Jurnal Cakrawala Pendidikan dan Biologi
Volume 2, Nomor 2, Juni 2025
E-ISSN .: 3089-2503; P-ISSN .: 3063-5977; Hal. 81- 91
DOI: https://doi.org/10.61132/jucapenbi.v2i2.293
Available online at: https://ejournal.aripi.or.id/index.php/jucapenbi

The Effectiveness of Miro Application to Enhance 8th Grade Students' Writing Skill of Descriptive Text in SMPN 2 Sutojayan

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Abstract. *English proficiency is vital for academic and professional success in Indonesia, but students often struggle with writing. Descriptive text composition is challenging due to its intricate structure and linguistic elements. To overcome these challenges, the researcher suggests utilizing the Miro Application, a digital whiteboard tool known for fostering interactive collaboration and effectiveness in dynamic learning activities. The study aims to assess Miro's impact on enhancing 8th grade students' descriptive text writing skills at SMP Negeri 2 Sutojayan. The study utilizes a quantitative experimental approach, specifically a pre-experimental design, conducted at SMP Negeri 2 Sutojayan over one month, from November to December 2023. The population includes all 8th grade students, with a purposive sample of 31 students from a single recommended class. This research, conducted with 8th-grade students at SMP Negeri 2 Sutojayan, employed a one-group pre-test post-test design. Data analyses covered normality, homogeneity, and paired sample t-tests. Normality test values (0.095 and 0.088) aligned with good data distribution. Homogeneity test (0.067) affirmed data homogeneity, indicating methodical soundness. The hypothesis test for Miro Application based learning impact yielded a significant result (0.000 < 0.05). Miro Application significantly affected post-test scores, presented digitally via mobile phones. Finally, The Miro Application demonstrated effectiveness in enhancing descriptive text writing skills.*

Keywords: *Miro Application; Descriptive Text; Writing Skill Mastery; EFL*

1. INTRODUCTION

Promoting an understanding of foreign languages has the potential to foster positive attitudes towards diverse cultures and linguistic backgrounds. In nations where English is not the primary language, like Indonesia, acquiring proficiency in English can significantly enhance students' academic performance both in their present studies and in future educational and professional pursuits. English often serves as the initial foreign language introduced in many Indonesian schools, playing a crucial role in various aspects of life, particularly in education. Despite its importance, numerous students find English challenging, leading to lower grades in comparison to other subjects.

Writing ability entails the skill to effectively convey ideas, emotions, and perspectives through written communication. The use of accurate terminology, syntax, and spelling is essential for ensuring precise expression of thoughts. Homework assignments represent a mode of teaching and learning interaction where teachers provide tasks for students to complete individually or in groups, either at school or at home. Writing, along with listening, speaking, and reading, stands as a pivotal language skill, enabling students to articulate their ideas through the written medium. Lado in (Muslikhah, 2023) emphasizes that writing is

Received: April 14, 2025; Revised: April 28, 2025; Accepted: Mei 13, 2025; Online Available: Mei 16, 2025;

paramount in language acquisition, positing it as the most challenging English skill to acquire, a sentiment echoed by Richard & Willy in (Muslikhah, 2023) further support the notion that many learners, even in their native language, encounter challenges in writing.

(Kosasih, 2006) describes a descriptive text as an essay aiming to evoke a sensory experience for the reader, allowing them to feel as if they are observing the described object firsthand. (Mahsun, 2020) defines descriptive text as writing with a social purpose, aiming to portray an item or specific objects based on their physical attributes. A descriptive text serves as a literary piece that vividly illustrates or characterizes a subject, creating the illusion for the reader or listener that they are witnessing the depicted subject, even if they have not encountered it themselves. The structural intricacies of form or description text composition, along with the linguistic elements of descriptive text, pose challenges for many students in writing exercises.

As one of the supports for the implementation of descriptive text learning, the researcher proposes the use of the Miro Application in the classroom. Miro stands as a cooperative digital whiteboard tool that enables individuals to collaborate on projects interactively. This web-based whiteboard application enhances the efficiency of work processes, making it suitable for use in both small and large enterprises. Its versatility extends to various tasks, encompassing research, idea generation, mind mapping, and even the creation of wireframes. Additionally, the Miro board facilitates student collaboration in dynamic learning activities like mind mapping, brainstorming, material synthesis, and analysis of course content (Muslikhah, 2023).

The researcher aims to delve deeper into assessing the efficacy of utilizing the digital mind-mapping application, Miro, to enhance students' proficiency in writing descriptive texts, building upon the earlier discussed background information. The research will focus on 8th-grade students at SMP Negeri 2 as the target population. The choice of this school is motivated by the students' familiarity with digital technology, given that the school provides each student and teacher with smartphones for educational purposes. Hence, the researcher proposes a study titled "The Effectiveness of Miro Application to Enhance 8th Grade Students' Writing Skill of Descriptive Text in SMPN 2 Sutojayan".

The Digital Learning Media

Learning media plays a pivotal role in enhancing student achievement, serving as instrumental tools that support the teaching and learning process, facilitating the presentation of information to attain educational objectives (Suraya, 2014). Additionally, any medium utilized by teachers to convey messages to students, aiming to stimulate

thinking, attention, and interest during the learning process, qualifies as media (Arief, 2009). The utilization of learning media offers several advantages, including making teaching and learning more engaging, enhancing students' comprehension, introducing variety into classroom teaching methods beyond traditional lectures, and boosting student engagement in the use of learning materials. Consequently, it can be inferred that learning media constitutes a set of tools designed to catalyze and facilitate students' theoretical and practical understanding within the classroom.

Various types of learning media are available for teachers to incorporate during instructional activities, necessitating an understanding of the chosen media before implementation. (Arsyad, 2019) categorizes learning media into several types: first, human-oriented media, such as teachers, tutors, and instructors; second, print-based media, including books, loose sheets, and guides; third, visual-based media, encompassing e-books, charts, graphs, maps, images/figures, and slides; fourth, audiovisual-based media, involving videos, slides, and television; and fifth, computing-based media, such as computers and interactive videos. In the creation of learning media, attention must be given to cognitive, affective, and psychomotor aspects, aligning with the associated learning objectives (Asyhar, 2012). This demonstrates that media encompasses various forms and types, tailored to meet the specific needs of each teaching and learning process.

Applications are platforms employed to execute processes, transforming them into metaphorical new forms while preserving the fundamental value of the task at hand (Ramzi, 2013). On the other hand, learning is a consciously undertaken activity by educators to prompt students into engaging in instructional activities (Nana & Ahmad, 2014). Examples of digital learning media encompass WhatsApp, Google Classroom, Google Meet, Quizizz, and others. Firstly, WhatsApp facilitates easy communication for teachers with students and colleagues, enabling the delivery of written materials through chats or video transmissions. Secondly, Google Classroom serves as an online learning platform for assigning and completing tasks. Thirdly, Google Meet offers a voice and video-based platform for meetings, both on a small or large scale, anytime and anywhere in real-time. Lastly, Quizizz is a website that provides interactive multiple-choice quiz games for students.

Miro Digital Application

Miro, a tool or application named in honor of the Spanish artist Joan Miro, was established in 2011 under the name Realtime Board by Andrey Khusid and Oleg Shardin. It underwent a rebranding in 2019 and is now known as Miro. Serving as a collaborative virtual whiteboard platform, Miro enables users to engage in interactive project work. This

online whiteboard application enhances work processes by fostering a more effective and efficient collaborative environment. Suitable for both small and large companies, Miro, as a cloud-based application, proves versatile for various tasks such as research, idea generation, mind mapping, and even wireframe creation. Moreover, the Miro board facilitates student collaboration in active learning pursuits like mind mapping, brainstorming, material synthesis, and analysis of course content. As students interact with each other on the Miro board, it encourages their focus during digital classes (Skubik-Peplaski, Edick, & Cook, 2022).

Furthermore, according to (Bhattacharya & Mohalik, 2020), Miro serves as a digital mind mapping application that facilitates centralized cross-functional coordination for teams. It provides students with a swift and straightforward method to gather, monitor, and organize user stories, as well as schedule scripts and reflect on them. The platform supports real-time creative drawing and features an infinitely expandable interactive whiteboard suitable for various visual activities, including adaptable planning, project management, and architecture. The integration of more than 20 applications such as InVision, Confluence, Slack, Google Drive, Jira, and others enhances its functionality.

(Oktaputriviant, 2022) outline several advantages associated with the use of Miro, including (1) real-time collaboration, allowing team members to simultaneously view, comment on, and modify results; (2) the capability to take notes at each stage of the process, akin to features in Adobe Photoshop; (3) the inclusion of options to add links, images, and emojis, with emoji displays similar to those in Whatsapp; (4) the ability to save created projects in various formats such as .pdf, .jpg, .rtf; and (5) the option to disseminate project outcomes via email or links.

The Descriptive Text as The Writing Mastery Aspect

Mastering descriptive text is imperative for students as they navigate the English learning process. In the first-grade syllabus of senior high school, descriptive text stands out as a significant component that educators should cover during the teaching and learning activities. Alternatively termed as a descriptive paragraph, according to Pardiyono as cited in (Sanjaya, 2013), a descriptive paragraph is a written text segment with the specific function of elucidating details about an object, whether living or non-living. Its primary objective is to provide a clear description of the object to the reader. Therefore, descriptive text is a genre that precisely and explicitly describes a person, place, thing, or animal. Importantly, the purpose of descriptive text is to present a detailed depiction of something in a specific manner. As outlined by (Harmenita & Tiarina, 2013), the general structures of

descriptive text consist of the following elements. First, identification which involves elucidating the subject matter, specifying what or who is to be described. Second, description delves into the particulars of the subject, encompassing the depiction of its parts, qualities, and characteristics. This phase entails the detailed explanation or portrayal of the subject matter.

In accordance with Kemendikbud's guidelines in (Wachidah, 2015), the linguistic characteristics of descriptive text encompass the following. First, employing the simple present tense which is this tense is crucial for proficient writing, particularly in the context of descriptive text composition. Murphy in (Annisaa, 2016) underscores the significance of the present simple tense in discussing things in a general sense, emphasizing occurrences that happen consistently or repeatedly, or stating general truths. Second, incorporating nouns with relevance to people, places, and renowned historical structures. Third, incorporating adjectives with relevance to people, places, and renowned historical structures. Fourth, demonstrating clear and organized spelling and handwriting. Fifth, utilizing appropriate utterances, emphasizing stress and intonation when students are presenting their work. Sixth, employing word references.In the context of this study, students are tasked with composing three paragraphs of descriptive text focusing on describing a place.

2. METHOD

This study is conducted using a quantitative experimental approach. (Sugiyono, 2019) asserts that the quantitative technique is considered scientific as it aligns with fundamental scientific principles, including being concrete/empirical, objective, quantifiable, logical, and systematic. This method is also recognized as the discovery method, given its capacity to facilitate the exploration and advancement of new science and technology. This study is based on a pre-experimental design, which (Sugiyono, 2019);(Hardani et. al., 2020) describes as not a true experiment. This is because there are still external variables that influence the formation of the dependent variable. Therefore, the experimental results are not solely influenced by the independent variable. This situation can also arise due to purposive sampling and the absence of control variables.

This study took place at SMP Negeri 2 Sutojayan over a one-month period from November 2023 to December 2023. The population of the study included all 8th-grade students, with a sample size of 31 students. The sampling was purposive, focusing on a single class based on the recommendation of the School Principal. This was done to optimize the school's time and resources in coordinating the implementation of the Education

calendar to avoid overlap with the regular academic schedule. The study followed the stages of pre-test, treatment, and post-test.

3. FINDINGS AND DISCUSSION

The outcomes of this study were derived from evaluating a set of essay questions with descriptive text content administered to 8th-grade students at SMP Negeri 2 Sutojayan. In the initial assessment, students were tasked with responding to descriptive text questions without any prior preparation. Subsequently, the researcher observed and recorded the unaided writing abilities of the students in the context of descriptive text learning. Following the initial assessment, the researcher introduced a learning intervention to 31 students using the Miro application, fostering interactive learning through their electronic devices. Following this intervention, the researcher administered a post-test, consisting of the same questions as the initial pre-test. The pre-test and post-test scores of the 31 students were then analyzed using various statistical tests, including assessments for data normality, homogeneity, and paired sample t-tests, conducted through SPSS 27, with specific details provided in the subsequent sections.

The Normality of Test

The normality test is utilized to assess whether the residuals of the regression model in this study follow a normal distribution. A well-fitted regression model is characterized by residuals that exhibit a normal distribution. To ascertain the normality of residuals, the Kolmogorov-Smirnov (K-S) test, a non-parametric statistical method, can be implemented through the SPSS software. The normality of data distribution is acknowledged when the significance value exceeds 0.05, as outlined by (Ghozali, 2018). The outcome of the normality test for this research is elucidated as follows.

Figure 1. The Tests of Normality

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Class	Statistic	Df	Sig.	Statistic	df	Sig.
Writing Skill Mastery Result	Pre Test	.380	31	.095	.599	31	.064
	Post Test	.192	31	.088	.892	31	.078

a. Lilliefors Significance Correction

The outcomes of the normality analysis for the pre-test and post-test scores related to vocabulary learning among students at SMP Negeri 2 Sutojayan are 0.095 and 0.088, respectively. In both cases, these values exceed the threshold of 0.05. Consequently, following these criteria, it can be concluded that the data collected for both the pre-test and

post-test regarding students' writing learning of descriptive text outcomes exhibit a normal distribution.

The Homogeneity of Test

In the event that the data has already demonstrated normal distribution, the next step involves conducting a test to assess its homogeneity. The test employed for this purpose is the Homogeneity test, as defined by (Arikunto, 2020). The Homogeneity test serves to evaluate the similarity of variances within samples derived from the same population. The subsequent section provides an explanation of the results obtained from the homogeneity test in this research.

Figure 2. The Test of Homogeneity of Variance

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Writing Skill Mastery Result	Based on Mean	6.000	1	60	.067
	Based on Median	5.508	1	60	.022
	Based on Median and with adjusted df	5.508	1	59.725	.022
	Based on trimmed mean	6.497	1	60	.013

The results from the aforementioned test reveal that the significance level associated with the mean in the respective column is 0.067, surpassing the threshold of 0.05. This observation suggests that, based on this criterion, the scores from both the pre-test and post-test concerning writing learning of descriptive text outcomes exhibit homogeneity.

The Hypothesis Testing in Paired Sample T-Test

The paired t-test, also recognized as the t-paired test, serves as a comparative analysis method for evaluating differences in cases where both variables exhibit a quantitative data scale (interval or ratio). This test, alternatively known as the pairing T-test, is a parametric technique employed for comparing two sets of paired data. In accordance with the provided definition, it can be elaborated that this test is specifically designed for scrutinizing differences or conducting comparisons. In essence, it assesses whether there exists a disparity in the mean or average between two paired groups, as expounded by (Kresmiati, 2017). The term "paired" underscores that the data originates from the same subjects. The SPSS outcome of the paired sample t-test is presented below:

Figure 3. Paired Samples Test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRETEST - POSTTEST	-7.871	3.384	.608	-9.112	-6.630	-12.951	30	.000

According to the SPSS calculations above, it is found that the significance value is obtained at 0.000. When compared with the criterion 0.000 < 0.05, this indicates a significant influence on these calculations. So, it can be conclude that if the Miro Application has the significant positive effect to the students' writing learning on descriptive text in 8th grade students of SMP Negeri 2 Sutojayan.

The Discussion

This research adopted a one-group pre-test post-test design within an 8th-grade class at SMP Negeri 2 Sutojayan. The data collection process, spanning from pre-test to treatment and post-test stages, involved gathering scores, subsequently subjected to analyses encompassing normality, homogeneity, and paired sample t-tests. In the normality test using the Kolmogorov-Smirnov formula for both pre-test and post-test, values of 0.095 and 0.088 were obtained, respectively. Comparing these values to the criteria established by (Ghozali, 2018), which suggests values above 0.05 indicate normal data distribution, aligns with the concept advocated by (Oktaviana, 2020) that deems well-distributed data as good. This conformity to normal distribution allows for further testing.

In the homogeneity test, a significance value of 0.067 was observed, exceeding 0.05, affirming that the data can be characterized as homogeneous. The homogeneity test, as described by (Sianturi, 2022), aims to demonstrate that multiple sample groups share the same variance. The research is methodically sound as the homogeneity test indicates homogenous data, given the pre-test and post-test procedures were applied to the same sample with a measurable cognitive level.

Finally, the researcher executed a hypothesis test to determine the significant impact of Miro Application-based learning on the descriptive text skills of 8th grade students at SMP Negeri 2 Sutojayan. The paired sample t-test formula was employed, considering identical samples subjected to the same treatment. The SPSS analysis yielded a result of 0.000, indicating significant impact compared to the 0.05 threshold. This processed data

reveals that the Miro Application had a significant effect on students' post-test scores, presented digitally through mobile phones during the treatment.

The benefit of Miro Application can be seen from several previous studies. First, in (Adani, 2022) research, the Miro mind mapping application was utilized to assess the specific aspect of reading that experienced the most improvement. The study adopted a quantitative approach and employed an experimental pre- and post-testing design. The participant pool consisted of 17 female students and 12 male students from SMA Negeri 2 Bandar Lampung. Data was collected through pre-tests and post-tests. The significance level for the Paired Sample T-Test analysis in SPSS version 22.0 was set at a t-value of 0.05 or lower. The obtained t-value in this study demonstrated significance ($0.000 < 0.05$). Consequently, it was established that the enhancement in reading abilities among students, particularly in comprehending narrative texts, was statistically significant.

Second, the benefit of Miro also shown by research that conducted by (Skubik-Peplaski et al., 2022) centers on the utilization of Miro board technology, allowing students to collaboratively create visual representations of theories in the occupational therapy field. The incorporation of Miro boards was acknowledged for its role in diminishing feelings of isolation, cultivating a communal and creative atmosphere, and promoting a cooperative and enriching educational experience. The implementation of effective teaching methods provided students with multiple chances to assess their learning advancements and receive constructive and timely feedback amid the challenges posed by the COVID epidemic.

Third, also shown by (Osipovskaya & Lukač, 2022), the impact of the digital environment on traditional collaborative learning approaches was explored, with a focus on introducing online group activities, particularly icebreakers. The study compared visual collaboration tools Miro and Mural, assessing aspects like pricing, interface, templates, integrations, customization, and collaboration. Miro was found to have a greater number of templates and integrations, providing an excellent user experience with a consistent design. Mural, while offering more facilitation features, may be a pricier option. The study also suggested various icebreaker activities for virtual meetings using both platforms, highlighting the enhanced engagement possible in online environments with Miro and Mural's support for warm-ups and collaborative visualization.

4. CONCLUSION

This research employed a pre-experimental research approach, involving pre-test, treatment, and post-test phases on 31 8th grade students. The study assessed students' natural descriptive text writing abilities without prior instruction. Subsequently, the researcher administered the treatment, utilizing the Miro Application for three sessions, followed by a post-test with the same essay questions related to creating descriptive text. The researcher analyzed the students' scores and found that the data exhibited normal distribution in the normality test with values of 0.095 and 0.088 > 0.05. Furthermore, the obtained data was homogeneous with a value of 0.067 > 0.05. In the hypothesis testing, a significance level of 0.000 < 0.05 was observed, indicating a significant impact from pre-test to post-test. Therefore, it can be concluded from this study that the Miro Application is effective in enhancing the writing skills of eighth-grade students in descriptive text learning at SMP Negeri 2 Sutojayan. The Miro Application effectively stimulates student performance because its presentation format, involving mind mapping, tends to refresh students' thinking patterns during the learning and teaching process.

REFERENCES

Adani, Y. S. (2022). *Improving students' reading comprehension ability in narrative text through Miro mind mapping application*.

Annisaa, R. (2016). *An analysis of grammatical errors on the students' descriptive text writing (A descriptive research at the first grade of SMA Negeri Ajibarang in academic year 2015/2016)*. Universitas Muhammadiyah Purwokerto.

Arief, S. (2009). *Media pendidikan, pengertian, pengembangan, dan pemanfaatannya*. Jakarta: PT Rajagrafindo Persada.

Arikunto, S. (2020). *Prosedur penelitian suatu pendekatan praktik*. Jakarta: Rineka Cipta.

Arsyad, A. (2019). *Media pembelajaran* (Edisi ke-21). Jakarta: PT Rajagrafindo Persada.

Asyhar, R. (2012). *Kreatif mengembangkan media pembelajaran* (Vol. 2). Jakarta: Gaung Persada Press.

Bhattacharya, D., & Mohalik, R. (2020). Digital mind mapping software: A new horizon in the modern teaching-learning strategy. *Journal of Advances in Education and Philosophy, 4*(10), 400–406.

Ghozali, I. (2018). *Aplikasi analisis multivariete SPSS 25*. Semarang: Universitas Diponegoro.

Hardani, et al. (2020). *Metode penelitian kualitatif & kuantitatif*. Yogyakarta: Pustaka Ilmu.

Harmenita, R. Y., & Tiarina, Y. (2013). Teaching writing a descriptive text by using environmental observation strategy. *Journal of English Language Teaching, 1*(2), 29–38. https://doi.org/10.24036/jelt.v1i2.1167

Kosasih, E. (2006). *Kompetensi ketatabahasaan dan kesusastraan: Cermat berbahasa Indonesia*. Bandung: CV Yrama Widya.

Kresmiati, N. (2017). *Perbandingan kinerja keuangan sebelum dan sesudah krisis keuangan global 2008 pada PT. Bank Syariah Mandiri*.

Mahsun, M. (2020). *Pembelajaran Bahasa Indonesia berbasis teks*. Jakarta: Rajawali Press.

Muslikhah, T. S. (2023). *The effectiveness of using Miro digital mind mapping for students' vocabulary mastery at Hidayatullah Islamic High School Semarang*. Universitas Islam Sultan Agung Semarang.

Nana, S., & Ahmad, R. (2014). *Media pengajaran penggunaan dan pembuatannya*. Bandung: Sinar Baru.

Oktaputriviant, N. R. (2022). Interactive mind map: A medium of language learning in the online learning era. *Prosiding Seminar*, 185–192. https://doi.org/10.32503/prosidingseminar.v0i0.60

Oktaviana, M. (2020). *Pengaruh dukungan sosial dan efikasi diri terhadap hasil belajar pada mata pelajaran ekonomi siswa kelas XI IPS SMA Negeri 13 Kota Jambi*. Fakultas Keguruan dan Ilmu Pendidikan.

Osipovskaya, E. A., & Lukač, D. (2022). The visual online tools for collaborative learning and icebreaker activities. *RUDN Journal of Informatization in Education, 19*(4), 351–359. https://doi.org/10.22363/2312-8631-2022-19-4-351-359

Ramzi, M. (2013). *LKP: Rancang bangun aplikasi penjadwalan mata pelajaran berbasis web pada SMK Negeri I Cerme*. STIKOM Surabaya.

Sanjaya, D. (2013). TPS as an effective technique to enhance the students' achievement on writing descriptive text. *English Language Teaching, 6*(12), 106–113.

Sianturi, R. (2022). Uji homogenitas sebagai syarat pengujian analisis. *Jurnal Pendidikan, Sains Sosial, dan Agama, 8*(1), 386–397. https://doi.org/10.53565/pssa.v8i1.507

Skubik-Peplaski, C., Edick, J., & Cook, W. (2022). Agile learning and teaching with Miro boards.

Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* (Edisi ke-26). Bandung: Alfabeta.

Suraya, K. R. (2014). *Pembelajaran tematik integratif dan pengaruhnya terhadap akhlak siswa kelas 4 SD Negeri Cebongan Sleman Yogyakarta tahun pelajaran 2013/2014*. UIN Sunan Kalijaga.

Wachidah, S. (2015). *Buku pegangan siswa Bahasa Inggris SMP kelas 9 Kurikulum 2013*. Pusat Kurikulum dan Perbukuan, Balitbang, Kemdikbud.