

## **Students' Perception of Using Mind Maps to Improve Students' Writing Ability**

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### **ABSTRACT**

This study aims to explore the students' perception of using mind maps to improve their writing skills, especially in writing an article. The researcher also has a goal to find out the advantages of applying mind maps in learning writing. Qualitative methods are applied in this research. 28 students in the sixth semester of an academic writing course are the participants in this study. The data of this research are collected using a questionnaire. The questionnaire was designed with closed and open-ended questions. The average score of each statement in the close-ended question is classified as a good perception according to the interval score interpretation. The result of the open-ended question also showed a good perception from the participants. The study carefully analysed the acquired data using the approach indicated above. The qualitative analysis revealed strong themes about the students' perceptions towards mind maps as a tool for improving their article writing skills. These motifs were subsequently explored through extensive coding and thematic analysis. Furthermore, the study investigated the specific benefits that students perceived from incorporating mind maps into their writing process. Through in-depth interviews and textual analysis of open-ended responses, the researcher highlighted major benefits such as greater organisation, increased idea production, and increased clarity in communicating ideas in their papers.

Moreover, the results of this study provided insight on the efficacy of mind maps as an educational tool in academic writing. The excellent reception and constructive feedback from participants highlighted mind maps' ability to encourage a more structured and coherent approach to writing, enabling the development of critical writing abilities required for academic achievement.

**Keywords:** Advantages; Mind Map; Students' Perception; and Writing Ability.

## INTRODUCTION

Every level of school certainly cannot be separated from writing activities. Writing skills are important and need to be mastered because it is a basic language skill (Harmer, 1998). Writing skills are also important because it can affect student achievement. Muslim (2014) states that the scores of students with good writing skills are superior to students who are not skilled in writing. Therefore, in learning English, in-depth writing skills are taught to prepare students for real-life communication. This is supported by Kuyhara et al. (2009) who claim that writing is an important thing that can give success in education, work, and society. Writing must be learned, taught, and practised from the beginning of learning.

For students, the skills that are difficult for them to master are writing skills. It is quite difficult for students to write in a language other than their own language. One of the issues is coming up with concepts. After they come up with an idea, they must consider it in English. Once students have their thoughts, they must connect them to organize their writing clearly (Furqoni, 2019). In addition, some other aspects of writing should be considered by the students (Silvani, 2020; Astriani, et al., 2023), such as vocabulary (Wijirahayu & Sutiwan, 2023). Therefore, students need strategies to help them learn to write (Apriani, et al., 2022). By using imaginative exercises, students can organize the key concepts of a notion into an understandable mind map, which is a learning strategy called mind mapping (Kustian, 2021). Tony Buzan is the man who has developed this popular strategy. Mind mapping allows the writer to summarize information from many sources in the form of a diagram containing important keywords (Farrand et al., 2002). The use of mind mapping makes it easier for students to determine ideas.

Several studies are also interested in finding out about students' perceptions of using mind maps the use of mind mapping in writing activities. First, a study conducted by Fadillah (2019) investigated student perceptions of using mind-mapping software applications. A study by Fu et al. (2019) also found that the majority of students expressed their support for the mind-mapping method integrated with the contextual gaming approach. Furthermore, it was also shown that the suggested learning method is more inclined to assist students in generating optimistic thoughts and emotions, generating a wide range of concepts, fostering a sense of novelty, and conveying actions or intentions. In addition, Nurlaila (2013) also researched mind mapping in learning to write. She found that mind mapping is the right way to increase students' creativity and vocabulary in constructing sentences and ideas in learning to write.

Additionally, Mahmud et al., (2011) found that using mind mapping for academic writing in college can improve writing learning and produce ideas. Moreover, Astriani et al. (2020) also confirmed that the function of mind mapping in learning models is also to enhance students' metacognitive abilities. Much previous research has proven that the use of mind mapping can help students in learning writing, such as studies from Agustina (2020). Therefore, to fill the empirical gap, in this research the researcher tries to find other things from the participants. In this study, the researcher has two research questions.

1. What are students' perceptions of using mind maps directly in learning writing?
2. What are the advantages of using mind maps directly in the writing-learning process?

## METHOD

This study used qualitative methods to investigate students' perceptions about using mind maps to improve writing skills. The instrument used was a questionnaire adapted from Yunus & Chien (2016). In the questionnaire, the researcher provides close-ended and open-ended questions. Close-ended questions are used because they are easy to code, entered, and analyzed. The researcher used the "Strongly Agree", "Agree", "Disagree", and "Strongly Disagree" codes with an attitude of 4, 3, 2, 1, which means that the researcher collects responses simply by typing in a number that corresponds to the answers given. The analysis was immediately obtained in the Google Form software that researchers used to distribute the questionnaires. Scores of the close-ended question are categorized using the following interval score interpretation (Sumartini, 2017).

**Table 1. Interval Score Interpretation**

<b>Interval</b>	<b>Interpretation</b>
1 – 1.75	Poor
1.76 – 2.5	Fair
2.6 – 3.25	Good
3.26 – 4	Very good

The study used open-ended questions, which allowed respondents to freely express their thoughts without being influenced by the researcher. This approach also allows participants to provide a variety of responses and explanations about their experiences and perceptions of utilising mind maps in the writing class.

The study included 28 students participating in the sixth semester of the Academic Writing course. This course was chosen because it includes the use of mind mapping as a learning aid. Furthermore, the researchers sought to acquire thorough insights into the students' experiences and perspectives on the use of mind maps in this particular course context.

The study used open-ended questions and focused on students enrolled in a course that included mind mapping to collect rich qualitative data that delves deeply into the practical applications and perceived effectiveness of mind maps in improving writing skills among sixth-semester students. This specific strategy sought to produce nuanced insights that may be used to drive future instructional methods and research efforts in the field of writing education.

## RESULTS AND DISCUSSION

The results of students' perceptions of using mind maps in writing class can be seen in Table 2 below.

**Table 2. Students' Perception of Using Mind Maps in Writing Class**

Statements	Attitude	f	%	M	I
It is easy to create mind maps in writing class.	SA	5	17.9%	3.00	G
	A	18	64.3%		
	D	5	17.9%		
	SD	0	0%		
Mind maps help me organize my thoughts in writing an article.	SA	12	42.9%	3.39	VG
	A	15	53.6%		
	D	1	3.6%		
	SD	0	0%		
I enjoy creating mind maps in writing class.	SA	7	25%	3.00	G
	A	15	53.6%		
	D	5	17.9%		
	SD	1	3.6%		
Creating a mind map was an interesting experience in writing class.	SA	6	21.4%	3.00	G
	A	17	60.7%		
	D	4	14.3%		
	SD	1	3.6%		
Mind mapping helps me understand concepts and ideas in writing an article.	SA	10	35.7%	3.25	G
	A	15	53.6%		
	D	3	10.7%		
	SD	0	0%		
Mind mapping allows me to be creative in writing class.	SA	9	32.1%	3.18	G
	A	15	53.6%		
	D	4	14.3%		
	SD	0	0%		
Creation of a mind map helped me understand the relationship between the ideas I wrote and the topic in writing an article.	SA	9	32.1%	3.18	G
	A	16	57.1%		
	D	2	7.1%		
	SD	1	3.6%		

Note: f = Frequency, % = Percentage, M = Mean, I = Interpretation

The average score for each statement is interpreted based on the score interval in Table 1. As a result, one statement is categorized as very good and six statements are categorized as good. The statement that is categorized as very good with an average score of 3.39 is that mind maps help to organize thoughts in writing an article. With a percentage of 96.5%, students agreed and showed positive perceptions about it. This result is in line with the statement that mind mapping is a teaching method that helps students picture their thoughts and makes learning more visual which can assist students in thinking, learning, and remembering (Liu et al., 2018). Therefore, students in writing class have to practice creating mind maps.

Academic writing class requires the students to create a mind map. Most of the students agree that creating mind maps in writing class is easy. There are 64.3 % students who agree. This is because they used to create a mind map in each chapter. Students usually use a mind mapping tool to create mind maps such as Canva, MindMeister, etc. By using those tools, students can create their mind maps easily. Mind maps may be quickly expanded, allowing the student to add additional notes or themes that are pertinent to the subject at hand. A simple glance at the scheme, the data contained in the file holding the afferent description, will suffice to remind someone of a subject or lost information (Cristea et al., 2011).

During the writing class, students always applied the mind maps before starting to create each part of the article. For example, to create an introductory part they make a mind map first. According to Table 2, 42,9 % of students strongly agree and 53,6 % of students agree with the statement "Mind maps help me organize my thoughts in writing an article. It can be concluded that during applying mind maps before starting to write they can organize their thoughts well. In pre-writing activities, students have to create their mind maps. This pre-writing activity is proposed to give students a chance to plan their article.

The same is the study conducted by Chang & Lu (2018), who designed a mobile-based concept map to do pre-writing activity in learning writing. The results show that a pre-writing activity can make EFL students recall and organize their life experiences. Students enjoy creating mind maps during writing class. It can be seen from the data that 25% of students strongly agree and 53.6 % of students agree with that statement. This was also proven by Dhindsa & Roger (2011) in their study of the effects of a constructivist-visual mind map teaching technique (CMA) and a conventional teaching strategy. The result shows that the students appeared to be having a good time and appreciating while they were engaged in all of the mind-mapping activities.

The fourth point stated that "creating a mind map was an interesting experience in writing class" There are 25% strongly agree and 53.6 % agree. It means that they are interested in creating a mind map in writing class. This is also proven by Ngo & Tran (2021) in their study. It stated that the majority of students expressed an interest in making mind maps to improve their writing skills, according to the first two data collections of classroom observation and interviews. This is because the improvement in their writing skills was indicated by the marks given by lecturers for writing assessments at the end of each semester.

Mind mapping helps students understand concepts and ideas in writing an article. 53.6 % of students agree with that statement. In creating a mind map students connect the concepts that they have learned previously to their new ideas. By connecting their prior knowledge to new material, students are required to actively participate in their learning through mind-mapping activities. During the process of making a mind map, a student frequently consults a textbook, class notes, an instructor, a classmate, or a study group (Jones et al., 2012).

Most of the students (53.6 %) agree that mind mapping allows students to be creative in writing class. In creating a mind map, students have to make creative ideas to make their plans. Aside from making creative ideas to make their plan before writing, students also have to be creative creating their mind map to be interesting when read by others. The previous research done by Buran & Filyukov (2015) also stated that mind mapping allows students to be creative in writing class. After they introduced the mind mapping techniques to the participants, then students used mind maps in the classroom to take notes, plan presentations, learn new languages, think of creative solutions to issues, and solve them.

In a mind map, smaller categories are shown as branches of larger branches and the major categories are depicted as radiating from a central image (Budd, 2004). It is one of the creations of the mind map.

The creation of a mind map helped students to understand the relationship between the ideas they wrote and the topic in writing an article 32.1 % of students strongly agreed and 57.1 % of students agreed with that statement. Concept mapping encourages assimilation by making it clear and requiring the learner to focus on the connections between concepts. In doing so, the learner may need to choose new concepts from the material and create original propositions and linkages on the concept map. This will need the use of higher levels of learning and higher-order thinking skills of synthesis and evaluation (Pishghadam & Ghanizadeh, 2006).

The answers from the students on the open-ended questions also support this result as can be seen in excerpt 1.

### **Excerpt 1**

*"Using mind maps helps me to make the writing activity more understandable and easy to map the ideas." While other students answered "... it is easier for me to organize what I will write."*

This finding is in line with findings in research conducted by Nurlaila (2013) who also studied mind mapping in teaching writing. She found that mind mapping succeeded in increasing students' ability to organize ideas in learning to write. These findings support previous research by Mahmud et al., (2011) which found that the use of mind mapping for academic writing at universities can help to generate ideas.

Furthermore, the 6 statements included in the good category are as follows. First, 82.2% of students agree with the statement that making mind maps in writing class is easy. Second, 78.6% of students enjoy making mind maps in writing class. Third, 82.1% of students agree that making mind maps is an interesting experience in writing class. Fourth, 89.3% of students agree that mind mapping helps in understanding concepts and ideas in writing articles. Fifth, 85.7% of students agree that mind mapping provides an opportunity to be creative in writing class. Sixth, 89.2% agree that making mind maps helps them understand the relationship between ideas written and topics in writing articles. Overall, the percentage of students with "Strongly Agree" and "Agree" answers was 86.14%. Where those two answers indicate students' positive perceptions of the use of mind maps in writing classes.

Most of the students' answers to the open-ended questions supported the results of the analysis. They stated that using mind mapping helped them in writing their project articles in various ways. They mentioned that mind maps can provide ideas, lead them to write the structure of their articles, provide clear understanding and planning of what they are going to write, and make their projects neater, it really helps in developing ideas in writing, helps them to develop their ideas in a shorter context, etc. Following are some of the answers made by students about whether using mind maps helped them in writing their article projects.

## **Excerpt 2**

Student A: *"Yes, it helps me. Mind mapping makes my article well-organized. In making a mind map, I can write about what I will write in the introductory part, literature review part, methodology part, finding and discussion part, and then the conclusion part. So, I am not confused about what I should write in each part of my article. Using mind maps before starting to write, it helps me to write a specific concept of my general idea."*

Student B: *"Yes, it helps me a lot. I can develop arguments and entire paragraphs more easily because the information is already compiled through a mind map."*

Student C: *"Yes of course. I made everything in my mind map, I wrote down the topic first, and what part of the topic (from the wider to the narrow ideas)."*

Excerpt 2 in the previous explanation indicates every student acknowledges the value of mind mapping for their writing process. In addition, prior to being put into writing, ideas and thoughts can be organised via mind mapping. Besides, they also admit that it helps organise knowledge and create arguments. In other words, the advantages of mind mapping for the students' writing processes are emphasised. It is a useful tool for preparing the article's structure, arranging ideas, and assisting in the formulation of arguments. For some students, using mind maps appears to help them approach academic writing in a clearer and more structured manner.

In conclusion, The research findings reveal a consistently positive perception among students regarding the utility of mind mapping in academic writing. The analysis, based on average scores and percentage agreement, categorizes one statement as "Very Good" and six statements as "Good." The statement garnering a "Very Good" categorization emphasizes that mind maps aid in organizing thoughts for article writing, supported by a high agreement percentage of 96.5%. This aligns with existing literature, such as Liu et al. (2018), highlighting mind mapping as a visual teaching method that enhances students' thinking, learning, and memory. Students express ease in creating mind maps using various tools like Canva, with 64.3% finding it easy due to prior experience. Additionally, students predominantly apply mind maps before initiating each article section, contributing to well-organized thoughts. The enjoyment derived from creating mind maps is evident, with 78.6% agreeing. Students also acknowledge the role of mind mapping in understanding concepts (53.6% agreement) and fostering creativity (53.6% agreement).

Furthermore, the creation of mind maps is seen as an interesting experience (78.6% agreement) and aids in understanding the relationship between ideas and topics (89.2% agreement). The open-ended responses from students support these findings, emphasizing the contribution of mind mapping to clear understanding, organization, and idea development in their writing projects.

Overall, the positive perceptions of students underscore the beneficial role of mind mapping in enhancing various aspects of the academic writing process.

## **CONCLUSION**

The research inquiries in this investigation have been efficiently resolved. The analysis of the questionnaire indicated that a significant majority of the participants, up to 86.14%, had a favourable opinion of utilising mind maps to improve their writing skills. This demonstrates the extensive recognition and acceptance of the effectiveness of mind maps in enhancing students' writing skills.

Regarding the second study question, which investigates the benefits of incorporating mind maps into the writing learning process, the analysis of students' responses in the open-ended questions portion reveals many significant advantages. Based on the students' perceptions, mind maps help them efficiently organise their ideas, improve speed and coherence in their writing process, and provide a thorough picture of the main topics they want to communicate in their compositions. Hence, instructors responsible for teaching writing skills may consider integrating mind-mapping techniques into their instructional methods, as these techniques have been proven to enhance the organisation and implementation of written assignments.

In addition, for future research endeavours aiming to further explore this topic, integrating interviews into the data collection approach may result in more intricate and perceptive conclusions. Interviews offer the ability to unearth additional viewpoints, experiences, and subtle insights that may not be adequately captured through quantitative research alone. Therefore, including qualitative methods such as interviews might enhance the comprehension of the role and influence of mind mapping in the context of teaching writing.

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