



**EXPLORING THE EFFECTIVENESS OF MIND
MAPS IN ENHANCING IDEA GENERATION DURING
PRE-WRITING ACTIVITIES IN ENGLISH FOR SIXTH-GRADE
EFL STUDENTS: A QUALITATIVE STUDY**

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Abstract:

This study explores students' perceptions of using mind mapping as a pre-writing strategy in an English as a Foreign Language (EFL) writing class through a qualitative approach. The research was conducted with sixth-grade students at Phan Van Cam Secondary School in Vietnam, from which six participants were selected for semi-structured interviews. Interviews were conducted at four stages of the learning process: during the pre-writing phase, before the writing test, after the intervention, and after the post-test. The interview data were analyzed thematically to identify patterns in students' experiences and perceptions. The findings reveal that most students initially had little or no prior experience with mind mapping and often felt uncertain when beginning a writing task. After the intervention, students reported that mind mapping helped them generate ideas, organize their thoughts more clearly, and plan their writing more effectively. The visual and collaborative features of mind mapping also increased students' engagement in the writing process. Although some challenges remained,

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particularly in idea development and vocabulary use, students expressed positive attitudes toward continuing to use mind mapping in future writing activities.

Keywords: mind mapping, pre-writing strategies, EFL writing, qualitative study, student perception

1. Introduction

1.1 Rationale of the Study

Writing is widely regarded as one of the most complex skills in learning English as a Foreign Language (EFL). In order to produce effective written texts, learners need to generate ideas, organize them logically, and express them clearly using appropriate language. However, many EFL students experience difficulties during the early stage of the writing process, particularly when generating and organizing ideas before writing begins.

The pre-writing stage plays an important role in helping students prepare ideas and structure their writing. Without sufficient preparation, students may feel uncertain about how to begin writing or how to develop their ideas. As a result, their writing may lack coherence and clear organization.

Mind mapping has been widely recognized as a useful visual strategy that can support idea generation during the pre-writing stage. By organizing ideas in a branching structure around a central topic, mind maps help learners visualize relationships among concepts and expand their thinking more effectively. In addition, visual elements such as colors, images, and keywords can make learning more engaging and support memory.

Although previous research has shown that mind mapping can improve students' writing performance, most studies focus primarily on quantitative results. Less attention has been given to students' experiences and perceptions when using mind mapping in writing activities. Exploring these perspectives can provide deeper insights into how mind mapping supports the idea-generation process in the classroom.

Therefore, this study explores the effectiveness of mind mapping in supporting sixth-grade students' idea generation during pre-writing activities, with a particular focus on qualitative evidence from students' learning experiences.

1.2 Research Objectives

This study aimed to examine the use of mind mapping in supporting sixth-grade students during the pre-writing stage of English writing lessons. In particular, the research focused on how mind mapping helps students develop ideas before writing and explores students' attitudes toward the use of mind maps in the classroom.

The study sought to achieve the following objectives:

- 1) To explore the effectiveness of mind mapping in supporting sixth-grade students' idea development during pre-writing activities in English writing lessons.

- 2) To investigate students' attitudes toward the use of mind maps in English writing classes.

1.3 Research Questions

Based on the objectives above, the study addressed the following research questions:

- 1) How did mind maps support sixth-grade students in developing ideas during pre-writing activities in English writing lessons?
- 2) What were students' attitudes toward the use of mind maps in English writing classes?

2. Literature Review

2.1 Writing in English as a Foreign Language

2.1.1 The nature of writing in EFL

Writing is widely considered one of the most complex skills in learning English as a Foreign Language (EFL). It requires learners to integrate linguistic knowledge, cognitive processes, and organizational skills in order to produce meaningful written texts. According to Hyland (2003), writing involves not only the correct use of grammar and vocabulary but also the ability to structure ideas logically and communicate meaning effectively.

For many EFL learners, writing can be challenging because it demands the simultaneous management of idea generation, language encoding, and text organization (Kellogg, 2008). These processes require both cognitive effort and sufficient linguistic resources.

From a qualitative perspective, writing is also a learning process influenced by students' experiences, perceptions, and classroom interactions. Exploring learners' experiences can provide deeper insights into how students approach writing tasks and what difficulties they encounter when generating ideas.

2.1.2 Challenges in Learning EFL Writing

Many EFL learners encounter difficulties when learning to write in English. One of the most common problems is generating and developing ideas before beginning to write. Students often feel uncertain about how to start a composition or how to expand their ideas into meaningful content (Graham & Perin, 2007).

Limited vocabulary and grammatical knowledge can also restrict students' ability to express ideas clearly. As a result, learners may rely on simple sentences or repetitive language, which can affect the overall quality of their writing (Viera, 2017).

In addition to linguistic challenges, affective factors such as anxiety and lack of confidence can influence students' writing performance. Qualitative research has shown that students' perceptions, attitudes, and emotional responses play an important role in shaping their learning experiences during writing activities.

2.1.3 Writing Development in Young EFL Learners

Young EFL learners often require additional instructional support when developing writing skills. Because their cognitive and linguistic abilities are still developing, they benefit from visual aids, structured guidance, and interactive learning activities (Tomlinson, 2014).

Scaffolding is particularly important for supporting young learners' writing development. Based on Vygotsky's concept of the Zone of Proximal Development, teachers can provide guidance that helps students perform tasks beyond their current level of ability (Walqui, 2006).

From a qualitative perspective, classroom interaction and collaborative activities also contribute to writing development. Students may learn more effectively when they have opportunities to share ideas, discuss writing topics, and observe different strategies used by their peers.

2.2 Process Approach to Writing

2.2.1 Product Approach and Process Approach

Two major approaches to writing instruction are the product approach and the process approach. The product approach emphasizes the final written text and focuses on grammatical accuracy and structural patterns (Hyland, 2003).

In contrast, the process approach views writing as a dynamic activity that involves multiple stages such as planning, drafting, revising, and editing (Harmer, 2007). This approach emphasizes the development of ideas and encourages students to refine their writing through continuous improvement.

From a qualitative perspective, the process approach also highlights the importance of understanding students' experiences during each stage of writing, particularly how they generate and organize ideas before drafting.

2.2.2 Stages of the Writing Process

The writing process generally includes four main stages: pre-writing, drafting, revising, and editing (Hyland, 2013).

The pre-writing stage involves generating ideas and planning the structure of the text. Drafting refers to producing the initial version of the writing, while revising focuses on improving content and organization. Editing is concerned with correcting grammatical and mechanical errors.

Qualitative studies often examine how students experience these stages and how instructional strategies influence their engagement and understanding during the writing process.

2.2.3 Importance of the Pre-writing Stage

The pre-writing stage is particularly important because it helps learners prepare ideas and organize their thoughts before writing. Planning activities such as brainstorming,

outlining, and visual mapping allow students to explore ideas and establish relationships among concepts (Graham, 2019).

From a qualitative perspective, examining students' experiences during pre-writing activities can provide valuable insights into how different strategies support idea generation and influence students' confidence when beginning a writing task.

2.3 Idea Generation in Writing

Idea generation refers to the process of exploring and developing ideas related to a writing topic before drafting. It allows writers to determine the content and direction of their texts (Hyland, 2013).

Research suggests that strategies such as brainstorming, listing, and visual mapping can help students generate ideas more effectively. Qualitative investigations can further reveal how learners perceive these strategies and how they influence students' thinking processes during writing preparation.

2.4 Mind Mapping as a Learning Strategy

Mind mapping is a visual technique used to organize information around a central concept through branching structures (Buzan, 2006). By presenting ideas visually, mind maps help learners understand relationships among concepts and expand their thinking. Mind maps often include keywords, colors, and images that make information easier to remember and organize (Davies, 2011). In writing instruction, mind mapping can support students in planning their ideas before composing a text.

Qualitative studies have also highlighted that students often perceive mind mapping as an engaging and motivating activity because it allows them to express ideas visually and creatively.

2.5 Previous Studies

Previous research has demonstrated that mind mapping can improve students' writing performance by helping them generate ideas and organize information more effectively (Al-Jarf, 2009; Yunus & Chien, 2016).

However, many studies focus primarily on quantitative measures such as writing scores. Fewer studies explore students' experiences and perceptions when using mind mapping during writing activities. Qualitative evidence can therefore provide a deeper understanding of how mind mapping influences learners' cognitive processes and classroom engagement.

2.6 Research Gap

Although previous studies highlight the benefits of mind mapping in writing instruction, several research gaps remain.

First, many studies emphasize writing outcomes rather than the learning process itself. Second, limited research has explored students' experiences when using mind

mapping during pre-writing activities. Finally, qualitative investigations focusing on lower secondary EFL learners in Vietnam remain relatively limited.

Therefore, further research is needed to examine how mind mapping supports idea generation from the perspective of students' learning experiences and perceptions.

3. Research Methodology

3.1 Research Design

This study adopted a qualitative-oriented research design to explore how mind mapping supports sixth-grade students in generating ideas during the pre-writing stage of English writing activities. Qualitative research focuses on understanding participants' experiences, perceptions, and learning processes in depth (Creswell & Poth, 2018). In this study, qualitative data were considered essential for examining how students perceive and experience the use of mind mapping in classroom writing activities.

Although the broader project employed a mixed-methods approach, the present analysis emphasizes qualitative evidence derived mainly from semi-structured interviews with students. These interviews allowed the researchers to explore students' perceptions of mind mapping, the strategies they used when preparing to write, and the challenges they encountered during the learning process.

By focusing on students' experiences and perspectives, this qualitative approach provides a deeper understanding of how mind mapping functions as a learning tool during the pre-writing stage of English writing instruction.

3.2 Research Instruments

3.2.1 Writing Tasks

Writing tasks were used as part of the classroom activities to allow students to practice writing after completing pre-writing preparation with mind maps. Writing is considered a complex skill that requires learners to organize ideas logically and present them coherently (Hyland, 2003).

Students completed writing tasks based on topics from Units 1–6 of the *Tiếng Anh 6 – Global Success* textbook. These tasks provided opportunities for students to apply mind mapping when planning their ideas before writing.

Although the writing tasks provided contextual information about students' learning progress, the main purpose of the qualitative analysis was to understand students' experiences when using mind maps during the writing preparation process.

3.2.2 Questionnaires

Questionnaires were used to obtain general information about students' perceptions of mind mapping and their experiences during pre-writing activities. Questionnaires are commonly used in educational research because they allow researchers to collect information from a large number of participants efficiently (Cohen, Manion, & Morrison, 2018).

The questionnaire included several closed-ended questions and was presented in both English and Vietnamese to ensure that students clearly understood the questions. The items focused on students' perceptions of mind mapping, their experiences using it in writing lessons, and the difficulties they encountered when generating ideas.

The questionnaire results provided general patterns that helped support the qualitative findings obtained from the interviews.

3.2.3 Interviews

Semi-structured interviews served as the primary instrument for collecting qualitative data. Interviews are widely used in qualitative research because they allow participants to express their experiences, perceptions, and opinions in detail (Creswell & Poth, 2018; Braun & Clarke, 2022).

The interview questions focused on several aspects of students' learning experiences, including:

- their previous strategies for preparing ideas before writing,
- their experiences using mind maps during pre-writing activities,
- the benefits of mind mapping in generating and organizing ideas,
- the challenges they encountered when using mind maps.

The interviews were conducted in Vietnamese to ensure that students could express their ideas comfortably and clearly. All interviews were audio-recorded with participants' consent and later transcribed for analysis.

3.3 Data Collection Procedure

The qualitative data were collected in several stages to capture students' experiences and perceptions throughout the learning process.

3.3.1 Pre-writing Phase

Initial interviews were conducted before the introduction of mind mapping in order to explore students' previous experiences with writing and the strategies they used to prepare ideas before writing.

3.3.2 Instructional Phase

Students were introduced to mind mapping as a pre-writing technique. The teacher demonstrated how to create mind maps and guided students through several practice activities. During this period, students created mind maps individually and in groups before completing writing tasks.

3.3.3 Post-intervention Phase

After the instructional period, interviews were conducted to explore students' experiences when using mind maps during writing activities. Students were asked to describe how the technique helped them organize ideas and prepare for writing.

3.3.4 Post-test Phase

Final interviews were conducted after students completed the writing tasks to examine their reflections on the effectiveness of mind mapping and their willingness to continue using this strategy in future writing activities.

This multi-stage data collection process allowed the researchers to observe how students' perceptions evolved over time.

3.4 Data Analysis Methods

The qualitative data were analyzed using thematic analysis following the procedures proposed by Braun and Clarke (2006). This method is widely used in qualitative research to identify patterns and themes within textual data.

The analysis process involved several steps. First, all interview recordings were transcribed and reviewed carefully to become familiar with the data. Second, meaningful segments of the data were coded according to their content. Third, similar codes were grouped into broader themes representing key aspects of students' experiences.

Through this process, several important themes emerged, including students' initial difficulties in generating ideas, their experiences when learning to construct mind maps, the perceived benefits of visual organization, and the role of collaborative learning in developing ideas.

Thematic analysis allowed the researchers to interpret students' responses systematically and to identify patterns across participants' experiences.

3.5 Participants

The study involved 40 sixth-grade students learning English as a Foreign Language at Phan Van Cam Secondary School in Dong Thap Province, Vietnam. All students used the *Tiếng Anh 6 – Global Success* textbook during the 2025–2026 academic year.

These students represented the main group participating in classroom activities where mind mapping was introduced as a pre-writing strategy in English writing lessons.

For the qualitative component of the study, six students were selected to participate in semi-structured interviews with six students in order to provide deeper insights into their learning experiences. The selection aimed to include students with different levels of participation and writing ability so that a range of perspectives could be represented.

Participation in the interviews was voluntary. To ensure confidentiality, pseudonyms (S01–S06) were used when reporting students' responses.

3.6 Research Credibility and Reliability

Several strategies were employed to ensure the trustworthiness of the qualitative findings.

First, all interviews were audio-recorded and transcribed to ensure the accuracy of the data. Second, direct quotations from students were included in the analysis to illustrate key themes and maintain the authenticity of participants' perspectives.

Third, the use of multiple data sources, including questionnaires and interviews, allowed for data triangulation. This approach helped strengthen the credibility of the findings by confirming patterns across different sources of data.

Through these procedures, the study aimed to provide a reliable and comprehensive understanding of students' experiences when using mind mapping in pre-writing activities in future learning activities.

4. Findings and Discussion

4.1 Findings of Qualitative Findings

This section presents the qualitative findings derived from semi-structured interviews with six students (S01–S06). The interviews were conducted at four stages of the learning process: during the pre-writing phase, before the writing test, after the instructional intervention, and after the post-test. The analysis aims to explore students' experiences, perceptions, and challenges when using mind mapping during pre-writing activities.

4.1.1 During the Pre-Writing Phase

The results of the student interviews conducted prior to the implementation of mind mapping reveal several important aspects related to students' previous learning experiences, their strategies for preparing ideas, and their psychological states when beginning a writing task.

First, all six interviewed students indicated that they had never used mind maps before participating in this class, suggesting that mind mapping was a completely new learning tool for them. For example, S01 explained that *"before joining this class, I had never used mind maps."* Similar responses were given by the other participants. S02 stated that *"I had never used mind maps before,"* while S03, S04, S05, and S06 also confirmed that they had no prior experience with this technique.

Because they had not used mind mapping previously, students relied on different individual strategies to prepare ideas before writing. These strategies were often fragmented and not systematically organized. For instance, S01 explained that he usually *"writes down ideas quickly on paper to prepare for the writing."* Meanwhile, S02 preferred to focus on understanding the writing topic, noting that he *"usually reads the topic carefully to understand what needs to be written."*

Other students tended to review linguistic knowledge before writing. S03 mentioned that he often *"reviews vocabulary and grammar in order to write better."* Similarly, S06 stated that he *"looks back at vocabulary related to the topic."*

Some students also used alternative preparation methods. For example, S04 reported that he typically *"makes an outline in Vietnamese and then translates it into English."*

In contrast, S05 explained that he usually generates ideas by asking himself guiding questions about the topic.

In addition to these preparation strategies, the interviews revealed that many students experienced psychological difficulties when starting a writing task. Several participants expressed feelings of anxiety and uncertainty. S01 admitted that he often felt confused because he *“did not know where to start or which idea should come first.”* Similarly, S02 explained that he sometimes felt worried because he *“might not have enough ideas.”*

Concerns about language accuracy were also common. S03 reported that he often worried about whether his writing was correct. Comparable feelings were expressed by S04, S05, and S06, who mentioned anxiety, lack of ideas, or fear of making mistakes when writing.

Despite these challenges, students generally showed positive attitudes toward visual learning tools. For instance, S01 suggested that images and colors *“make thinking easier and help remember ideas better.”* Similarly, S04 believed that visual elements *“can help organize ideas more effectively.”* The other participants expressed similar opinions, indicating that students were open to using visual strategies such as mind mapping.

4.1.2 Before the Writing Test

The interviews conducted before the writing test aimed to explore students' perceptions of mind mapping after they had been introduced to this technique and their readiness to apply it in writing tasks.

The findings indicate that most students expressed positive perceptions of mind mapping. Many participants reported that the technique helped them understand lessons more clearly and remember information more effectively. For example, S01 explained that *“learning to use mind maps is very helpful because it helps me understand the lesson more easily and remember information better.”* Similarly, S04 commented that mind maps helped him *“grasp the main ideas of the lesson and learn more quickly.”*

Several students also highlighted the role of mind mapping in organizing their writing. S03 stated that mind mapping *“helps create a clear outline for the writing.”* Likewise, S02 believed that learning how to use mind maps was *“very necessary for writing tasks.”*

Students also noted that mind mapping helped them generate more ideas. S05 explained that mind maps *“help me find more ideas for my writing,”* while S06 stated that the technique *“helps me generate more ideas.”*

However, some initial difficulties were also reported. These challenges mainly related to learning how to construct mind maps. For example, S01 admitted that he had difficulty because he *“did not know how to draw and organize ideas in a mind map.”* Similarly, S03 reported that he found it difficult *“to create a mind map because at first I did not know how to do it.”*

Some students also encountered difficulties in organizing ideas within the mind map structure. S02 explained that he sometimes *“got confused between ideas when drawing the mind map.”* In addition, S05 reported that he sometimes had difficulty *“thinking of many ideas when starting.”*

Language ability also influenced students' experiences. S04 explained that his limited vocabulary made it difficult *"to develop ideas on the mind map."* Nevertheless, not all students experienced serious problems. S06 mentioned that he *"did not experience many difficulties when using mind maps."*

Despite these challenges, all students expressed willingness to apply mind mapping in the upcoming writing test. S01 believed that mind mapping would help him *"write faster and more clearly."* Similarly, S02 stated that the technique would allow him *"to write more quickly and easily."* S04 also noted that mind maps help him *"create an outline before writing."* These responses indicate that students recognized the potential benefits of mind mapping for writing preparation.

4.1.3 After the Intervention

After several lessons in which mind mapping was used during pre-writing activities, students reported significant improvements in their writing preparation process.

Many students indicated that mind mapping helped them plan their writing more efficiently. For example, S01 stated that mind mapping helped him *"plan the writing more quickly and more clearly."* Similarly, S02 explained that the technique allowed him *"to plan the writing without having to think for too long."*

Students also emphasized the role of mind mapping in generating and expanding ideas. S03 noted that the technique helped him *"think about the writing more effectively and develop ideas more easily."* Likewise, S05 stated that mind mapping enabled him *"to come up with more ideas for the writing."* S06 shared a similar experience, explaining that the technique helped him *"have more ideas when planning the writing."*

In addition to idea development, mind mapping helped students visualize the structure of their writing. S04 explained that using mind maps made it *"easier to write because there was already a clear outline."* He also noted that the technique helped him *"see the overall structure of the writing."*

Students also expressed positive attitudes toward the visual aspects of mind mapping. For example, S01 and S03 both mentioned that they enjoyed using *"different colors and shapes."* Similarly, S05 reported that he liked *"using images and colors when drawing mind maps."* These visual features made the learning process more engaging and enjoyable.

Another important finding relates to collaborative learning. Many students indicated that working in groups helped them better understand how to create mind maps. S01 explained that group work helped him *"learn how to use mind maps better because classmates could share many ideas."* Similar opinions were expressed by S03 and S05, who noted that working with classmates allowed them *"to learn additional ideas from friends."* In addition, S06 stated that group activities helped him *"learn different ways of drawing mind maps."*

In short, these responses suggest that mind mapping not only supported idea generation but also encouraged collaboration and interaction among students.

4.1.4 After the Post-test

The post-test interviews revealed noticeable changes in students' perceptions of mind mapping and its effectiveness in the writing process.

Most students believed that mind mapping helped improve the quality of their writing. For instance, S01 explained that his writing *"improved because I could organize my ideas more clearly."* Similarly, S03 stated that mind mapping helped him *"arrange ideas more clearly when writing."* S04 also reported that writing became easier because *"I already had a clear outline."*

Some students also emphasized that mind mapping helped them expand the content of their writing. For example, S05 explained that his writing became *"better because I had more ideas."* Likewise, S02 stated that mind mapping helped him *"make an outline, so writing became easier."* S06 also believed that the technique helped him *"write better because I could organize my ideas clearly."*

Nevertheless, some challenges remained. S02 mentioned that he sometimes *"still had difficulty thinking of many ideas."* Similarly, S03 explained that he *"still found it difficult to develop ideas."* Vocabulary limitations were also mentioned as a difficulty. S04 reported that it was sometimes difficult *"to find words to develop ideas."*

In addition, some students noted that drawing mind maps could take extra time. For instance, S06 stated that he *"sometimes spent a lot of time drawing the mind map."* However, S01 reported that he *"did not have many difficulties because I had become familiar with how to use mind maps."*

Finally, all students expressed a strong willingness to continue using mind mapping in future writing activities. S01 believed that the technique helped him *"improve my writing scores."* S02 and S06 stated that it allowed them *"to write more quickly."* S05 explained that mind mapping helped him *"organize ideas better,"* while S03 noted that the technique made it *"easier to plan the writing."*

Students also suggested ways to improve mind-mapping activities, such as including more group work, using more colors, and providing additional guidance and practice opportunities. These suggestions indicate that students not only recognized the benefits of mind mapping but also wished to continue using this strategy in their learning.

4.2 Discussion

4.2.1 Students' Prior Experiences and Challenges in the Pre-Writing Stage

The interview results collected during the pre-writing phase reveal that all participants had no prior experience with mind mapping before participating in the study. Students such as S01 and S02 confirmed that they had never used mind maps previously. This finding suggests that students' writing preparation strategies were largely based on traditional approaches such as listing ideas, reviewing vocabulary, or translating ideas from Vietnamese into English.

These findings are consistent with previous research indicating that many EFL learners rely on linear note-taking or translation strategies when preparing to write. Such

strategies may help students generate ideas, but they do not always support effective organization of ideas or the development of a clear writing structure.

The interviews also reveal that students experienced various psychological challenges at the beginning of a writing task. Many participants reported feelings of anxiety, uncertainty, and lack of confidence. For example, S01 explained that he often did not know where to begin the writing, while S02 worried that he might not have enough ideas. Similarly, S03 expressed concern about making mistakes in his writing.

These responses suggest that the pre-writing stage can be a particularly challenging phase for EFL learners. When students lack effective strategies for organizing ideas, they may experience difficulty initiating the writing process. Therefore, providing learners with structured planning tools may help reduce these difficulties and support more confident writing performance.

Despite these challenges, students expressed positive attitudes toward visual learning elements such as colors, images, and diagrams. Several students indicated that visual elements help them remember ideas and organize information more easily. This finding suggests that visual thinking strategies such as mind mapping may align well with students' learning preferences and could provide a useful approach for supporting writing preparation.

4.2.2 Students' Perceptions of Mind Mapping Before the Writing Test

The interviews conducted before the writing test indicate that students had begun to recognize the benefits of mind mapping after a period of classroom instruction and guided practice. Most participants reported that mind mapping helped them understand lessons more clearly and remember information more effectively.

For example, S01 stated that learning mind mapping helped him understand the lesson more easily and remember the information better. Similarly, S04 explained that mind maps helped him grasp the main ideas of the lesson more quickly. These responses suggest that the visual structure of mind maps may support cognitive processing and information organization.

Another important finding is that students perceived mind mapping as a useful tool for organizing writing ideas. Several participants emphasized that mind mapping helped them create a clear outline before writing. For instance, S03 noted that mind maps helped him create a clear structure for his writing, while S02 described the technique as very necessary for writing tasks.

Students also reported that mind mapping helped them generate more ideas. Participants such as S05 and S06 explained that mind maps allowed them to expand their thinking and discover additional ideas related to the writing topic. This finding supports the view that mind mapping can stimulate associative thinking and idea development.

However, the interviews also revealed some initial challenges. Some students reported difficulties in learning how to construct a mind map or how to organize ideas within the diagram. For example, S01 mentioned that he initially did not know how to

draw and organize ideas in a mind map, while S03 stated that he did not know how to create a mind map at first.

In addition, some students reported difficulties related to idea development and vocabulary limitations. These challenges highlight the importance of providing sufficient guidance and practice when introducing new learning strategies. Nevertheless, despite these difficulties, all students expressed willingness to apply mind mapping in the upcoming writing test, suggesting that they recognized the potential benefits of this technique.

4.2.3 Students' Experiences After the Mind Mapping Intervention

After participating in the mind mapping activities during the intervention period, students reported several improvements in their writing preparation process. One of the most frequently mentioned benefits was that mind mapping helped students plan their writing more quickly and clearly.

For example, S01 stated that mind mapping helped him plan the writing more quickly and clearly, while S02 explained that it allowed him to prepare the writing without spending too much time thinking about how to start. These findings suggest that mind mapping may help reduce the cognitive load associated with organizing ideas in the pre-writing stage.

Students also emphasized the role of mind mapping in supporting idea generation. Participants such as S03 and S05 reported that the technique helped them think about the writing topic more effectively and develop more ideas. Similarly, S06 explained that mind mapping helped him generate additional ideas when planning the writing.

Another important finding concerns the role of mind mapping in helping students visualize the structure of their writing. For example, S04 explained that using mind maps allowed him to see the overall structure of the composition before writing. This suggests that mind mapping may help learners develop a clearer understanding of how ideas are connected within a text.

Students also expressed positive attitudes toward the visual and creative aspects of mind mapping. Several participants reported that they enjoyed using colors, shapes, and images when drawing mind maps. These visual elements appeared to make the learning process more engaging and enjoyable for students.

In addition, the interviews highlight the importance of collaborative learning. Many students reported that group discussions helped them learn how to create mind maps more effectively. Through collaboration, students were able to exchange ideas, observe different approaches, and learn from their classmates' experiences.

All in all, these findings suggest that mind mapping not only supports cognitive processes related to writing but also contributes to a more interactive and engaging learning environment.

4.2.4 Students' Reflections After the Post-Test

The interviews conducted after the post-test indicate that students generally perceived mind mapping as an effective tool for improving their writing performance. Most participants reported that the technique helped them organize their ideas more clearly and produce better writing.

For example, S01 stated that his writing improved because he could organize his ideas more clearly, while S03 explained that mind mapping helped him arrange ideas more logically when writing. Similarly, S04 noted that the technique made writing easier because he already had a clear outline prepared.

Students also reported that mind mapping helped them expand the content of their writing. For example, S05 stated that his writing improved because he had more ideas to include in his composition. S02 also mentioned that creating a mind map helped him organize ideas before writing, which made the writing process easier.

Despite these positive outcomes, some students continued to experience challenges. Several participants mentioned that developing ideas could still be difficult, particularly when they lacked sufficient vocabulary. In addition, some students reported that drawing mind maps sometimes required additional time.

However, one interesting finding is that these difficulties appeared to decrease as students became more familiar with the technique. For example, S01 stated that he did not experience many difficulties after becoming accustomed to using mind maps.

Another significant finding is that all students expressed a desire to continue using mind mapping in the future. Many participants believed that the technique helped them write more quickly, organize ideas better, and improve their writing scores.

Students also suggested several ways to enhance the effectiveness of mind mapping activities. These suggestions included increasing group discussions, using more visual elements such as colors, and providing additional guidance and practice opportunities.

Overall, these responses indicate that students not only recognized the benefits of mind mapping but also developed a positive attitude toward using the technique as part of their writing process

5. Conclusion and Recommendations

5.1 Conclusion

This study explored the effectiveness of mind mapping in supporting sixth-grade students' idea generation during the pre-writing stage of English writing from a qualitative perspective. The findings were mainly derived from semi-structured interviews conducted with selected students throughout different stages of the learning process.

The qualitative results indicate that before the implementation of mind mapping, many students experienced difficulties when beginning writing tasks. Their strategies for preparing ideas were often fragmented and lacked clear organization. In addition, several

students reported feelings of uncertainty or anxiety when starting to write because they were unsure how to develop and structure their ideas.

After mind mapping was introduced, students reported noticeable improvements in their writing preparation process. The visual structure of mind maps helped them organize ideas more clearly and expand their thinking before writing. Many participants indicated that the branching format allowed them to generate additional ideas and see the relationships among different points more easily.

The findings also reveal that mind mapping contributed to increased confidence and engagement during writing activities. Students appreciated the visual features of mind maps, including the use of colors, images, and diagrams, which made the learning process more interesting. In addition, collaborative activities during mind-map construction helped students exchange ideas and learn from their classmates.

To close, the qualitative findings suggest that mind mapping is an effective strategy for supporting idea generation during the pre-writing stage. By providing a clear and visual framework for organizing ideas, mind mapping helps students approach writing tasks more systematically and confidently.

5.2 Implications

The findings of this study provide several pedagogical implications for English language teaching, particularly at the lower secondary level.

First, teachers should place greater emphasis on the pre-writing stage in the writing process. Providing students with structured activities before writing can help them generate and organize ideas more effectively.

Second, mind mapping can be used as a practical instructional strategy to support idea development. By visually connecting main ideas with supporting details, mind maps allow students to organize their thoughts before writing and reduce the difficulty of starting a composition.

Third, teachers should provide clear instructions and guidance when introducing mind mapping. Because some students may initially find it difficult to construct mind maps, step-by-step demonstrations and sample diagrams can help learners understand how to apply the technique effectively.

Finally, collaborative learning activities can be integrated into mind-mapping exercises. Group discussions and shared mind-map construction can encourage students to exchange ideas and develop richer content for their writing.

5.3 Limitations

Despite the valuable insights obtained from this study, several limitations should be acknowledged.

Firstly, the qualitative component involved only a small number of interviewed students, which may limit the generalizability of the findings to other educational contexts.

Secondly, the study was conducted within a relatively short period of time. A longer implementation period might provide deeper insights into how students' writing skills develop when mind mapping is used regularly.

Thirdly, the qualitative analysis mainly focused on students' perceptions and experiences. Other sources of qualitative data, such as classroom observations or teacher interviews, could provide additional perspectives on the use of mind mapping in writing instruction.

5.4 Suggestions for Further Research

Future research may expand this study in several directions.

First and foremost, further studies could involve larger samples and different school contexts in order to examine whether similar findings emerge in other educational settings.

Second, future research may explore the long-term effects of mind mapping on students' writing development, particularly how regular use of this strategy influences writing skills over time.

Third, additional qualitative investigations could examine teachers' perspectives on implementing mind mapping in the classroom and the challenges they encounter when integrating this technique into writing instruction.

Last but not least, future studies may investigate how mind mapping can be combined with other pre-writing strategies, such as brainstorming or collaborative planning, to further enhance students' idea-generation skills in English writing.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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