

“Artistic Intelligence”: Engaging English Learners by Using Art and AI in Teaching Descriptive Writing

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When we think about technology today, we instantaneously think of Artificial Intelligence (AI). As proponents of using AI in classrooms, we cannot agree enough with the many advantages AI offers. In this paper, we would like to showcase an example of how AI can enhance language learning and promote artistic intelligence and descriptive writing skills among multilingual learners (MLLs) using famous painters’ artwork. We will discuss this fun way to get the students to write and describe different images of iconic artworks. The process is straightforward: We pre-teach descriptive expressions such as prepositions, positioning words, colors, and names of painting genres. Students describe famous artworks, which we present in slides, and AI transforms these descriptions into images. There, students get captivated, and by contrasting their description with the AI-generated image, they see gaps and improve their description. It is this that causes them to refine and elaborate the craft of writing in a cyclical way where they constantly improve their use of language.

The Intersection of Art and Writing

Art evokes positive emotions and makes us curious. This evoked emotion is the intersection where art and writing meet. Although writing can be monotonous at times, AI can transform this process. It changes students’ descriptions to new images immediately and when students see that, they are prone to add more descriptions to elicit more. This feedback loop encourages students to revise their descriptions repeatedly; as a result, they become deeply engaged with every round of the writing task.

Implementation of the Project

We initially tested the AI’s capabilities with Van Gogh’s “The Bedroom” and Dalí’s “The Persistence of Memory,” using GPT4 (See Figure 1 for an example). It was intriguing that the results were different from our expectations. This trial convinced us of the project’s potential for students. When we implemented this activity with 8th grade MLLs using Van Gogh’s “Sunflowers” and Gauguin’s “Tahitian Women,” the AI-generated images displayed various interpretations. Figure 2 shows AI outputs based on students’ descriptions of these two classic paintings. Observing the students’ reactions was very interesting: Some enjoyed the images, and others were unsatisfied with the generated images and became eager to write more (see Appendix A). Despite the initial goal of replicating Van



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their peers and the artwork. We found that this activity allows beginners to feel confident and help build a sense of belonging in the classroom.

Figure 3

AI-Generated Parody Images of Classic Paintings Used to Elicit Learners' Verbal and Written Language



Note. These images were found online (e.g., Peggy Lindt, Poster Foundry, and Svetlana Petrova)

Educational Impact

Through this AI activity, MLLs are given a platform to demonstrate their creativity while practicing authentic language use through prompting and testing. Colors, directions, positions, orientations, numbers, objects, actions, emotions, styles – the list goes on (see example prompts in Appendix B). It really captures the idea that a picture is worth a thousand words. Not only is there a language impact, but there is also student engagement as well as culture. Exposure to art and learning about artists and their works and their periods in time could help prevent the current generation from losing such a wonderful topic. AI can enhance learning in many ways, so it is important to learn about its limitations and uses as a tool. Teachers can consider extending the activity further by discussing critical topics related to ethics and responsible AI practices in generating or imitating original artworks.

Limitations

This AI activity has some limitations. Direct access to AI tools and computers, while becoming more readily available for many schools, still needs to be improved around the world. So it is important to make sure access to classrooms, computers, and AI tools are available at school. Some AIs also have limitations on what they can do and on the number of uses. A possible adaptation for this is to make it a class activity where only the teacher uses the AI program and asks all students to contribute to the prompt to create the artwork. Other limitations are in the expected output; students must be aware that their generated picture may be very far from the original, as creating a perfect copy would be almost impossible. Using key phrases like “in van Gogh’s style” might help it become close to the original.

Recommendations for The Future

This concept holds potential for application in other subjects, such as history, story writing, and comics. Expanding projects to include creating picture books or works based on class writings could be an exciting endeavor. We are eager to see the potential that AI can bring into education to make learning exciting and engaging for all learners.

Conclusion

Overall, this AI hackathon has been very rewarding. What started as an activity and grade in class has turned into a passion for our group, and this passion has already been implemented in the classroom.

From the initial agreement by us to use the concept for our AI hackathon to the great reviews and votes we received from classmates and AI hackathon attendees, then to actual use in a classroom, this project has taught us and students more about using AI and art.

Reference

OpenAI. (2024). *ChatGPT* (4.0 version) [Large language model]. <https://chat.openai.com/chat>

About the Authors

Miki Davidson is an EL/ELA teacher at Kapolei Middle School and a recent MA TESOL graduate from Hawai'i Pacific University. She focuses on research that combines content lessons with language teaching and AI integration. As a recent AI ambassador, she plans to volunteer for the community.

Keegan Alexander William Jones is a recent BA TESOL and MA TESOL graduate Hawai'i Pacific University. He hopes to teach English around the world and research the use of AI for language learning, student mental health, and community growth.

Appendix A
Student Testimonials

Testimonial 1:

“What I like about this activity is that we can share our imaginations, describe something, and it will come alive. Other ways I can make AI more fun is you can create your own art and ask the AI to describe it.”

Testimonial 2:

“It's interesting what I write gives a different image. I want to do more like this.”

Testimonial 3:

“This activity was fun because it helped you write by describing things and helped your skills.”

Testimonial 4:

“What I liked about this activity was that I was able to see images of the thoughts that I had in my head. What I'd like to do more with this program is generate pictures to make it easier for me or other students to write about what is happening in the photos.”

Appendix B

Prompt 1:

“in van gogh's style, could you please paint me a bedroom, where the wooden bed is on the right, it has a red blanket, and white pillows. The floorboards of the room are wooden and old. There is a bedside table on the left and a small chair in between. above the headboard of the bed is a picture frame, and a rack of clothing. There is a window above the chair. The walls are painted blue. on the right wall there are 4 hung paintings.”

Prompt 2:

“Can you create a painting based on the following descriptions? You are the painter who paints with surrealism. In the painting, on the left, a brown wood block, on it, there is a clock piece faced down and it has lots of ants and next to it, there's a melting clock, the upper half of it is on the block, but the lower half looks like it's melting and deforming, color is bluish. Above the block, there is a dead tree sitting on it but no leaves, it has a branch sticking out toward the center of the paint and on that branch, another melting silver clock hanging melting over the branch. There's a white sheet like cloth draped over the ground. It's white. It has a human's closed eye with lashes. It also has a melting clock. The upper half is showing, but the rest is hidden. The background has a body of water and a rocky cliff on the upper right side.”