Journal Corner of Education, Linguistics, and Literature
Vol. 4 No. 4 (May, 2025), pp. 459-473
https://doi.org/10.54012/jcell.v4i4.474

The Use of Xmind Assisted Mind Mapping Technique In Improving Students' Review Writing Skills

Asih Wiarsih[1]✉, Lanlan Muhria[2]
[1,2] *Universitas Sindang Kasih Majalengka, Jawa Barat, Indonesia*
✉ email: asihwiarsih@uskm.ac.id

Received:
May 15, 2025
Revised:
May 17, 2025
Accepted:
May 25, 2025
Published:
May 29, 2025

ABSTRACT

This research is motivated by the lack of students' writing skills in review texts, which is caused by the limited learning strategies that can facilitate critical and systematic thinking processes. The objective of this study is to determine the improvement of students' review writing skills through mind-mapping techniques assisted by Xmind. This study uses the type of Classroom Action Research, which is carried out through actions consisting of 2 cycles, where each cycle has four stages: planning, implementation, observation, and reflection. Research data were obtained using data collection techniques in the form of observation, interviews, assessments, and documentation. The study showed that students' review writing skills with mind-mapping techniques assisted by Xmind had increased significantly. The average score of students' review writing skills increased in each cycle, with an average score of 70.45 for cycle I and 86.81 for cycle II. The cycle I review writing test results showed that 29 students (76.32%) achieved completeness and increased. Thus, the mind mapping technique assisted by Xmind is effectively used as a learning strategy to improve students' review writing skills. Integration of this technique into the writing learning curriculum in higher education is recommended, especially to solve the classic challenges in teaching writing.
Keywords: *Mind Mapping; Xmind; Writing Skills; Review Text.*

INTRODUCTION

Writing review skills are essential to students' mastery of academic literacy. Writing a review not only requires an understanding of the contents of the text but also the ability to analyze critically, synthesize, and convey arguments systematically. Unfortunately, many students have difficulty expressing ideas coherently and logically in a review. Weak skills influence this in organizing ideas and lacking innovative writing learning strategies (Gunawan et al., 2024; Rahma et al., 2024; Wiliyanti et al., 2024).

One approach that is gaining more attention in improving writing skills is the mind-mapping technique. According to Buzan & Griffiths, (2013), the originator of this concept emphasized that mind maps function as visualization tools that help the brain link information in branching patterns, thus facilitating the process of creative and systematic thinking. In the context of learning to write, mind mapping has proven

effective in helping students develop a framework of thought before writing (Sifaiyah et al., 2022; Widiarti et al., 2024).

Furthermore, with the development of digital technology, mind-mapping applications such as Xmind are present as practical solutions that strengthen the benefits of this technique. It allows the creation of interactive digital mind maps that are easy to revise and can be saved in various formats, thus supporting flexibility in the learning process (Anwar et al., 2024). The use of this application in the learning process has shown positive results in improving learning motivation and narrative writing skills among students (Amalia & Napitupulu, 2022; Fajrudin et al., 2023; Hamdiyah & Puspitasari, 2023; Purwaty et al., 2022).

In a study conducted by Moon & Sutama, (2024), using Xmind in Indonesian language learning in higher education successfully improved students' ability to construct coherent and logical paragraphs. Similar results were also obtained in a study by Arono et al., (2022), which noted a significant increase in argumentative essay writing skills after students used Xmind to organize ideas before writing.

Specifically, in the context of writing a review, the mind-mapping technique has great potential. Writing a review requires a precise mapping between the parts of the source text, the author's critical response, and the structure of the review itself (Zulaikah, 2022). With the help of Xmind, students can organize ideas visually so that the review writing process becomes more structured and effective.

Utilizing the Xmind application, students will experience improved review writing skills, critical thinking skills, creativity, and the ability to construct logical arguments. In addition, using technology such as Xmind is also in line with government policies that encourage digital transformation in higher education (Putri et al., 2024).

However, research that specifically examines the effectiveness of Xmind-assisted mind mapping techniques in improving review writing skills is still minimal. Therefore, this study is important to fill the gap in literature while providing empirical contributions to the development of review writing teaching methods in higher education.

The urgency of this research is also reinforced by the need to align learning methods with the principles of Merdeka Belajar-Kampus Merdeka (MBKM), which emphasizes creativity, independence, and the use of technology in the learning process. The mind mapping technique assisted by Xmind is a concrete tool that can encourage students to learn actively, think critically, and produce quality written works.

The novelty of this study lies in its specific focus, namely the application of mind mapping techniques assisted by the Xmind application in improving students' review writing skills. While many previous studies have examined the use of mind mapping in the context of writing essays, narratives, or general arguments (Arono et al., 2022; Bacharsyah & Wasidi, 2022; Goebert, 2023; Widiarti et al., 2024), studies on the effectiveness of this technique in helping students write reviews, which have their analytical structure, are still scarce. Besides, this study uses Xmind as a digital tool for learning to write. It makes mind mapping more effective, accessible, and engaging,

resulting in greater improvements in students' review writing skills compared to traditional methods.

In addition, the selected research subjects, namely students, add to the uniqueness of this research, considering that most similar research is still widely conducted at the secondary school level. The integration of academic writing skills and mastery of information technology in this study offers a new learning model relevant to be applied in higher education in Indonesia.

Thus, this study offers an innovative solution to the problem of low student review writing skills and contributes to developing technology-based learning practices that are more creative, adaptive, and relevant to the development of the times. Therefore, this study aims to examine the extent to which the use of mind-mapping techniques assisted by Xmind can improve students' review writing skills.

METHOD

The method used in this study is the classroom action research approach (Bradbury, 2015; Mertler, 2024). Through this method, research is carried out systematically in several cycles to observe, evaluate, and improve the implementation of the Xmind-assisted mind mapping technique. Data were collected through observation, interviews, and student review writing skills tests to measure the effectiveness of the learning model applied and improve students' writing skills. The form of this research can be seen in the image below:

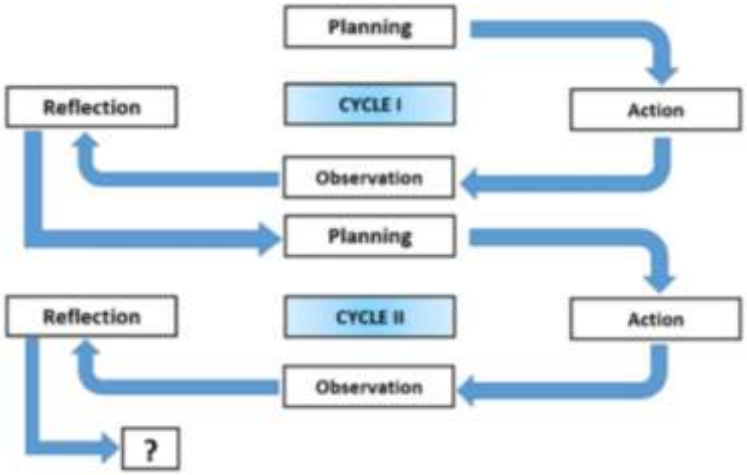

Figure 1. Classroom Action Research Spiral (Arikunto, 2019), adaptation (Kemmis & Mc. Taggart, 2010)

1. Planning
   Planning is done by determining the steps to solve the problems faced at the initial test and observation stage, namely compiling a learning plan using the mind mapping technique assisted by Xmind.
2. Action
   The action taken is the implementation of teaching and learning activities through the application of a learning model using the mind mapping technique assisted by

Xmind. Each meeting includes three stages including initial activities, core activities, and final activities.

3. Observation
   In this activity, the researcher acts as a passive participant. The researcher observes and records all activities during the learning process. After that, the data is analyzed to determine whether there is an increase in the quality of the results and learning process with the application of the learning model using the mind mapping technique assisted by Xmind. At this stage, an evaluation is also carried out to measure students' understanding of concepts and mastery of the material.
4. Reflection
   This stage aims to assess whether the learning model using the mind mapping technique assisted by Xmind is running optimally and can improve students' review text writing skills. The results of the reflection in cycle I are used to prepare a development plan or scenario for the next cycle.

With this approach, optimal learning strategies can be found to improve students' writing skills and solve problems faced in the language learning process (Marsevani & Habeebanisya, 2022; Mertler, 2024). This approach also allows for direct adjustment to student needs to make research results more relevant and applicable in education.

The study subjects were 38 third-semester students at the Indonesian Language and Literature Education Study Program, Sindang Kasih University, Majalengka. The object of this study is to apply mind mapping techniques assisted by Xmind to improve students' review writing skills.

Before the stages are implemented, initial tests and observations are first conducted to determine students' writing skills. The results of the initial tests and observations are used as a basis for implementing actions through the application of the Xmind-assisted mind mapping technique. The form of action implemented in cycle I is based on the results of the evaluation of the initial tests and observations. Then, the actions in cycle II are determined based on the results of the reflection on cycle I.

The tools used in data collection in this study are (1) tests, (2) observation sheets, and (3) questionnaires. The test aims to determine students' review writing skills. Meanwhile, observation functions to observe all activities and changes that occur when providing actions and obstacles that arise. Meanwhile, the questionnaire is in the form of student responses to the lecturer's ability to manage lectures using the Xmind-assisted mind mapping technique.

The types of data analyzed are quantitative and qualitative. Quantitative data are obtained from the results of student understanding tests on learning materials. Qualitative data are in the form of observation results of student activities and responses to learning. In this study, data were analyzed interactively (Miles & Huberman, 2007), namely through three stages: (a) data reduction, (b) data presentation, and (c) drawing conclusions/verification. Triangulation techniques are used to test the validity of the data, both from observations and tests.

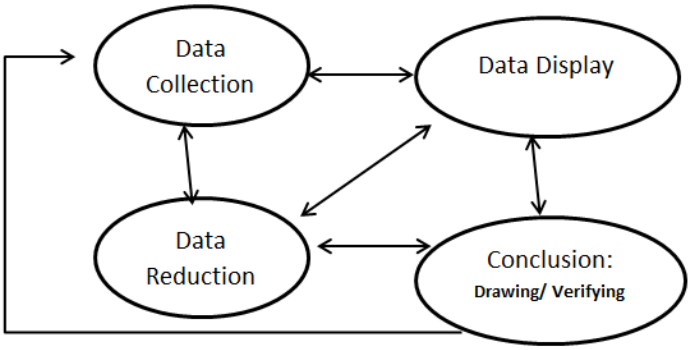

Figure 2. Interactive Analysis Model of Qualitative Data (Miles & Huberman, 2007)

FINDINGS AND DISCUSSION

Pre Action Cycle

Classroom action research (CAR), which utilizes the mind mapping method assisted by Xmind, was conducted in two cycles to improve students' ability to write reviews. However, data on the ability to write reviews had been previously obtained using the prepared guidelines and assessment observation sheets. These data were obtained from a pre-test conducted without using the mind mapping method assisted by Xmind. The results of the initial study showed that the researcher assessed students' ability to write reviews. The results of the initial test showed the following:

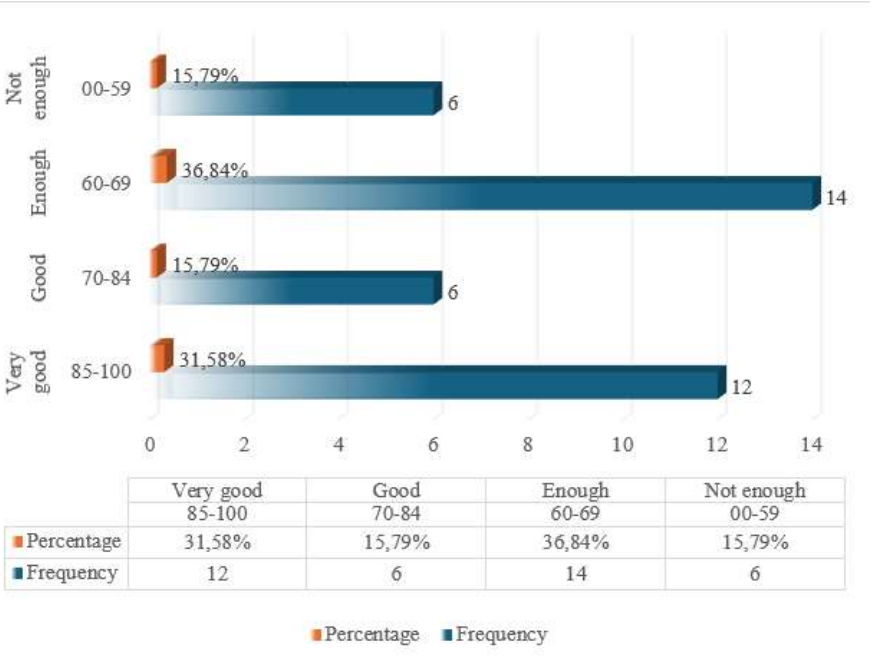

Figure 3. Results of the Pre-Action Student Review Writing Test

Students obtained an average score of 65.72 before the action with the mind mapping technique in writing learning, based on initial data before the implementation of the action. From the table above, student presentations can be seen. Students with a

score of 85-100 are included in the very good category, as many as 12 people, with a percentage of 31.58%. Students with a score of 70-84 are included in the sufficient category as many as six people, with a percentage of 15.79%. Students with a score of 60-69 are included in the sufficient category, as many as 14 people, with a percentage of 36.84%, and students with a score of 00-59 are included in the less than the adequate category, as many as six people, with a percentage of 15.79%. Thus, from these results, it can be concluded that the students' abilities have not reached the predetermined completeness.

At this stage, it is clear that the majority of students are still struggling at a stagnant level of review writing skills. With almost 53% of students not yet completed, this indicates that previous teaching methods have not been able to build the systematic thinking structure needed in writing a review. Interestingly, the very good category already exists (31.58%), indicating that there is potential in some students, but the conventional approach has failed to spread this success to other groups.

The above conditions are also supported by students' responses or attitudes in the writing learning process, as seen in the table below:

Table 1. Student Responses Before Action

No	Observed Aspects	Appear		Do not appear	
		Total	Percent	Total	Percent
1	Students' enthusiasm in participating in learning.	14	37%	24	63%
2	Students' attention to the explanation given by the lecturer.	12	32%	26	68%
3	Students' seriousness in learning activities.	11	29%	27	71%
4	Student activity in learning activities.	10	26%	28	74%
5	Student responses or attitudes during learning.	12	32%	26	68%
6	Be orderly in the following learning.	21	55%	17	45%

The initial condition of students' attitudes in learning showed very minimal participation, where of the six aspects observed, only the aspect of orderliness in following learning received the largest percentage, which was 55%, while the lowest percentage score was in the aspect of activeness in learning, which was only 26%. This shows that efforts to improve learning need to be made. Therefore, providing action using the mind mapping technique assisted by Xmind is expected to improve students' review writing skills, including positive student responses in the learning process.

Cycle 1

Based on the initial research data as above, the researcher carried out actions in cycle 1 by learning to write reviews using mind mapping techniques assisted by Xmind. The results of the actions carried out in cycle 1, as seen in the table below:

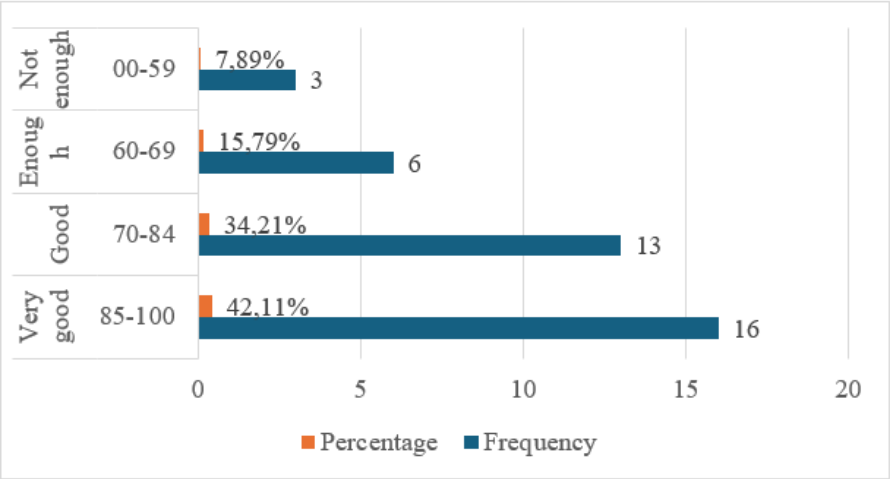

Figure 4. Results of Student Review Writing Test Cycle 1

The results of the research from the treatment and data analysis of cycle I showed an average student score of 70.45. In the first cycle, there was a significant jump in the distribution of student writing quality. The "less" category disappeared completely, meaning that even students who previously had difficulty were able to write at a minimum level of "sufficient." This indicates that the mind-mapping technique is starting to break the deadlock that students usually experience in formulating ideas. The increase in the "very good" category from 31.58% to 42.11% reflects that this method not only helps the weak but also facilitates groups that are already quite good to be more systematic and reasoned in their reviews. However, the completeness of 76.32% is still below the ideal target (usually 85-90%), so improvements are needed in the next cycle.

Table 2. Cycle 1 Student Responses

No	Observed Aspects	Appear		Do not appear	
		Total	Percent	Total	Percent
1	Students' enthusiasm in participating in learning.	16	42%	22	58%
2	Students' attention to the explanation given by the lecturer.	14	37%	24	63%
3	Students' seriousness in learning activities.	13	34%	15	39%
4	Student activity in learning activities.	12	32%	26	68%
5	Student responses or attitudes during learning.	14	37%	24	63%
6	Be orderly in the following learning.	23	61%	15	39%

The results of the implementation in cycle 1 also have an impact on changes in students' attitudes or responses to learning. Almost every aspect observed showed an increase. The aspect of orderliness in following learning, which received an initial percentage of 55%, increased to 61%, as well as the lowest percentage score in the

aspect of activeness in learning, which was originally only 26%, increased to 32%. This shows that there is an improvement in learning even though it is not optimal. Therefore, it is necessary to provide cycle II actions as a refinement of the learning carried out in cycle I.

Cycle II

The results of the study through treatment and data analysis in cycle II showed an increase in the average score to 93.55%.

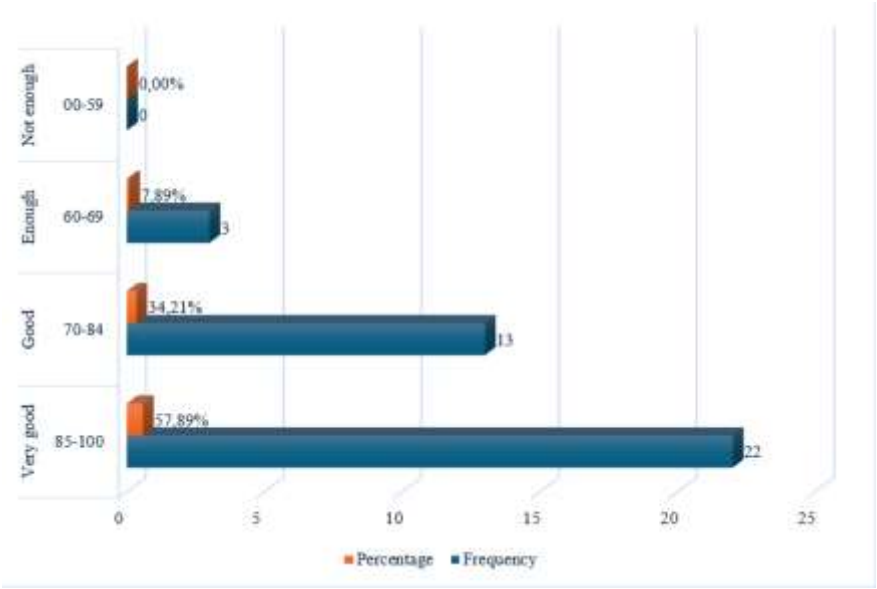

Figure 5. Results of Student Review Writing Test Cycle II

At this stage, the mind mapping technique assisted by Xmind showed its optimal performance. The average score that jumped more than 21 points from the beginning is clear evidence that students not only write better but also start to apply critical thinking techniques in compiling reviews. The drastic increase in the "very good" category to 57.89% is a signal that this technique has succeeded in creating an "upper class" in writing - a group of students who are not only qualified but stand out in the sharpness of analysis narrative structure, and the integrity of the review. This result also shows that the "less" category remains zero and "enough" is only 7.89%, confirming that this approach is inclusive, pushing the weak to the top and the good to be very good.

Table 3. Cycle II Student Responses

No	Observed Aspects	Appear		Do Not Appear	
		Total	Percent	Total	Percent
1	Students' enthusiasm in participating in learning.	34	89%	4	11%
2	Students' attention to the explanation given by the lecturer.	28	74%	10	26%
3	Students' seriousness in learning activities.	23	61%	15	39%

4	Student activity in learning activities.	29	76%	9	24%
5	Student responses or attitudes during learning.	26	68%	12	32%
6	Be orderly in the following learning.	36	95%	2	5%

Based on the results of observations made by researchers during the second cycle, it was found that students' attitudes had changed, and there was a significant increase in quality from previous actions. This is indicated by the learning process of writing reviews using the mind mapping method assisted by Xmind carried out by researchers during the second cycle. Around 34 students (or 89 percent of the total students) were very involved in learning activities throughout the cycle. This is indicated by the readiness of students to participate in learning. Students have sat in an orderly in their respective groups to attend lessons, and there are a few students who are not enthusiastic enough, namely four students out of eleven. This is because students continue to talk to their friends and disturb other friends. Students' attention to the lecturer's explanation is quite good. Namely, 28 students (74%) pay attention to the explanation, and 10 students (26%) do not pay attention. This is due to the fact that most students continue to be lazy by laying their heads on the table.

During the second cycle, learning activities remained not serious. Twenty-three students (61%) considered their learning activities less serious. Because students and lecturers already knew each other, learning activities became more relaxed. This allowed for good communication about the subject matter, and students received it well. Around 29 students (76% of the total students) were actively involved in learning activities, an increase from the first cycle, as indicated by the number of students who answered questions given by the lecturer. On the other hand, nine students (24%) remained less active in learning activities. The lack of student activity in asking questions and responding to lecturers' questions showed this. Every student was seen following the lesson in an orderly during the second cycle. This was evident from the students' attitudes during the lesson; there were some students who chatted, but the atmosphere in the classroom remained calm.

This shows the hidden power of using technology-based mind mapping, such as Xmind, which helps students' writing and other cognitive aspects. The increase in students' enthusiasm (up 52%) shows that this method encourages them to actively write. This is something that is difficult to achieve in writing learning, which is usually considered monotonous. The discipline that jumped to 95% indicates that the structured thinking process taught through Xmind has spread to their learning attitudes, becoming more orderly, more focused, and more serious. This is a crucial secondary finding that supports the improvement of writing skills because writing skills are closely related to a diligent and organized attitude.

The results of this study indicate a significant transformation in students' review writing skills after the application of mind-mapping techniques assisted by Xmind. At the pre-action stage, students' conditions were still at a stagnant skill level, with an average score of 65.72 and learning completion of only 47.37%. These data indicate

that the conventional learning methods used previously have not been able to form a systematic thinking framework that is the foundation for writing skills, as explained by (Flower & Hayes, 1981) in the theory of the writing process, which emphasizes the importance of planning, organizing, and revising in composing text.

However, after the initial intervention in cycle I, there was a marked improvement. The average score increased to 70.45, and learning completion jumped to 76.32%. This increase reflects that the mind mapping technique helps students build a more coherent idea structure, thereby reducing barriers to expressing thoughts in writing. This finding is in line with a recent study by (Al-Jarf, 2021), which confirmed that the use of digital mind mapping improves students' academic writing skills because it facilitates the preparation of more organized and coherent arguments.

The most drastic change was seen in cycle II, where the average student score increased to 86.81, with a learning completion rate of 92.11%. This fact confirms that the improved mind mapping technique not only helps students in formulating ideas but also encourages them to think critically, as emphasized in a study by (Liu & Wang, 2024) which found that digital mind mapping improves higher-order thinking skills in the context of academic writing. The significant increase in the "very good" score category to 57.89% also shows that this approach is effective in creating a group of students who not only meet the competency criteria but excel in the quality of analysis, narrative integrity, and logical thinking.

Furthermore, the results of observations of student attitudes showed very positive changes in the affective aspect. Enthusiasm for learning increased from 37% to 89%, activeness increased from 26% to 76%, and discipline jumped to 95%. These findings provide an illustration that the use of mind mapping not only has an impact on the cognitive domain but also raises students' intrinsic motivation to be more involved in the learning process. This is in accordance with the Self-Determination theory put forward by (Ryan et al., 2008), where students' active involvement grows when they feel they have control over the learning process they are undergoing. Empirical support for this is also strengthened by recent research by Gao et al., (2025), who found that the use of mind-mapping applications such as Xmind significantly increased students' learning motivation and time management skills.

The transformation that occurred in this study also shows the inclusive nature of the mind-mapping technique. Not only did students who were previously in the low category experience improvements, but those who were already in the sufficient and good categories also showed rapid progress. This phenomenon is rarely found in traditional learning methods, which are often only effective in improving the performance of the middle group. This finding is in line with the results of Liu & Wang, (2024) study, which stated that digital mind mapping is able to facilitate more equitable learning achievements with positive effects that reach the entire spectrum of student abilities.

Overall, the results of this study confirm that the use of Xmind-based mind mapping provides a real contribution to solving the classic problem in learning to write, namely the separation between content and structure. With the help of

visualization offered by Xmind, students are able to integrate both into a more cohesive thought process. The improvements that occur are not linear but exponential, as seen from the spike in scores and significant changes in learning attitudes in each cycle. Thus, this technique is worthy of consideration as an effective learning strategy to improve the quality of writing skills in higher education environments in accordance with the demands of the 21st century, which prioritizes critical, creative, and structured thinking.

The research findings that have been presented show that the application of mind mapping techniques, especially with the support of digital applications such as Xmind, has been proven to be able to significantly improve students' review writing skills. This approach plays an important role in helping students organize ideas in a more structured way, hone critical thinking skills, and produce writing that is more systematic and easy for readers to understand. These results are in line with a number of previous studies, which also confirm that the consistent use of mind mapping has a positive impact on improving writing skills, both at the student and student levels, covering various types of writing such as descriptions, expositions, and reviews (Belyaeva & Burdyga, 2024; Nofameltriani Harefa et al., 2023). This technique effectively facilitates students in developing ideas, overcoming difficulties when starting the writing process, and compiling main and supporting ideas more coherently (Sairo et al., 2021; Wahid & Sudirman, 2023; Zaidan khalaf & Obaid Hussein, 2023). Several studies have even noted a significant increase in the average score of writing results after using mind mapping, both manually and based on digital technology (Karminah et al., 2017; Laila et al., 2023; Salviyati et al., 2022; Widiastuti et al., 2024).

The integration of mind mapping with digital media such as Xmind can be seen as an effective alternative solution to overcome problems that often arise in learning to write. The use of digital mind mapping not only attracts students' interest because of its visual and interactive nature but is also able to increase their active participation during the learning process (Sairo et al., 2021). With the help of this application, students can organize ideas systematically, practice creativity, and build self-confidence in expressing ideas in writing (Belyaeva & Burdyga, 2024; Sairo et al., 2021). Data from various studies also show that students who use this technique experience an increase in the number of students who meet the minimum competency standards in writing and are able to produce higher-quality work (Sairo et al., 2021).

Furthermore, mind mapping not only has an impact on the final results of the writing but also improves students' thinking processes, from the planning stage to paragraph development (Belyaeva & Burdyga, 2024; Hasanah et al., 2016; Zaidan khalaf & Obaid Hussein, 2023) With this technique, students become more skilled in expressing opinions, constructing logical arguments, and designing writing that is not only structured but also easy for the audience to understand (Salviyati et al., 2022). Thus, it can be concluded that the use of mind mapping, especially with the support of digital technology such as Xmind, is very effective in improving review writing skills among students. This method helps facilitate the process of organizing ideas,

encourages creativity, and produces writing that is of higher quality in terms of structure and content.

The improvement of students' writing skills through the mind mapping technique with Xmind has also been proven not only to be linear progress but also to be exponential. Each cycle of implementation shows that students not only experience improvements in writing skills but also in terms of more coherent thinking skills, confidence in constructing arguments, and more active involvement in learning. This technique effectively addresses the fundamental problem in learning to write, namely the gap between content and structure (organization of ideas). With the visualization provided by Xmind, students are able to synergistically integrate the two in one clear thought process, as seen from the sharp increase in all aspects of both academic grades and learning attitudes.

CONCLUSION

Based on research and discussion, the researcher found that changes in students' attitudes during the learning process of writing reviews with the mind mapping method assisted by Xmind showed a significant increase. After participating in learning to write reviews with the mind mapping technique assisted by Xmind, the abilities of students of the Indonesian Language and Literature Education Study Program increased. This is indicated by an increase in students' review writing abilities in each cycle. The results of the review writing test in cycle I were 70.45, and cycle II was 86.81, indicating that 35 students (92.11%) achieved the completion score. Theoretically, the results of this study confirm the relevance of a multimodal approach in writing learning, which combines text with concept visualization. In practice, the use of the Xmind application has proven to be not just a tool but a catalyst for transformation in the writing learning process.

REFERENCES

Al-Jarf, R. (2021). Integrating participation goals in writing activities for EFL college students. Journal for Research Scholars and Professionals of English Language Teaching, 5(23).

Amalia, D., & Napitupulu, S. (2022). Pengembangan media puzzle gambar untuk meningkatkan keterampilan menulis karangan narasi siswa kelas iv sd 101899 lubuk pakam. EduGlobal: Jurnal Penelitian Pendidikan, 1(2), 120–130.

Anwar, N., Gunawan, H., Sekti, B. A., Setiawan, I., Erzed, N., Yulfitri, A., Martaseli, E., Laksana, R. P., & Hidayah, Q. H. (2024). Workshop Kolaborasi PkM Mini: Mapping Topik Riset Multi-Disiplin dengan Integrasi Aplikasi Carrot2, Dillinger, dan Xmind. IKRA-ITH ABDIMAS, 8(2).

Arikunto, S. (2019). Prosedur Penelitian. Rineka Cipta.

Arono, A., Suryadi, S., Nugroho, S., Istislami, Y., & Adesi, P. (2022). Pelatihan Menulis Puisi "Pesona Bengkulu" dengan Metode Respons dan Analisis Berbasis Teknologi Xmind dan Whitboard.Fi. Dharma Raflesia : Jurnal Ilmiah Pengembangan Dan Penerapan IPTEKS, 20(2), 271–288. https://doi.org/10.33369/dr.v20i2.21149

Bacharsyah, M. P., & Wasidi, W. (2022). Penerapan Metode Mind Maping Untuk Meningkatkan Kemampuan Menulis Narasi Siswa Kelas IV SD Negeri 33 Pagaralam. Diadik: Jurnal Ilmiah Teknologi Pendidikan, 12(1), 54–67. https://doi.org/10.33369/diadik.v12i1.21349

Belyaeva, E. P., & Burdyga, I. V. (2024). Using Mind Mapping For Teaching Vocabulary And Writing At English Lessons At The University. Bulletin of Shokan Ualikhanov Kokshetau University Philological Series, 1, 238–247. https://doi.org/10.59102/kufil/2024/iss1pp238-247

Bradbury, H. (2015). The Sage handbook of action research. Sage.

Buzan, T., & Griffiths, C. (2013). Mind Maps for Business: Using the ultimate thinking tool to revolutionise how you work. Pearson UK.

Fajrudin, L., Rahmat, K. N. A., Saefulloh, F., Fajari, L. E. W., Sa'diyah, H., & Aini, S. (2023). Peningkatan Keterampilan Menulis Karangan Narasi Melalui Pendekatan Contextual Teaching and Learning di Kelas V Sekolah Dasar. Kalam Cendekia: Jurnal Ilmiah Kependidikan, 11(1). https://doi.org/10.20961/jkc.v11i1.71765

Flower, L., & Hayes, J. R. (1981). A Cognitive Process Theory of Writing. College Composition & Communication, 32(4), 365–387. https://doi.org/10.58680/ccc198115885

Gao, X., Yang, Y., Du, Y., & Sun, D. (2025). Effect of mind mapping-based scaffolding on elementary students' computational thinking in block-based programming. Journal of Educational Computing Research, 63(1), 236–271.

Goebert, C. (2023). Mind Mapping as an Innovative Tool to Enhance Project-Based Learning Utilizing Technology Tools. Sports Innovation Journal, 4, 120–136. https://doi.org/10.18060/27406

Gunawan, G., Fathoroni, F., Astini, B. N., Herayanti, L., & Suranti, N. M. Y. (2024). Peningkatan Keterampilan Penulisan Artikel Ilmiah Melalui Pelatihan Berbantuan Artificial Intelligence. Indonesian Journal of Education and Community Services, 4(1), 17–23.

Hamdiyah, L., & Puspitasari, N. A. (2023). Media Pembelajaran Animasi Dalam Meningkatkan Keterampilan Menulis Narasi Siswa Sekolah Dasar. Jurnal Educatio FKIP UNMA, 9(1), 79–85. https://doi.org/10.31949/educatio.v9i1.4330

Hasanah, A., Usman, B., & Heriansyah, H. (2016). The Use Of Mind Mapping Technique In Improving Students' Writing Skill. https://consensus.app/papers/the-use-of-mind-mapping-technique-in-improving-students-%E2%80%99-hasanah-usman/7b26c79f20375965a28a938f22eea6f9/

Islami, N. I., Sastromiharjo, A., & Kurniawan, K. (2023). Penguatan Literasi Informasi pada Pembelajaran Menulis Teks Eksplanasi melalui Media Pembelajaran Berbantuan Teknologi. GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia. https://doi.org/10.19105/ghancaran.vi.11766

Karminah, S., Nurkamto, J., Nurkamto, J., Martono, M., & Martono, M. (2017). Enhancing Students' Writing Skill by Using Mind Mapping. English Education, 5(2), 54. https://doi.org/10.20961/eed.v5i2.36059

Kemmis, & Mc. Taggart. (2010). The Action Research Planner. Deaken Univercity Press.

Laila, I., Sulistyo, T., & Apriliani, I. L. (2023). Enhancing Students' Writing Skills using Mind Mapping Strategy. Jurnal Pembelajaran, Bimbingan, Dan

Pengelolaan Pendidikan, 3(7), 630–636. https://doi.org/10.17977/um065v3i72023p630-636

Liu, Z., & Wang, Z. (2024). Research and applications of digital concept mapping in education. Educational Technology & Society, 27(4), 34–52.

Marsevani, M., & Habeebanisya, H. (2022). A Classroom Action Research: Improving Speaking Skills through Work in Pair Technique. TLEMC (Teaching and Learning English in Multicultural Contexts), 6(1), 16–22. https://doi.org/https://doi.org/10.37058/tlemc.v6i1.4834

Mertler, C. A. (2024). Action research: Improving schools and empowering educators. Sage Publications.

Miles, M. B., & Huberman, M. (2007). Analisis Data Kualitatif Buku Sumber tentang Metode-Metode Baru. Terjemahan Tjetjep Rohendi Rohisi. Universitas Indonesia.

Moon, Y. J., & Sutama, I. M. (2024). Pembelajaran Kosa Kata Melalui Métode Peta Pikiran. LEARNING : Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran, 4(4), 1230–1240. https://doi.org/10.51878/learning.v4i4.4012

Nofameltriani Harefa, I., Daeli, H., Maru'ao, N., & Piarawan Zebua, E. (2023). Improving Students' Writing Skill By Using Mind Mapping Technique At The Tenth Grade Of SMK Swasta Kristen BNKP Luzamanu In 2022/2023. Journal on Education, 6(1), 7960–7970. https://doi.org/10.31004/joe.v6i1.4205

Purwaty, R., Marlina, M., & Fitrianti, H. (2022). Meningkatkan Keterampilan Menulis Narasi Melalui Model Pembelajaran Think Talk Write (TTW). Biormatika : Jurnal Ilmiah Fakultas Keguruan Dan Ilmu Pendidikan, 8(2), 245–254. https://doi.org/10.35569/biormatika.v8i2.1362

Putri, S. A., Asbari, M., & Hapizi, M. Z. (2024). Perkembangan Pendidikan Indonesia: evaluasi potensi implementasi merdeka belajar. Journal of Information Systems and Management (JISMA), 3(2), 39–46.

Rahma, Y., Handoyo, E., Yulianto, A., Zulaeha, I., Purwati, P. D., Sumartiningsih, S., & Widiarti, N. (2024). Penggunaan Moodle untuk Keterampilan Menulis Teks Eksposisi dalam Inovasi Pembelajaran Bahasa. Jurnal Pendidikan Bahasa Dan Sastra Indonesia Metalingua, 9(2), 104–114. https://doi.org/10.21107/metalingua.v9i2.25324

Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on self-determination theory. European Health Psychologist, 10(1), 2–5.

Sairo, M. I., Ratminingsih, N. M., & Sudira, I. G. A. (2021). Using Digital Mind Mapping to Improve Writing Skills. Indonesian Journal Of Educational Research and Review, 4(2), 271. https://doi.org/10.23887/ijerr.v4i2.39933

Salviyati, T., Mertosono, S., & Rofiqoh. (2022). The Effectiveness Of Using Mind Mapping Technique In Improving Students' Writing Skill. https://consensus.app/papers/the-effectiveness-of-using-mind-mapping-technique-in-salviyati-mertosono/596f84be841c5c0397ef02d0bd1916f5/

Sastromiharjo, A. (2024). Integrasi Teknologi Digital dalam Pembelajaran Menulis: Tinjauan Pustaka. Semantik, 13(2), 277–292.

Sifaiyah, Nahdi, K., & Mohzana, M. (2022). Pengembangan Bahan Ajar Model Mind Mapping dalam Meningkatkan Keterampilan Menulis Siswa SDN 1 Setanggor Selatan. Khatulistiwa, 3(1), 17–32. https://doi.org/10.69901/kh.v3i1.132

Ulfah, A., Jesica, E., Fitriyah, L., Amalia, G. S. P., Yulianingtyas, M., & Amelya, P. D. (2023). Pemanfaatan Teknologi dalam Model Pembelajaran Olah Alur pada Pembelajaran Menulis Cerpen. GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia. https://doi.org/10.19105/ghancaran.vi.11731

Wahid, J. H., & Sudirman, S. (2023). The Effect of Mind Mapping Technique on Students' Writing Skills. Journal of Languages and Language Teaching, 11(1), 39. https://doi.org/10.33394/jollt.v11i1.6692

Widiarti, M., Amri, M., & Sodiq, S. (2024). Keefektivitasan Mind Mapping dalam Pengembangan Ide Menulis Esai Deskriptif Siswa Kelas VII MTS Al-Hidayah. Diskursus: Jurnal Pendidikan Bahasa Indonesia, 7(2), 304. https://doi.org/10.30998/diskursus.v7i2.23533

Widiastuti, N. P. K., Putrayasa, I. B., Pujawan, I. G. N., & Widiana, I. W. (2024). Linguistic Intelligence: Improving Writing Ability through Mind Mapping of Project Based Learning. International Journal of Language Education, 8(3). https://doi.org/10.26858/ijole.v8i3.66491

Wiliyanti, V., Buana, L. S. A., Haryati, H., Rusmayani, N. G. A. L., Dewi, K. A. K., & Novita, F. (2024). Analisis Penggunaan Media Berbasis Teknologi Dalam Meningkatkan Minat Belajar Mahasiswa. Jurnal Review Pendidikan Dan Pengajaran (JRPP), 7(3), 6790–6797.

Zaidan khalaf, N., & Obaid Hussein, N. (2023). The Effect of Mind Mapping on Developing the Writing Skills of the 7th Grade Students. FULL TEXT BOOK OF IJHER CONGRESS8, 53–71. https://doi.org/10.47832/IjherCongress8-4

Zulaikah, A. (2022). Penerapan Peta Konsep Untuk Meningkatkan Kemampuan Siswa Menulis Report Text. Jurnal Lingkar Mutu Pendidikan, 19(1), 38–47. https://doi.org/10.54124/jlmp.v19i1.58