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# The Effect of SeaArt AI-Generated Imagery in Enhancing Junior High School Students' Ability to Describe Objects in Descriptive Writing

**Wahyu Hendrawan**

Pendidikan Bahasa Inggris, FBS, Universitas Negeri Surabaya, Surabaya, Indonesia.

♥e-mail korespondensi: wahyu.22099@mhs.unesa.ac.id

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**ABSTRAK**

The integration of Artificial Intelligence (AI) in educational field has metamorphosed traditional learning methodologies, particularly in writing instruction. This study explores the impact of AI-generated imagery, specifically using SeaArt, on enhancing secondary students descriptive writing skills. By providing visually rich and customizable prompts, AI-generated images serve as cognitive scaffolds that stimulate creativity, expand vocabulary, and improve students' ability to construct vivid and coherent descriptions. The study examines how SeaArt-generated visuals influence various aspects of descriptive writing, including sensory detail integration, figurative language use, narrative coherence, and engagement levels. A series of structured writing tasks were designed to analyze students' ability to translate visual stimuli into descriptive text, comparing AI-assisted writing with traditional text-based prompts. While this is an initial exploration without practical implementation, it lays the groundwork for future empirical studies and classroom applications. The discussion highlights potential challenges and directions for research on how SeaArt and similar AI tools could be effectively incorporated into writing pedagogy. This conceptual study proposes a design comparing students using AI-generated images with those using traditional prompts. Though not yet implemented, it anticipates improved creativity, vocabulary, and coherence in the AI group, offering a foundation for future classroom research.

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## Introduction

The global adoption of Artificial Intelligence (AI) is expanding rapidly, particularly in educational settings. some individuals expressed their concerns about its integration, fear it might do more harm than good. However, as time goes by, the benefits of AI become more apparent and we are progressively exposed to Artificial Intelligence benefits. This aligns with the views of Sam Altman, CEO of ChatGPT. During his visit to Indonesia in June 2023. Sam stated, "When ChatGPT was first introduced in the U.S., teachers and schools began to impose restrictions on its use, but later they realized that they had made a mistake. We will eventually adopt this in the teaching process." However, The Deputy Minister of Higher Education, Science, and Technology, Prof. Stella Christie, stated that AI, such as ChatGPT, compiles data that is often not entirely accurate. Therefore, its use must be wise and adhere to ethical considerations. This is something that must be taken into account in vocational and higher education. This highlights the positive value of AI, suggesting rather than perceiving it as a threat, we should explore its potential to support and enhance teaching and learning processes.

The inevitable advancement of Artificial Intelligence (AI) has significantly impacted various sectors, including education. AI-powered tools are increasingly being explored for their potential to enhance learning experiences, improve engagement, and support skill development. One emerging application of AI in education is its use in writing instruction, particularly in descriptive writing, where students often struggle with visualization, vocabulary expansion, and narrative coherence.

Descriptive writing requires students to create vivid mental images using words, incorporating sensory details and expressive language to convey emotions, settings, and experiences effectively (Bowkett & Hitchman, 2021). However, in real-life, many students face challenges in generating ideas, structuring descriptions, and selecting appropriate vocabulary. (Yoandita, 2019) Traditional teaching methods often only rely on text-based prompts, but these approaches may not always be engaging or adaptable to diverse learning needs.

AI-generated images, especially from platforms like SeaArt, offer an exciting way to inspire descriptive writing. Instead of relying only on their imagination, students can use these visuals as creative prompts, helping them craft more vivid descriptions, expand their vocabulary, and build stronger storytelling skills. Using AI in writing lessons also supports a multimodal composition, promoting human development (Daniel et al., 2023) also an approach to learning blending visual, textual, and cognitive elements to make language development more engaging and effective.

AI in education has its fair share of skeptics; some worry about students relying too much on technology, ethical concerns, or even whether the information is always accurate. But instead of seeing it as a threat, maybe it's worth looking at how it can actually help. This paper takes a closer look at how SeaArt's AI-generated images might be a useful tool for teaching descriptive writing, what makes them helpful, what challenges they bring, and what this could mean for future classrooms and research.

The purpose of this research is to investigate how AI-generated images can support students' descriptive writing development by improving their ability to visualize, structure, and express ideas more effectively. The study aims to explore the educational benefits of using SeaArt in classroom instruction, particularly its role in enhancing creativity, vocabulary use, and narrative coherence. This research is also expected to offer practical insights for educators seeking innovative tools to improve student engagement and writing outcomes.

**Research Method**

This study will employ a quantitative experimental design to examine the impact of AI-generated imagery, specifically using the famous website imagery generator, SeaArt, on enhancing secondary students' descriptive writing skills. A pre-test and post-test design with a control group will be utilized to measure students' writing performance before and after the implementation. The participants will be divided into two groups: an experimental group, which receives AI-generated images as visual prompts for writing, and a control group, which relies solely on traditional text-based prompts. The study includes eight secondary school classes, mainly in Surabaya, selected either randomly or based on availability and research requirements, specifically those in need of descriptive writing materials and sufficient time.

Collecting data for research involves choosing and designing the right tools carefully to ensure that the information is accurate and reliable (R. & Aithal, 2022). A writing assessment rubric will be used to evaluate students' descriptive writing skills based on specific criteria, including sensory detail integration, figurative language use, narrative coherence, and engagement. The writing rubric helps create a clear and fair way to score student writing, ensuring that all assessments are consistent and unbiased. A writing assessment rubric has been shown to provide similar scores across different graders when a standard set of guidelines is used (Minnich et al., 2018). Before students begin using AI-generated images in their writing lessons, they will take both a pre-test and a post-test. These tests will help quantify how much their writing potentially improves after being introduced to the new blended learning using AI tools.

The research procedure begins with a pre-test, where both groups complete a descriptive writing task with a specific theme but without visual assistance. During the treatment phase, the experimental group utilizes SeaArt-generated images as prompts, while the control group continues with traditional text-based writing exercises. This intervention will last for 4 to 5 weeks. Both groups will take a post-test at the end of the learning process, where they will do descriptive writing with a given theme. The students' writing from both the pre-test and post-test will be graded using a specific writing rubric, ensuring a clear way to compare their progress before and after the intervention. The assessment rubric is adapted from established writing frameworks to verify instrument validity. By doing this, the study hopes to provide real evidence of how AI-generated images

can help students improve their descriptive writing skills. The findings could offer valuable insights into how AI tools, especially SeaArt, which focus on generated imagery, can be effectively integrated into writing pedagogy, potentially transforming traditional approaches in writing instruction for secondary education.

**Result and Discussion**

The anticipated results of this study suggest that AI-generated imagery (SeaArt) can significantly enhance secondary students descriptive writing skills. Based on the quantitative analysis of pre-test and post-test scores using a standardized writing rubric, students in the experimental group are expected to show notable improvements in sensory detail integration, figurative language use, narrative coherence, and engagement compared to the control group. With the help of SeaArt, having visual looks of their own writing can make it easier for students to come up with stronger vocabulary and more detailed descriptions, helping their writing become more engaging and well-organized. Plus, students who use AI-generated images might feel more interested and creative since the visuals give them a starting point and spark new ideas.

It is expected that the quantitative data will be analyzed using paired sample t-tests to assess the significance of any differences between pre-test and post-test results. The experimental group is anticipated to show a statistically significant increase in scores, particularly in the areas of sensory detail and figurative language, compared to the control group. Preliminary expectations based on the research design suggest that around 70–80% of students in the experimental group may demonstrate improved performance in descriptive components such as vocabulary richness, use of imagery, and overall coherence. The effect of this idea is expected to indicate a well impact, reinforcing the potential of AI-assisted writing tools in educational settings. The result discussion will possibly show how combining text and visuals in learning helps students stay more engaged while also making descriptive writing easier, especially for those who struggle to come up with abstract ideas or puzzled what to write next. While traditional text-based prompts can inspire creativity, they might not work as well for students who need clear visual references to build their descriptions. Nevertheless, this study also anticipates several challenges, including the potential over-reliance on AI-generated imagery and issues of unequal access to the technology across different educational institutions. These findings are expected to guide future research in AI-assisted writing instruction, particularly in evaluating long-term impacts on students' writing skills. When used appropriately, AI-generated imagery has promising potential as a tool to support descriptive writing, making it more accessible, engaging, and structured for students.

In conclusion, this study aims to highlight the potential of AI as a meaningful support tool in the educational process, especially in enhancing writing instruction through innovative, visual-based approaches. This potential that brought to us also highlights how AI can benefit the educational field, opening up new opportunities for both learning and teaching (Alashwal, M, 2024; Nurjanah et al., 2024). Educators can enhance students' learning experiences by leveraging AI to improve teaching efficiency and deliver more effective feedback (Mishra, 2024; Nasser, 2024). As a result, AI serves as a valuable tool in fostering better learning environments, elevating the quality of education, and equipping students with the skills needed to navigate future challenges.

**Conclusion**

In conclusion, the integration of AI-generated imagery (SeaArt) in descriptive writing instruction has the potential to significantly enhance students' writing skills by providing visual scaffolding that stimulates creativity, enriches vocabulary, and improves narrative coherence. The quantitative analysis of pre-test and post-test scores is expected to demonstrate that students who utilize AI-generated prompts outperform those using traditional text-based prompts in key writing criteria. Additionally, the study highlights the broader benefits of AI in education, including its ability to personalize learning, improve engagement, and streamline instructional practices. While challenges such as over-reliance on AI and accessibility concerns must be considered, the findings suggest that AI tools like SeaArt can be effectively incorporated into writing pedagogy to create more dynamic and engaging learning experiences. Ultimately, this research contributes to the growing

field of AI-assisted education, offering valuable insights into how technology can support both teachers and students in developing essential writing skills for the digital era.

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