited vocabulary. This lack often leads to hesitation, nervousness, and low confidence when responding to teachers' questions. Although teachers have already introduced the mind mapping technique, students' vocabulary mastery remains relatively low. Therefore, this research is conducted to investigate how the application of mind mapping is carried out by teachers and to examine its effectiveness in improving students' vocabulary learning outcomes.

To support this perspective, Buzan in Sukardi et al., (2025) incorporated various elements in mind mapping, such as using landscape paper, branches, images or symbols, colors, keywords, and central images, to encourage non-linear note-taking. Today, mind mapping is widely applied in multiple disciplines, particularly in education. In the learning context, it assists students in engaging both hemispheres of the brain. The left hemisphere is responsible for logical and analytical thinking, while the right hemisphere supports creativity and visual processing. By integrating these two functions, mind mapping stimulates optimal brain performance and promotes a relaxed learning atmosphere. **Buzan** emphasized that mind mapping serves as a systematic thinking tool that enhances memory (Sukardi et al., 2025)**.**

Furthermore, mind mapping provides a helpful technique for memorizing vocabulary.

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Through his theory of the Cerebral Hemisphere, Buzan explained how the brain can operate at its maximum potential. Although he is credited with modernizing the method, the concept of mapping ideas visually has existed for centuries. Educators, psychologists, and scientists have long utilized similar techniques for purposes such as teaching, brainstorming, visual thinking, and solving problems. Notable historical figures like Leonardo da Vinci, Galileo Galilei, Richard Feynman, and Albert Einstein employed creative note-taking strategies to express and develop their ideas.

METHOD

This study employed a qualitative research design with a case study approach, as qualitative research is carried out in natural settings to interpret and understand phenomena (Silvia et al., 2023). The case study was selected because it allows the researcher to provide a detailed description of specific events, processes, or activities within a real-life context (Kurniawan, 2019). In line with the emic perspective, the researcher sought to capture participants' perceptions and experiences by immersing in the classroom environment, which enabled narrative descriptions, empathetic interpretations, and deeper contextual understanding. This process required building mutual trust with participants through effective communication and interviewing.

The data of this study consisted of both primary and secondary sources. Primary data were collected directly from teachers and students through classroom observations, interviews, and documentation. The teacher served as the main subject, while students were the objects of observation in the learning process. Supporting documents such as student records and evaluation results were also included. Secondary data were obtained from books, journals, dictionaries, newspapers, and online references to provide additional perspectives.

To collect the data, three techniques were employed: observation, interview, and documentation. Systematic classroom observation was conducted using an observation sheet that recorded the date, class, teaching method, and lesson topic. This was carried out over a two-to-three-month period, with findings written in field notes, guided by Sukardi et al., (2025) emphasizing the role of motivation, confidence, and anxiety in language learning. Semi-structured interviews were conducted with the teacher and students, each lasting 10–20 minutes, allowing participants to freely express their views. The researcher obtained informed consent, created a supportive atmosphere, and used probing questions when necessary. Documentation included historical information of SMPN 7 Muaro Jambi, teacher and student backgrounds, school facilities,

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as well as students' notes, photos, and learning modules, which enriched the contextual understanding.

The collected data were analyzed using the interactive model consisting of three stages: data reduction, data display, and conclusion drawing with verification. In the reduction stage, irrelevant information was eliminated to focus on findings related to the research questions**.** Data were then displayed narratively to describe the teacher's strategies and classroom conditions clearly. Finally, conclusions were drawn and verified to ensure credibility and validity**.** Through this process, the researcher was able to identify and interpret the strategies used by the teacher to improve students' vocabulary mastery.

RESULTS AND DISCUSSION

Teacher Applied the Mind Mapping Technique

Based on the results of observations, interviews, and documentation, the researcher found that the teacher applied the mind mapping technique in teaching vocabulary to the eighth-grade students of SMPN 7 Muaro Jambi. The teacher explained that vocabulary is a crucial element in language learning and students are required to memorize at least three to five new words every day. After finishing a lesson, she usually asked her students to memorize the vocabulary written on the whiteboard and sometimes used mind mapping as a tool to support memorization. According to her, most students managed to memorize the words, while some did not, and those who failed were given simple consequences such as sweeping the classroom or singing in front of the class. Despite challenges, the teacher emphasized patience in guiding her students, as she realized that they had diverse backgrounds and abilities in learning English. The researcher's observation on August 11, 2017, also confirmed that mind mapping was applied during vocabulary lessons, although its implementation in the classroom was not entirely optimal and still required improvement

a) Teacher Used Simple Technique to Present Materials

In the teaching process, the teacher relied on simple techniques to present the learning materials. She explained that preparing even basic tools, such as paper and diagrams, was important to support student understanding and make the classroom atmosphere more comfortable. These preparations aimed to help students follow the lesson more effectively, especially when vocabulary items were introduced. According to her, a well-prepared class allows students to access knowledge more easily, while poor preparation can hinder comprehension.

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The teacher illustrated this by preparing a sheet of paper and drawing diagrams that represented the vocabulary topic, such as family members, which the students were then asked to continue.

From the observations, it was evident that the teacher applied mind mapping in a straightforward manner, mainly using paper as the primary medium. She asked her students to replicate her diagrams and complete them with additional vocabulary. However, she did not prepare enough materials for all students, nor did she use multiple colors or visual elements that could make the diagrams more engaging. This limitation caused students to struggle with memorizing the vocabulary as they had to divide their time between drawing and memorization, which reduced the effectiveness of the activity.

During the second observation, it was found that the teacher introduced a topic about school facilities but provided minimal explanation or examples. This lack of clarity made many students lose interest, resulting in disruptive behavior in class. The findings suggested that the teacher needed to provide richer examples and use visual supports to make vocabulary more meaningful. Since students tend to be more engaged with colorful images and interactive methods, mind mapping could have been more effective if designed with attractive features such as pictures, colors, and categorization of words.

b) Teacher Used One Media to Present Materials

The use of mind mapping in this classroom was limited to one type of medium, namely paper. The researcher found that students in the eighth grade of SMPN 7 Muaro Jambi faced difficulties in memorizing vocabulary and often showed low motivation to participate in English learning activities. Some students remained silent when asked questions, partly because of differences in their learning backgrounds. According to the teacher, while some students attended language courses outside school, others did not, which made them shy or hesitant to use English. Therefore, she tried to compensate by applying mind mapping through paper-based tasks.

In practice, the teacher asked her students to write vocabulary on paper and expand the diagrams based on the given topic. When students encountered difficulties, they were allowed to consult dictionaries to find meanings and correct pronunciations. However, they were not permitted to rely on peers for help. Beyond the classroom, students were encouraged to continue practicing independently at home. While this practice aligned with idea of mind mapping as an individual note-taking tool, the teacher still needed to guide and supervise students more intensively to maximize the benefits of the activity.

Group work was also used occasionally, where students were asked to collaborate in completing mind maps based on textbook topics. However, not all groups managed to stay on

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task, and some became noisy during the activity. Despite this, the teacher showed patience and encouraged students to share their understanding within the group, write down unfamiliar words, and memorize at least three new words each session. Although the activities promoted peer interaction, the findings indicated that relying on only one medium paper limited the effectiveness of vocabulary learning, particularly when technological resources such as projectors or digital media were unavailable.

c) Teacher Asked the Students to Complete Mind Mapping Diagrams

Another strategy used by the teacher was asking students to complete partially prepared mind mapping diagrams. She guided them to fill in the missing vocabulary and permitted the use of dictionaries to ease the process. This activity encouraged learners to explore and find new words independently. After completing their diagrams, students were asked to present their work, explain the vocabulary items, and memorize the new words they had discovered during the process. This task allowed students to actively engage with the material rather than passively receive it.

The classroom observation, confirmed that students were given opportunities to present their diagrams in front of their peers. While some students successfully explained the vocabulary items, others struggled, particularly in pronouncing the words correctly. The researcher noted that many students mispronounced English vocabulary due to limited practice in the classroom. Although spelling and writing improved through the use of diagrams, the oral aspect of vocabulary learning still required additional support and correction from the teacher.

Overall, the findings suggested that while completing diagrams helped students improve their writing and vocabulary recall, there remained challenges in pronunciation and speaking fluency. The teacher did not conduct collective pronunciation drills but instead asked students to practice on their own, which reduced the effectiveness of oral vocabulary mastery. Therefore, it was concluded that better preparation and more guided practice were needed before applying mind mapping in the classroom. Assignments such as writing short stories based on completed diagrams, which students were required to submit in the following session, could be further developed to integrate vocabulary mastery with meaningful language use.

The Causes of Ineffective Application of Mind Mapping in Vocabulary Teaching

Vocabulary holds a central role in language learning since a rich and functional vocabulary is essential to develop students' language proficiency. One of the main challenges faced by junior high school students when progressing to senior high school is the need to master a large number

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of English words. For this reason, assisting students in improving their vocabulary becomes one of the crucial responsibilities of English teachers. Considering that students have diverse learning styles, teachers must be able to apply appropriate strategies in their teaching. In principle, mind mapping can serve as an effective tool for organizing ideas and supporting learning; however, if the technique is not implemented according to proper guidelines, it may fail to contribute to students' vocabulary development. The researcher identified several factors that caused the mind mapping strategy to be less effective in teaching vocabulary among the eighth grade students of Class A at SMPN 7 Muaro Jambi

a) Teacher Did Not Explain Clearly

One of the main problems found in the classroom was the lack of clear explanation from the teacher regarding the use of mind mapping. Although mapping is essentially a technique that helps students organize and retain information by connecting knowledge frameworks, the students struggled when instructions were not explained properly. As reflected in one student's statement, they were asked to complete diagrams without being guided on how to construct them. When the topic was unfamiliar, such as explaining the story of *Malin Kundang*, the students could not create the diagrams effectively since they did not fully understand the material.

The researcher's observation also confirmed this situation, where the teacher often gave instructions at the end of the lesson when time was nearly over. The teacher admitted that due to the demand of following the syllabus strictly, she asked students to complete diagrams in the last thirty minutes of class. As a result, students were left with limited time and incomplete understanding. This practice not only reduced students' motivation but also made them anxious since they had to produce results quickly without proper guidance.

This condition created a gap in students' learning abilities. Those who were more confident and active could complete the diagrams, while others simply observed their peers without meaningful participation. Consequently, many students gained little knowledge or experience, especially when the topics were more difficult. One student even admitted that when the subject was too challenging, they preferred to imitate their classmates rather than risk being scolded by the teacher. These findings highlight the need for teachers to provide clearer explanations, simpler topics, and sufficient time allocation for students to properly engage in mind mapping activities.

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b) The Time is Limited

Another significant issue in the classroom was the limitation of time. Time management is crucial in teaching, and when not handled effectively, it can disrupt the learning process. The teacher herself acknowledged that her class often lacked adequate time to complete mind mapping activities. As a result, students were instructed to continue the task at home. While this allowed them to finish their work, it reduced the opportunity for direct guidance and meaningful interaction during the lesson. The teacher recognized this as a weakness and emphasized the need to improve her time management in future classes.

Insufficient time not only affected task completion but also influenced students' concentration and ability to organize their ideas. Many students struggled to write clear keywords, develop branches, and connect the information correctly. Their focus shifted to finishing quickly rather than engaging thoughtfully with the material, as their minds were already directed toward leaving the classroom. Moreover, the teacher admitted that she sometimes failed to demonstrate how to properly complete the diagrams, which caused nervousness among students and led them to deviate from the given topic.

Therefore, the teacher must pay greater attention to both time management and teaching strategies. Demonstrating the process of creating a mind map before asking students to perform the task can reduce anxiety and help them feel more confident. Furthermore, integrating pronunciation practice and vocabulary review during the activity would make the learning process more meaningful. If time is managed effectively, students will not only be able to complete the diagrams but also expand their vocabulary and communication skills in an engaging and structured way

c) The Teacher Did Not Make Additional Materials

The third problem identified was the absence of additional supporting materials during the mind mapping activities. The researcher's observation revealed that the teacher relied only on small sheets of paper and basic diagrams, without incorporating other learning resources. Although this approach introduced students to new experiences, it did not adequately address their vocabulary limitations. Additional materials, such as pictures, colors, categorized word lists, or other visual aids, could have helped students recall and memorize words more effectively.

By not providing supplementary resources, students continued to face difficulties in expanding their vocabulary. The teacher mainly depended on the textbook, often asking students to read without further explanation before, during, or after the activity. This method limited students' comprehension and left them struggling with unfamiliar words. In many cases, students

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relied on dictionaries without fully understanding the pronunciation or meaning of the terms they found. Such practices reduced the effectiveness of the mind mapping strategy in improving language skills.

To overcome this issue, teachers need to develop creative and varied teaching materials that align with students' needs. Effective mind mapping involves multiple elements such as images, colors, key words, classification of information, and both detailed and holistic perspectives. Incorporating these elements not only makes learning more engaging but also stimulates creativity and supports memory retention. Therefore, the teacher should enrich her instructional resources and adapt her strategies to enhance students' vocabulary mastery while making classroom activities more dynamic and enjoyable.

CONCLUSION

Based on the results it can be concluded that the teacher's use of mind mapping played a crucial role in improving students' vocabulary, although some challenges appeared when the materials were delivered too simply, with limited media, and without clear guidance, causing students to struggle with spelling and memorization. Over time, the teacher enhanced the approach by combining strategies such as presenting vocabulary items directly, using diagrams, and applying key principles of mind mapping like colors, images, keywords, associations, and central images which made the learning process more structured and creative. As a result, students were able to learn vocabulary more effectively, quickly, and enjoyably, proving that varied and innovative applications of mind mapping can significantly support language learning.

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