

Exploring Students' Perception on the Integration of Concept Mapping in Argumentative Writing

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ABSTRACT

Mind mapping is a creative, visual learning strategy that helps pupils grasp things more effectively. This study aimed to determine students' perceptions of using Mind Mapping using Xmind in writing classes. This study used a qualitative case study research method design. The data were collected through open-ended questionnaires and interviews. The subjects of this study were 6 active English students who had passed the argumentative course. Xmind became a tool for mind mapping approach to assist students in fulfilling their writing assignments. The findings indicated that students had a good attitude about utilizing mind mapping as an effective Visual teaching aid. Most students thought that mind mapping benefited them in writing essays, allowing them to be more creative and developing their ideas.

Keywords: Perception, Concept mapping, Argumentative writing

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INTRODUCTION

Perceptions are a person's ideas after seeing and doing something, allowing him to determine his feeling. Perceptions provide insight into the outcomes of events collected by the five senses. Mola (2021) notes that perception occurs when a person reads a letter, organizes it into a phrase, and understands what he reads. Perception is established when the perpetrator's mind analyzes and integrates his current experience with his previous experiences, resulting in a more accurate experience of what is viewed.

Mind mapping is a learning technique that efficiently organizes information for easy recall, making it simple to input and retrieve ideas when needed. This method is highly effective, creative, straightforward, and powerful in summarizing material. It visually maps out thoughts in a structured, picture-based format, making it ideal for organizing ideas in writing (Buzan, 2004). The mind map is a visual thinking tool that can help users organize knowledge, analyze, interpret, synthesize, recall, and develop new ideas more effectively. It can take the shape of a schematic to help people relate facts and ideas to new construction. (Brandner, 2020). A mind map is a graphical representation of thoughts and concepts. It provides a non-linear way to connect concepts based on context and quantity (Onkas, 2015).

The primary goal of mind mapping is to create ideas for various of tasks. It teaches students how to solve problems, emphasize viewpoints, take notes, recollect information, and prepare and organize projects (Buran & Filyukov, 2015). Mind mapping as a learning technique includes five key characteristics: (1) focusing on a particular topic and breaking it down into several "branches" (3) consisting of interconnected written text or graphics in each branch by line; (4) the less significant subject is given as "twigs"; and (5) the structure is connected at

nodes. This method improves student productivity by helping them produce and recognize ideas for structural information (Bhattacharya & Mohalik, 2020).

This study aims to explore students' perceptions of the use of mind mapping, especially on the Xmind application, and the effectiveness of writing argumentative essays. The main focus of this research is to observe how students' perceptions of using mind mapping on the Xmind application can motivate students to make it easier for students to write, increase their confidence, and overcome common barriers in starting to write essays. In addition, this study will look at how effective the use of mind mapping using Xmind is. This research is also expected to provide new insights into more effective and more productive writing teaching methods for students. The findings from this study are also anticipated to identify strategies that can be implemented in other courses to improve students' writing skills.

Previous researchers have yet to study the use of Mind Mapping in Xmind applications extensively. The lack of literature and previous research on this topic suggests that it has yet to be widely explored. However, the researchers found some relevant past research. First, Pribadi and Susilana (2021) discovered that mind-mapping approaches help pupils remember information and acquire knowledge using visual signals like colors and images. Mind mapping enables learners to enhance memory recall by visually capturing key concepts in a structured manner. This technique helps students organize material in a personalized, engaging, and diverse way, making it easier to revisit previously learned content. Second, Sentyawati (2022) demonstrated that students have a generally good opinion of mind mapping as a visual learning aid. According to the research, most students agreed that using mind maps significantly helps them organize and summarize information and enhances their note-taking process. Third, Tarin & Yawiloeng (2023) this study found that mind-mapping strategies can improve both writing abilities and cognitive writing processes. According to their findings, mind mapping helps students write in English more effortlessly, rapidly, simply, and creatively.

The researcher performed this study after seeing that many pupils struggle to acquire English, especially in writing. Many students struggle to start writing because they need clarification about what they will write. The author found a technique that can make it easier for students to start writing essays, namely mind mapping. Mind mapping helps students start writing essays by collecting main ideas from themes prepared beforehand.

As a result, this study is likely to give a unique viewpoint on using technology in writing instruction. The study's findings are intended to provide a stronger foundation for establishing more effective teaching tactics and encouraging the use of technology to improve students' writing quality. Furthermore, the findings of this study can help other educational app developers create creative and effective learning tools.

METHOD

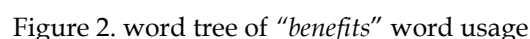
This study takes a qualitative approach, employing a case study method. Rashid et al. (2019) Clearly, a case study is a research approach that aids in discovering phenomena in a specific setting using diverse data sources. The participants in this research were third-year English students enrolled in an argumentative writing course that utilized the XMind application. Interviews, questionnaires, and documentation studies are some data collecting approaches used. Interviews were performed with six randomly selected students to learn about their experiences, problems, and perspectives on Mind Mapping, particularly using the Xmind program. To supplement the data from the interviews, questionnaires were distributed to students to collect information on their perspectives on the English learning process. Data was collected through documentation, which included images of interview activities, screenshots of questionnaire findings, and other papers that support this research.

Miles and Huberman's theory, which involves data reduction, data presentation, and conclusion drawing or verification, served as the foundation for the data analysis approach applied. During the data reduction process, acquired material was reduced, organized, and

Thus, this study may give a detailed picture of how students perceive the usage of mind mapping in the Xmind program to improve their writing abilities and identify supportive and inhibiting variables in the process.

This research interviewed six students, one male and five girls. They are third-year English students. The names of the six individuals in this essay are not written using their real names for reasons of secrecy. The participants' names are: SM, AR, MTA, FT, SA, and TNF. The interview and questionnaire transcripts from the six participants were collated and loaded into NVivo 14 software for further analysis.

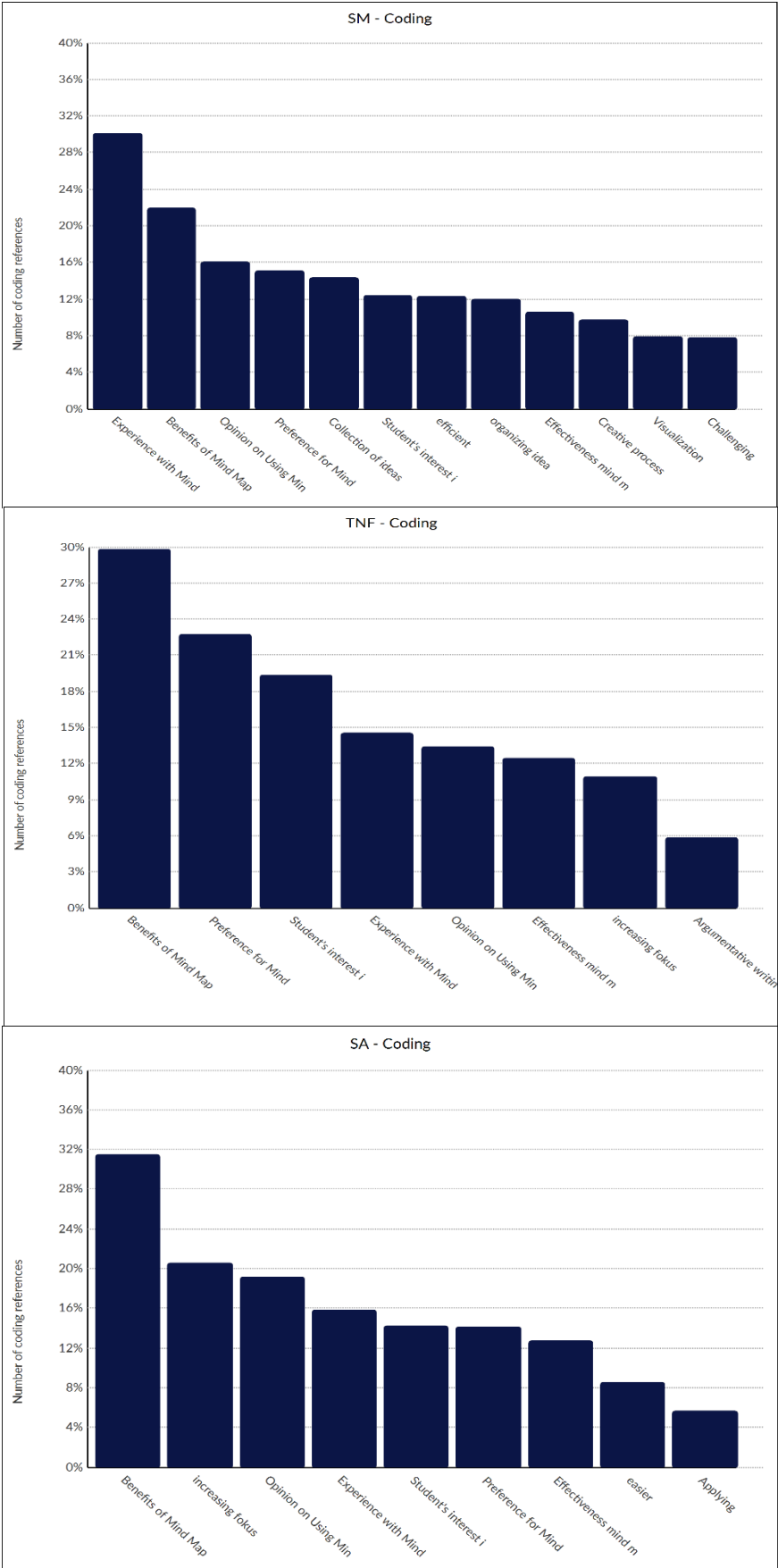
Next, the Text Search Query tool is used to determine the meanings of the terms in the word cloud above. The researcher's goal in this study is to understand how the term "benefits" is used as a dominant word and a keyword. The search results are then presented as a word tree.



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breaking them down into simpler information. This makes mind mapping a tool for starting writing, especially using the Xmind application.



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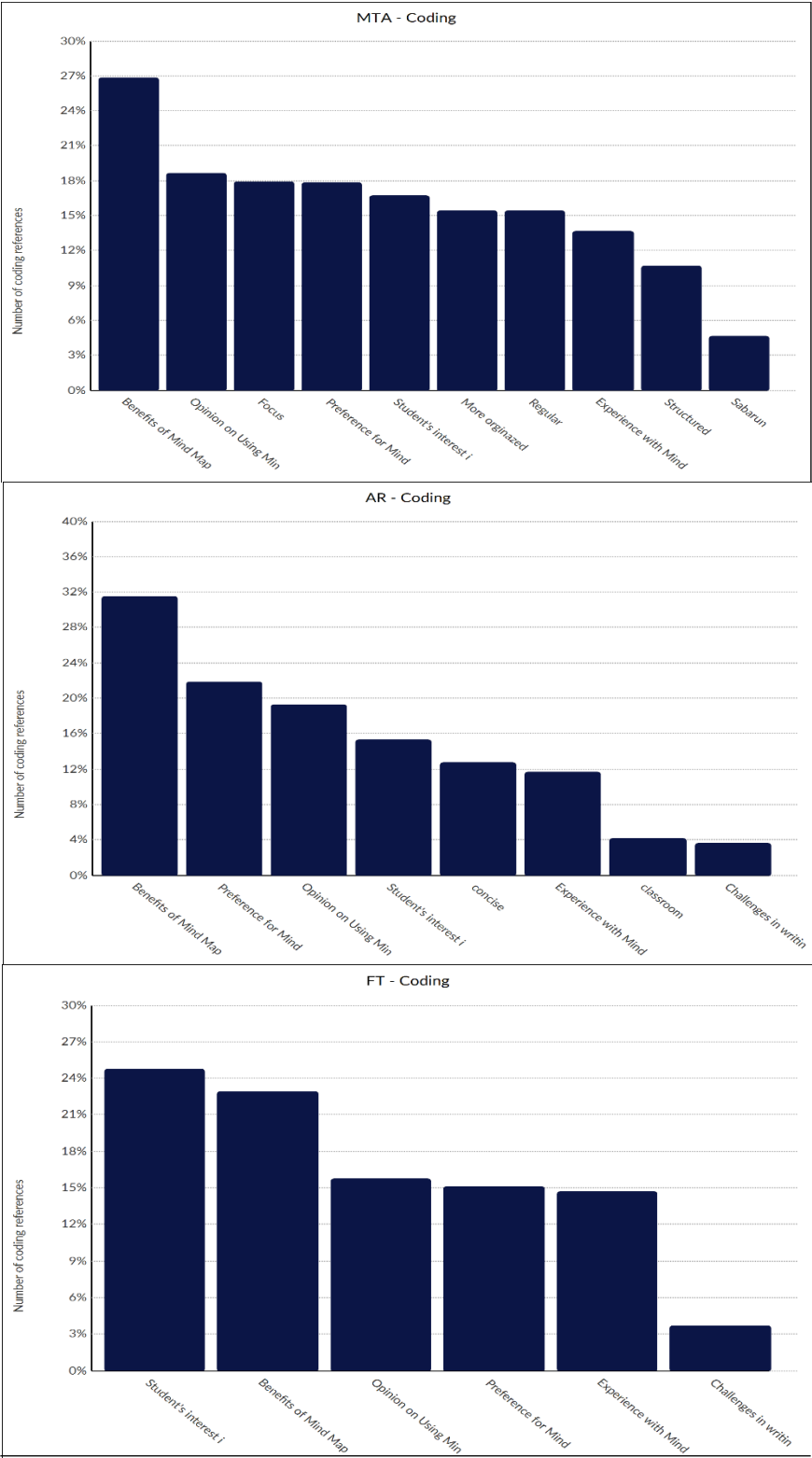


Figure 3. Themes from Each Participant's Coding Results

In addition to visualization, word clouds, and word trees are quite useful for labeling or coding, which is subsequently converted into theme categories on the NVivo 14 codes menu. Themes are themes associated with the emphasis and research topics. The themes identified from the statements of the six participants are shown in Figure 3.

Furthermore, the researcher presents the benefits of using mind mapping. Figure 4 depicts a project map created with Xmind. The project map was developed using the themes from the coding results, which may be used to explore and illustrate data linkages. Based on the project map created, three indicators of perception of using Xmind in creating mind

mapping were obtained: the benefits of using mind mapping, effectiveness, and experience in using mind mapping.

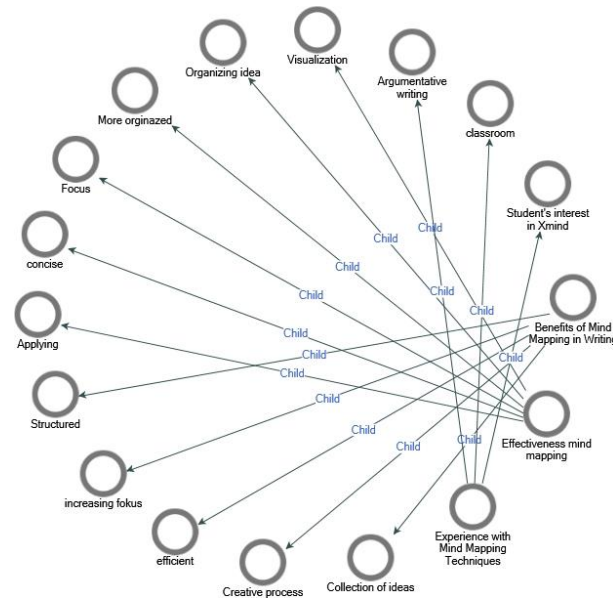


Figure 4. Project map perceived use of mind mapping

Profit is the benefit or advantage taken from a tool or other. Students felt that mind mapping had the benefit of helping them to get started writing an essay. Students realize that mind mapping helps to structure the topic of writing. SM explained in detail:

"I often used it for brainstorming, planning projects, or understanding complex concepts. It certainly helped me in the process of simplifying and mapping concepts in a more structured way.."

Students often use mind mapping for various purposes such as brainstorming, planning projects, and understanding complex concepts. SM found mind mapping very helpful in simplifying ideas and mapping concepts in a more structured and organized way. Mind mapping is also useful for readers so they do not feel bored because the information is more concise. AR said

"...writing was a lesson that required a lot of words, so in mind mapping, it was narrowed down to only the important points that were included. This way, those who read it didn't get bored, and those who wrote it didn't get tired."

Students find mind mapping helpful in the writing process, especially for brainstorming, organizing ideas, and planning projects. This technique, taught by their lecturer, helps them structure their essays more effectively. Students appreciate mind mapping because it simplifies complex ideas into key points, making the writing clearer and easier for both the writer and the reader.

Furthermore, effectiveness means how well mind mapping helps students achieve their learning goals, such as understanding ideas better, improving writing skills, and organizing thoughts. This can be seen from how easily students can plan their writing, organize ideas in a clear way, save time when writing, and improve their writing, which can be seen in Figure 5.

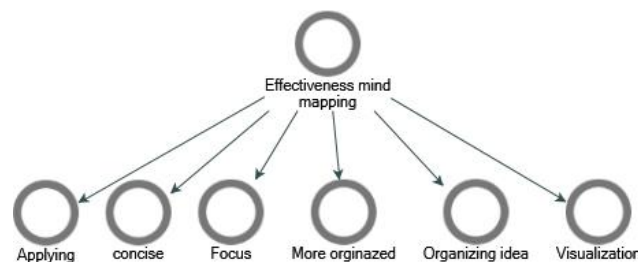


Figure 5. Project map of effectiveness mind mapping

In addition, it can also be seen that focus is the dominant word compared to the others. This shows that students feel that using mind mapping helps students to focus on writing. It can be seen that the word focus is the most central indicator compared to the others, as shown in Figure 6.

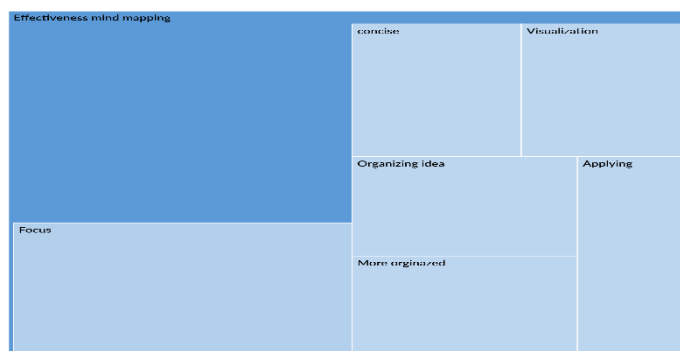


Figure 6. Hierarchical diagram of mind mapping effectiveness indicators

Mind mapping helps keep the writing focused, concise, more organized and aligned with the original purpose, preventing the content from becoming scattered or unclear. This makes mind mapping very helpful in ensuring that the structure of the writing stays organized and on topic. Mind mapping is also visualization tool that help them organize their ideas better. It was explained by SM:

"...with mind mapping, we could see the overall structure of what we created. For example, in short stories or fiction, it helped us understand what we were doing through interesting visualizations."

With mind mapping, SM can see the overall picture of their writing, especially in writing short stories or fiction. The visualization presented by mind mapping helps them understand and plan each part of the story. TNF also argued that Mind Mapping makes the pre-writing process easier by helping to organize ideas and see connections between them. It allows for flexible brainstorming and helps group-related thoughts. This breaks down complex ideas into smaller parts, making it simpler to plan and outline writing.

Discussion

Based on the results of the interviews and questionnaires, a significant majority of students indicated a good opinion of using mind mapping in the writing process. Participants highlighted that mind mapping significantly aided their comprehension of complex concepts, allowing them to break down intricate ideas into manageable components. This clarity facilitated a more structured approach to their writing, making their texts easier to follow and understand. Students appreciated the way mind mapping enabled them to visualize relationships between ideas, which in turn helped them organize their thoughts coherently.

Moreover, students reported an overall enjoyment in utilizing mind mapping as a tool for idea organization. This enjoyment stems not only from the effectiveness of the method but also from its visual nature, which made the writing process feel less daunting and more engaging. The interactive aspect of creating mind maps provided a creative outlet for students, fostering a more dynamic learning environment.

However, the study also uncovered certain limitations associated with mind mapping. Some students encountered technical difficulties while using mind mapping software, occasionally hindering their ability to engage with the tool fully. Additionally, students noted that creating mind maps could be time-consuming, which may challenge those balancing multiple academic responsibilities. These logistical challenges suggest that while mind mapping offers substantial benefits, practical considerations must be addressed to enhance its effectiveness in the classroom.

Despite these limitations, the overall benefits perceived by students indicate that mind mapping remains a valuable and effective tool in supporting their writing processes. The positive impact on understanding, organization, and engagement suggests that educators should systematically incorporate mind-mapping techniques into their teaching strategies. By

doing so, they can capitalize on the strengths of mind mapping while addressing the challenges students may face. Thus, the findings of this study advocate for a more widespread adoption of mind mapping in writing instruction, recognizing its potential to enrich the learning experience and improve writing outcomes.

This study is also relevant to previous research, such as the work of Pribadi and Susilana (2019), who discovered that mind-mapping approaches help pupils remember information and acquire knowledge by using visual signals such as colors and images. Mind mapping enables learners to enhance memory recall by visually capturing key concepts in a structured manner. This technique helps students organize material in a personalized, engaging, and diverse way, making it easier to revisit previously learned content. Furthermore, building mind maps allows students to design and implement their learning methodologies. Overall, it is an effective method for helping students connect new information with their existing knowledge.

Second, this research is also consistent with the findings of Sentyawati (2022), whose study indicated that students had a generally good attitude toward mind mapping as a visual learning aid. According to the research, most students agreed that using mind maps greatly aids them in organizing and summarizing information, as well as in the process of note-taking. Additionally, they found that mind mapping provides opportunities for increased creativity, allowing them to visualize their ideas more clearly and explore different ways of structuring their thoughts. Furthermore, many students reported that this technique helps them not only in developing new ideas but also in improving their overall understanding of the material.

Third, this study aligns with the research conducted by Tarin and Yawiloeng (2023); this study found that mind-mapping strategies can improve both writing abilities and cognitive writing processes. According to their findings, mind mapping helps students write in English more effortlessly, rapidly, simply, and creatively. Moreover, mind maps aid students' cognitive processes when writing by allowing them to recall existing information, produce new ideas, and arrange those ideas using the mind mapping approach, finally enabling the transfer of these ideas into well-structured descriptive paragraphs.

CONCLUSIONS

The findings of this study reveal a spectrum of student perceptions concerning the use of mind mapping, particularly through the Xmind application, in writing classes. Overall, many students identified mind mapping as an effective tool that aids in organizing ideas, facilitates brainstorming, and enhances the planning of their writing endeavors. This qualitative research indicated that students found mind mapping instrumental in simplifying complex concepts, which, in turn, allowed them to maintain focus on the original purpose of their writing. By visualizing their ideas, mind mapping enabled students to grasp the interconnections between various concepts, thereby rendering the writing process more structured and coherent.

Furthermore, the study highlights that mind mapping positively affects students' ability to concentrate during writing tasks. Many participants expressed that this technique helped them stay on topic, preventing them from diverging into irrelevant areas. Moreover, mind mapping served as a valuable reference point for students grappling with writer's block, offering them a clear visual guide to navigate their thoughts when they felt stuck. The organized visual format of mind maps allowed students to logically arrange information, ensuring that critical points were not overlooked. This capability was perceived as empowering, granting students greater control over their writing processes and making their overall experience more manageable and efficient.

Despite these positive outcomes, it is essential to acknowledge that not all students shared a uniformly favorable experience with mind mapping. Some participants articulated that the technique necessitated a deeper cognitive effort, which could be perceived as a hindrance rather than a help. A noteworthy observation from one participant suggested that

mind mapping felt less relevant for structuring formal academic essays. This discrepancy underscores the diversity of student perceptions regarding the applicability and effectiveness of mind mapping, particularly as it relates to different writing tasks.

In conclusion, while most students recognized the benefits associated with the use of mind mapping—such as enhanced organization, focus, and clarity in the writing process—others expressed skepticism about its efficacy in more formal writing contexts, such as essay composition. This variation in perceptions indicates the need for further research to explore the contexts in which mind mapping is most beneficial and to understand the factors contributing to differing student experiences. Overall, the findings of this study suggest that while mind mapping is a valuable educational tool, its effectiveness may vary depending on the type of writing and individual student preferences, calling for a nuanced approach to its implementation in academic settings.

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