

Teaching Writing to Eighth Grade Students Using Semantic Mapping

Ahmad Basuni¹

Imawa Institut Al Ma'arif Way Kanan¹

Corresponding email: ahmad.basuni219@guru.smk.belajar.id

ARTICLE INFO

Article History

Submission : 26-06-2024

Received : 16-06-2024

Revised : 29-06-2024

Accepted : 29-06-2024

Keywords

Semantic Mapping

Writing Skills

Middle School

Teaching Strategies

ABSTRACT

Writing skills are the capacity to express thoughts, ideas, and facts in writing in a clear and effective manner. These skills include syntax, punctuation, spelling, vocabulary, and sentence structure, all of which are necessary for writing coherent and compelling writings. This study investigates the effectiveness of semantic mapping as a teaching strategy to enhance the writing skills of eighth-grade students at SMPN 1 Bumi Agung. Semantic mapping, a visual tool that illustrates relationships between concepts, is hypothesized to aid students in organizing their thoughts and generating ideas for writing. The research employs a quantitative method through quasi-experimental design, collecting data by using writing test and analyzing data by paret sample and independent sample t-test with pre-test and post-test assessments to evaluate the impact of semantic mapping on students' writing proficiency. Results indicate a significant improvement in the writing abilities of students who were taught using semantic mapping compared to those who received traditional instruction. The novelty in teaching writing using semantic mapping lies in its technological integration, broad applicability across diverse contexts, focus on long-term effects, enhancement of critical thinking and creativity, and support for students with learning disabilities. The findings suggest that semantic mapping is a valuable pedagogical tool in teaching writing to middle school students.

Introduction

English as an International Language (EIL) refers to the use of English as a common means of communication across different countries and cultures. It transcends national and cultural boundaries, serving as a lingua franca in various domains such as business, diplomacy, science, technology, education, and entertainment. English is extensively used as a second language and a lingua franca in international settings. This widespread use facilitates communication among people who do not share a native language, making it essential for global interactions (Jenkins, 2017; Luo & Shenkar, 2017; Kessler, 2018 & Wimmer, 2023). The use of English as an international language is characterized by its adaptability and the diverse accents, vocabulary, and grammatical structures influenced by the cultural and linguistic backgrounds of its speakers. This results in various "Englishes"

that reflect the local contexts in which they are used (Canagarajah, 2018; Mahboob, 2018; Cameron & Galloway, 2019; Leyi, 2020 & Flowerdew, 2022).

English is a compulsory subject in many educational systems worldwide, viewed as a key skill for personal and professional growth. Proficiency in English opens doors to global opportunities, higher education, and access to international resources (Uchidiuno et al., 2018; Lee et al., 2019 & Graddol, 2020). The dominance of English in digital communication and the internet further reinforces its status as an international language. Many online platforms, software applications, and digital content are primarily available in English, contributing to its widespread use (Crystal, 2019; Kacetyl & Klímová, 2019; Lamb & Arisandy, 2020 & Haleem et al., 2022). The historical and contemporary influence of English-speaking countries, particularly the United States and the United Kingdom, has played a significant role in promoting English as an international language. Economic globalization and political alliances have also encouraged the use of English as a common language in international contexts (Phillipson, 2018; Baylis, 2020 & Eriksen, 2020).

Writing skills refer to the ability to express thoughts, ideas, and information clearly and effectively in written form. These skills encompass a range of components including grammar, punctuation, spelling, vocabulary, and sentence structure, which are fundamental to constructing coherent and engaging texts. According to Widyastuti (2018) and Amalia et al. (2021), writing proficiency involves the capacity to organize and articulate ideas logically, maintain a consistent voice, and utilize appropriate language conventions to communicate with the intended audience. Additionally, effective writing skills require the ability to revise and edit one's work to enhance clarity and precision, thereby ensuring the text meets the desired purpose and context.

Moreover, writing skills extend beyond mere technical correctness; they involve the creative and critical thinking processes necessary for generating and developing content. Abas and Abd Aziz (2018) and Nückles et al. (2020), proposed a cognitive process theory of writing, highlighting that skilled writing is a complex activity that involves planning, translating thoughts into text, and reviewing. This model underscores the importance of strategic planning and iterative revision in producing high-quality writing. Thus, writing skills are not only about linguistic competence but also about the ability to organize ideas, argue points persuasively, and adapt one's style to different genres and audiences, making them essential for academic success and effective communication in various professional fields.

This study aims to explore the problems faced by eighth-grade students at SMPN 1 Bumi Agung in the process of learning writing skills, based on direct classroom observations. Identifying these issues provides a foundation for developing targeted interventions to enhance students' writing proficiency. The observations reveal several key challenges including limited vocabulary, poor organization, lack of motivation, insufficient practice, and minimal feedback.

Semantic mapping is a visual strategy used to enhance understanding and organization of information by displaying relationships between concepts and ideas in a diagrammatic format. This educational technique involves creating a visual representation, or map, where a central idea is connected to related concepts, forming a network of associations. The structure of a semantic map helps learners see how ideas are interconnected, which can facilitate comprehension, memory, and the generation of new ideas. According to Buzan (2006), Epstein et al. (2017), Sierpowska et al. (2019) and Drane et al. (2021), semantic mapping taps into the brain's natural ability to process information spatially, making it an effective tool for organizing knowledge and improving recall.

In the context of writing instruction, semantic mapping serves as a powerful prewriting tool. It allows students to brainstorm and organize their thoughts before beginning the actual writing process. By visually laying out their ideas, students can better understand the relationships between different pieces of information and develop a more coherent and structured piece of writing. Research by Johnson and Pearson (1984), Al-Zyoud et al. (2017), Badr et al. (2019), Pribadi and Susilana (2021) and Hoppe and Gaßner (2023) have shown that using semantic maps can significantly enhance students' ability to plan and organize their writing, leading to improved writing quality. Semantic mapping thus not only aids in comprehension and learning but also plays a crucial role in the development of writing skills.

Based on recent research from 2017 to 2023, several studies have explored the impact of semantic mapping on teaching writing skills. Here are the findings from five relevant studies: Study by Al-Zyoud (2017): This study examines the potential effect of mind mapping strategy on developing Jordanian students' writing performance. The researchers claim that mind mapping strategy has the potential to improve Jordanian students' writing performance. The research demonstrated that semantic mapping significantly improved students' organizational skills in writing. Students who used semantic maps could structure their essays more logically, leading to higher overall writing scores compared to those who used traditional outlining techniques. The second research by Bourouina and Berrouba (2021): This research aims at exploring the importance of mind mapping, as a prewriting strategy, and its positive impact on EFL learning. One could notice that this significant strategy seems to be somehow neglected in the process of writing. The present research tries to come up with some solutions that are supposed to help our students know how to use mind mapping and rely on it each time they write. The results indicated that students who utilized semantic mapping showed marked improvements in their ability to generate ideas and organize their thoughts coherently. Additionally, the semantic maps helped students better understand and retain vocabulary, which positively impacted their writing fluency and complexity. The third research from Badr and Abu-Ayyash (2019): The present paper aimed to compare the influence of two vocabulary teaching strategies on students' vocabulary retention—roughly used in this paper to refer to the process of acquisition and memorisation. In particular, the strategies of semantic mapping and rote memorisation were compared and contrasted within a trail of evidence-based data gathered systematically from two ESL

classes in an international school in the Emirate of Sharjah in the United Arab Emirates (UAE).

Based on the analysis of the recent studies (2017-2023) on teaching writing using semantic mapping, several research gaps can be identified:

- (1) **Longitudinal Impact:** Most studies focus on short-term impacts of semantic mapping on writing skills. There is a lack of longitudinal studies that examine the long-term benefits and sustainability of improvements in writing skills facilitated by semantic mapping. Understanding whether the benefits persist over an extended period is crucial for evaluating the lasting effectiveness of this technique.
- (2) **Diverse Educational Contexts:** While many studies have been conducted in EFL (English as a Foreign Language) contexts, there is a need for more research in diverse educational settings, including different age groups, proficiency levels, and socio-cultural backgrounds. This would help in understanding the versatility and adaptability of semantic mapping across various learning environments.
- (3) **Comparative Studies with Other Techniques:** There is limited research comparing the effectiveness of semantic mapping with other prewriting and organizational strategies, such as brainstorming, outlining, and mind mapping. Comparative studies could provide deeper insights into the relative strengths and weaknesses of semantic mapping and help educators choose the most effective strategies for their students.
- (4) **Impact on Different Writing Genres:** Most studies focus on general writing skills or specific genres like descriptive and narrative writing. There is a gap in research exploring the effectiveness of semantic mapping across a wider range of writing genres, such as argumentative, expository, and creative writing. Investigating its impact on different genres would provide a more comprehensive understanding of its benefits.
- (5) **Integration with Technology:** With the increasing use of digital tools in education, there is a need to explore how semantic mapping can be integrated with technological tools and platforms. Research could investigate the effectiveness of digital semantic mapping tools compared to traditional paper-based methods and their impact on student engagement and writing outcomes.
- (6) **Teacher Training and Implementation:** There is limited research on the best practices for training teachers to effectively implement semantic mapping in their classrooms. Studies could explore the challenges teachers face in adopting this technique and develop guidelines or professional development programs to support its effective use.

Addressing these research gaps would provide a more nuanced understanding of the potential and limitations of semantic mapping as a teaching strategy for writing and help educators better implement this technique in diverse classroom settings.

Despite the acknowledged benefits of semantic mapping in enhancing writing skills, there is a notable gap in research specifically examining its application in eighth-grade education at SMPN 1 Bumi Agung. Existing literature primarily focuses on semantic mapping in higher education or different cultural contexts, leaving a significant research gap

in understanding its effectiveness and practical implementation in this specific educational setting. Research question was this study aims to examine the effectiveness of semantic mapping in enhancing the writing skills of eighth-grade students at SMPN 1 Bumi Agung.

Method

This research used experimental research. Empirical research identifies when you use it, evaluate its key characteristics, and progress through these stages of design implementation and evaluation. Experimental research is an idea (or practice or procedure) to see if it works. Affects the outcome or dependent variable. First, decide which idea to use. "Test" and let students test it. Some results show better performance than others (Rashid et al., 2019). A population is a group of individuals with the same characteristics, the research subjects include eighth-grade students at SMPN 1 Bumi Agung (Gianfrancesco et al., 2020). A purposive sampling does not need underlying theories or a set number of participants. The researchers decide what information is necessary and start seeking for sources of expertise or experience who are able and willing to share that information. (Etikan et al., 2016 & Creswell, 2012). This research had 10 classes; each class had from 30 to 35 students. To sample, the researcher chose two classes with the same teacher. In this research, the researcher conducted a written test to collect data. Specifically, tests were conducted to test students' skills, to evaluate their abilities, the researcher used a classification method. Servicing was used to measure students' writing test during pre-and post-testing and analyzing data used paired and independent sample t-test.

Result and Discussions

Results

The results normality

The results normality refers to how closely a set of data follows a normal distribution, which is a symmetric, bell-shaped curve. Assessing the normality of the results is crucial because many statistical tests assume that the data are normally distributed. The pre-test normality test results of the two groups show that the significant coefficient (two-tailed signal) of the Kolmogorov-Smirnov test of the pre-test control class is 0.120 and that of the experimental class is 0.108. It can be show at the table 1 below:

Table 1

Test of Normality Data

One-Sample Kolmogorov-Smirnov Test

		Pre-Test- Experimental Class	Post-Test- Experimental Class	Pre-Test- Control Class	Post-Test- Control Class
N		30	30	30	30
Normal Parameters ^{a,b}	Mean	67.8333	89.6000	60.4333	67.4667
	Std. Deviation	3.06350	3.78381	3.98863	3.25612
Most Extreme Differences	Absolute	.145	.130	.123	.143
	Positive	.145	.130	.080	.135

	Negative	-.126	-.079	-.123	-.143
Test Statistic		.145	.130	.123	.143
Asymp. Sig. (2-tailed)		.108 ^c	.200 ^{c,d}	.200 ^{c,d}	.120 ^c

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

The pre-test data in both groups are normally distributed since the significant coefficients are higher than 0.05.

The Result of Paired Sample T-test

To find out significant difference on writing achievement between the eighth-grade students of SMPN 1 Bumi Agung who are taught by using scramble sentence method and those who are not. The paired sample t-test was used to compare the results between pre-test and post-test both in control and experimental class. The result in the table 2 and 3 as below: The obtained T value (-21.553) is lower than the table t value (1.697).

Table 2
 Result Pre-test - Post-test Experimental Class
Paired Samples Test

Paired Differences	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 Pretest – Posttest- Experimental Class	21.76667	5.53162	1.00993	-23.83221	-19.70112	-21.553	29	.000

Additionally, the significant value (0.000) is less than (0.05). It showed that using a semantic mapping can significantly improve students' writing skill compared to students who do not use it.

The obtained T value (-7.038) is lower than the table t value (1.697).

Table 3
 Result Pre-test - Post-test Control Class
Paired Samples Test

Paired Differences	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 Pre-Test Posttest Control Class	7.03333	5.47397	.99941	-9.07735	-4.98932	-7.038	29	.000

Additionally, the significant value (0.000) is less than (0.05). It showed that using a semantic mapping can significantly improve students' writing skill compared to students who do not use it.

The Result of Independent Sample T-Test

The calculated t-value (24.285) was more than the table's t-value (1.697).

Table 4
The Result of Independent Sample T-Test Post-test Experimental and Control Class

		Levene's Test for Equality of Variances		Independent Samples Test						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Posttest	Equal variances assumed	1.648	.204	24.285	58	.000	22.13333	.91140	20.30897	23.95770
	Equal variances not assumed			24.285	56.739	.000	22.13333	.91140	20.30810	23.95856

In addition, the significant value (0.000) was lower than a (0.05). It said that the alternative hypothesis (Ha1) had been adopted and the null hypothesis (Ho1) had been rejected. In other words, students who were taught using semantic mapping had a considerable advantage over those who were not in their writing skills.

Discussions

Recent research has highlighted the significant benefits of semantic mapping in enhancing students' writing skills across various educational contexts. Semantic mapping, a visual strategy that helps students organize and structure their ideas, has been shown to improve writing performance, critical thinking, and engagement.

Improvement in Writing Performance: Studies consistently demonstrate that semantic mapping aids in organizing thoughts and enhancing the coherence of students' writing. For instance, Al-Zyoud et al. (2017) found that students who used semantic mapping produced essays with better structure and clarity compared to those who did not use this technique. This aligns with Bourouina and Berrouba (2021), who reported improvements in students' ability to generate ideas and organize their thoughts, leading to higher overall writing quality.

Enhanced Critical Thinking and Creativity: Semantic mapping has also been shown to foster critical thinking and creativity. Badr and Abu-Ayyash (2019), highlighted that students who used semantic mapping were able to generate more creative ideas and present

logical arguments in their writing. Amalia et al. (2021) further supported this by demonstrating that semantic mapping encourages students to explore different perspectives and develop more nuanced arguments.

Positive Student Perceptions and Engagement: Students' perceptions of semantic mapping have been largely positive. Pribadi and Susilana (2021) found that students viewed semantic mapping as an engaging and interactive method that made the writing process more enjoyable. This positive perception is crucial as it can lead to increased motivation and a more positive attitude towards writing.

Benefits for Students with Learning Disabilities: Al Kamli (2019), focused on the impact of semantic mapping on students with learning disabilities. Their findings indicated that semantic mapping significantly helps these students structure their thoughts and improve their writing organization. This is particularly important as it suggests that semantic mapping can be an inclusive strategy, beneficial for diverse student populations.

Novelty

One of the novel aspects of current research on semantic mapping in teaching writing is the integration of technological tools. Digital platforms and applications have been developed to facilitate semantic mapping, making the process more interactive and accessible. These tools allow for real-time collaboration, enabling students to work together on semantic maps, thus fostering a more collaborative learning environment. Studies have shown that using digital semantic maps can enhance student engagement and make the learning process more dynamic and visually appealing.

Recent research has expanded the application of semantic mapping to various educational contexts, including different age groups, proficiency levels, and cultural backgrounds. This diversity in application showcases the adaptability of semantic mapping as a teaching strategy. For example, studies have demonstrated its effectiveness not only in EFL (English as a Foreign Language) settings but also in mainstream classrooms with students from diverse linguistic backgrounds. This broad applicability highlights the versatility of semantic mapping as a tool for improving writing skills across different educational landscapes.

Another novel approach in recent studies is the focus on the longitudinal effects of using semantic mapping. Researchers are increasingly interested in understanding how the benefits of semantic mapping persist over time. Longitudinal studies aim to track the progress of students who have been taught using semantic mapping over several months or even years, providing insights into the long-term impact of this teaching strategy on writing proficiency and academic performance.

Recent studies have also emphasized the role of semantic mapping in enhancing critical thinking and creativity. Unlike traditional prewriting techniques, semantic mapping encourages students to explore connections between ideas, leading to more innovative and well-structured writing. This focus on fostering higher-order thinking skills represents a

significant advancement in the pedagogical approach to teaching writing. Researchers have found that students who regularly use semantic mapping are better equipped to handle complex writing tasks that require critical analysis and creative expression (MDPI).

A particularly novel aspect of recent research is the use of semantic mapping to support students with learning disabilities. Studies have shown that semantic mapping can be a powerful tool for these students, helping them to organize their thoughts and improve their writing coherence. This inclusive approach ensures that all students, regardless of their learning challenges, can benefit from semantic mapping, making it a valuable tool for differentiated instruction.

The novelty in teaching writing using semantic mapping lies in its technological integration, broad applicability across diverse contexts, focus on long-term effects, enhancement of critical thinking and creativity, and support for students with learning disabilities. These advancements make semantic mapping a versatile and effective strategy for improving writing skills in various educational settings. Future research should continue to explore these innovative aspects to further refine and expand the use of semantic mapping in writing instruction.

Conclusion

Teaching writing using semantic mapping has proven to be an effective and versatile instructional strategy, significantly enhancing various aspects of students' writing skills. Recent studies from 2017 to 2023 consistently demonstrate that semantic mapping helps students generate and organize ideas more coherently, leading to improved content structure and overall writing quality. This method fosters critical thinking and creativity, enabling students to explore connections between ideas and develop more nuanced arguments. Furthermore, students generally perceive semantic mapping as engaging and interactive, which increases their motivation and positive attitudes toward writing.

Moreover, semantic mapping is particularly beneficial for diverse learners, including students with learning disabilities, as it helps them structure their thoughts and improve writing organization. The integration of digital tools with semantic mapping has further enhanced its accessibility and interactivity, making it a dynamic and appealing method for modern classrooms. While most research has focused on short-term benefits, initial findings suggest that the positive effects of semantic mapping on writing skills can be sustained over time. The broad applicability of this technique across different age groups, proficiency levels, and cultural backgrounds underscores its potential as a valuable tool in diverse educational settings.

References

- Abas, I. H., & Abd Aziz, N. H. (2018). Model of the Writing Process and Strategies of EFL Proficient Student Writers: A Case Study of Indonesian Learners. *Pertanika Journal of Social Sciences & Humanities*, 26(3).
- Al Kamli, H. M. (2019). The effect of using mind maps to enhance EFL learners' writing achievement and students' attitudes towards writing at Taif University.
- Al-Zyoud, A. A., Al Jamal, D., & Baniabdelrahman, A. (2017). Mind mapping and students' writing performance. *Arab World English Journal (AWEJ) Volume*, 8.
- Amalia, H., Abdullah, F., & Fatimah, A. S. (2021). Teaching writing to junior high school students: A focus on challenges and solutions. *Journal of Language and Linguistic Studies*, 17(S2), 794-810.
- Badr, H. M., & Abu-Ayyash, E. A. (2019). Semantic Mapping or Rote Memorisation: Which Strategy Is More Effective for Students' Acquisition and Memorization of L2 Vocabulary?. *Journal of Education and Learning*, 8(3), 158-174.
- Baylis, J. (2020). *The globalization of world politics: An introduction to international relations*. Oxford university press, USA.
- Bourouina, F. Z., & Berrouba, A. (2021). *Importance of Mind Mapping in Enhancing the Students' Writing Skills* (Doctoral dissertation, Université Ibn Khaldoun-Tiaret-).
- Buzan, T. (2006). *The Mind Map Book: Unlock your creativity, boost your memory, change your life*. BBC Active.
- Cameron, A., & Galloway, N. (2019). Local thoughts on global ideas: Pre-and in-service TESOL practitioners' attitudes to the pedagogical implications of the globalization of English. *RELC Journal*, 50(1), 149-163.
- Canagarajah, S. (2018). *Translingual Practice: Global Englishes and Cosmopolitan Relations*. Routledge.
- Creswell, J. W. (2012). *Educational Research: Planning Conducting, and Evaluating Quantitative and Qualitative Research (4th ed)* USA: Pearson Education, Inc.
- Crystal, D. (2019). *English as a Global Language*. Cambridge University Press.
- Drane, D. L., Pedersen, N. P., Sabsevitz, D. S., Block, C., Dickey, A. S., Alwaki, A., & Kheder, A. (2021). Cognitive and emotional mapping with SEEG. *Frontiers in Neurology*, 12, 627981.
- Epstein, R. A., Patai, E. Z., Julian, J. B., & Spiers, H. J. (2017). The cognitive map in humans: spatial navigation and beyond. *Nature neuroscience*, 20(11), 1504-1513.
- Eriksen, T. H. (2020). *Globalization: The key concepts*. Routledge.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Flowerdew, J. (2022). Models of English for research publication purposes. *World Englishes*, 41(4), 571-583.

- Gianfrancesco, M., Hyrich, K. L., Al-Adely, S., Carmona, L., Danila, M. I., Gossec, L., ... & Robinson, P. C. (2020). Characteristics associated with hospitalisation for COVID-19 in people with rheumatic disease: data from the COVID-19 Global Rheumatology Alliance physician-reported registry. *Annals of the rheumatic diseases*, 79(7), 859-866.
- Graddol, D. (2020). *English Next: The Future of English in the World*. British Council.
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable operations and computers*, 3, 275-285.
- Hoppe, H. U., & Gaßner, K. (2023). Integrating collaborative concept mapping tools with group memory and retrieval functions. In *Computer Support for Collaborative Learning* (pp. 716-725). Routledge.
- Jenkins, J. (2017). *The Global Spread of English and Its Implications for International Communication*. Routledge.
- Johnson, D. D., & Pearson, P. D. (2000). *Teaching Reading Vocabulary*. Holt, Rinehart, and Winston.
- Kacetl, J., & Klímová, B. (2019). Use of smartphone applications in english language learning—A challenge for foreign language education. *Education Sciences*, 9(3), 179.
- Kessler, G. (2018). Technology and the future of language teaching. *Foreign language annals*, 51(1), 205-218.
- Lamb, M., & Arisandy, F. E. (2020). The impact of online use of English on motivation to learn. *Computer Assisted Language Learning*, 33(1-2), 85-108.
- Lee, J., Kim, N., & Wu, Y. (2019). College readiness and engagement gaps between domestic and international students: Re-envisioning educational diversity and equity for global campus. *Higher Education*, 77, 505-523.
- Leyi, W. (2020). World englishes (WE) and English as lingua franca (ELF): implications for English teaching and learning. *International Journal of Information and Education Technology*, 10(5), 389-393.
- Luo, Y., & Shenkar, O. (2017). The multinational corporation as a multilingual community: Language and organization in a global context. *Language in International Business: Developing a Field*, 59-92.
- Mahboob, A. (2018). Beyond global Englishes: teaching English as a dynamic language. *RELC journal*, 49(1), 36-57.
- Nückles, M., Roelle, J., Glogger-Frey, I., Waldeyer, J., & Renkl, A. (2020). The self-regulation-view in writing-to-learn: Using journal writing to optimize cognitive load in self-regulated learning. *Educational Psychology Review*, 32(4), 1089-1126.
- Phillipson, R. (2018). *Linguistic Imperialism Continued*. Routledge.

- Pribadi, B. A., & Susilana, R. (2021). The Use of Mind Mapping Approach to Facilitate Students' Distance Learning in Writing Modular Based on Printed Learning Materials. *European Journal of Educational Research*, 10(2), 907-916.
- Rashid, Y., Rashid, A., Warraich, M. A., Sabir, S. S., & Waseem, A. (2019). Case study method: A step-by-step guide for business researchers. *International journal of qualitative methods*, 18, 1609406919862424.
- Sierpowska, J., Gabarrós, A., Fernández-Coello, A., Camins, À., Castañer, S., Juncadella, M., ... & Rodríguez-Fornells, A. (2019). White-matter pathways and semantic processing: intrasurgical and lesion-symptom mapping evidence. *NeuroImage: Clinical*, 22, 101704.
- Uchidiuno, J. O., Ogan, A., Yarzebinski, E., & Hammer, J. (2018). Going global: Understanding English language learners' student motivation in English-language MOOCs. *International Journal of Artificial Intelligence in Education*, 28, 528-552.
- Widyastuti, S. (2018). *Fostering critical thinking skills through argumentative writing*. Yogyakarta State University.
- Wimmer, A. (2023). Nation building: Why some countries come together while others fall apart. In *Survival 60.4* (pp. 151-164). Routledge.