Navina Dias

Dr. Greene

ENGL 1106

May 6, 2025

‘Art’-ificial Intelligence: Balancing Technology and Creativity for University Students

In February 2025, Christie’s, a renowned auction house for the fine arts, hosted an art auction that featured art not made by artists, but artificial intelligence (AI). The auction house faced a lot of backlash, with over 6,000 artists signing a letter to Christie’s to cancel the auction (Kainz). Some artists, on the other hand, are eager to explore the possibilities AI has to offer in the artmaking process. This divide in the art industry is driven by the lack of research done on AI in the visual arts. With some having doubts and others having curiosity, it is key that artists, especially students, learn about both the challenges and benefits AI brings to visual arts.

While there are many questions that arise with the increased use of AI, the technology’s implications in education are already being seen. From writing essays and code to solving complex math equations, students have found use for AI in a variety of fields. While regulations on AI have been put into place by many schools and universities, they have not yet begun teaching students how to ethically and efficiently use this technology. Compared to the thorough research being done in math and science fields, only a small amount of AI research has been conducted in visual arts fields.

Many careers and industries currently put emphasis on the need for their employees to understand AI, both its benefits and challenges. Entire departments are being created within organizations to research AI due to its promising capabilities. In college arts education, it is especially important for students to understand both the technical and ethical uses of AI, and

develop a relationship with it early on before they begin their careers. This can benefit students by allowing them to grow their creative and technical skills. With the increased demand in the job market for AI knowledge, preparing students early on can make them competitive candidates in an industry that evolves alongside technology.

Similar to how research was conducted when computers were introduced into art education, now is the time to explore how AI can be used as a tool for both visual arts students and educators, as well as any implications the technology may have. Computers did not replace pen and paper, so AI should not replace human creativity. The rapid growth of AI emphasizes the need to investigate creating a balance between AI and human creativity for university students in art education, therefore impacting students in their future careers. Analyzing the benefits and challenges AI currently presents in arts education and the art industry can help discover that balance.

Investigating uses for AI in arts education is important to prepare university students for a growing technological industry. While much research has been done on AI and its implications in other fields, little has been done in the visual arts field. According to Nicholas Leonard, a practicing artist and educator at Northern Illinois University, “this should be a cause for concern since trends in AI in daily life and AIed in general education fields show no indication of slowing down” (23). Students are being exposed to AI more now than ever before, from AI summaries of Google searches to advertisements made using AI visuals. As stated by Leonard, the benefits and challenges of using AI are currently being explored in general education fields, and this interest to explore AI has also spread to professional industries. Now more than ever, visual artists are using digital tools to assist in their creative practices. For university students that will go into this industry, it’s especially important for them to learn how to implement AI in

their creative development. By doing so, students can understand how to use AI to ethically create without replacing their own ideas. Learning these skills early on will better prepare them to enter this industry, and adapt to changes that may come in the future.

AI is currently being used in some cases for visual arts education, and it's important to understand how this is working to benefit and challenge students. In my experience as a Creative Technologies major at Virginia Tech, using AI is not allowed in the artmaking process unless specifically mentioned by my professors. It's never used to assist with the visual aspects of design, but instead for ideation or non-visual aspects. A time when I was allowed to use AI was when we were tasked to create a video banner for a fictitious movie or series production. The focus of the assignment was to compose assets (photographs) we collected, not write the show description. Therefore, our professor allowed us to use AI to generate a description for our fictional series. In this case, AI wasn't used for designing, but rather for a minor detail that didn't impact the art-making process of the assignment. As a student I was still able to learn about the techniques and tools we were using, as well as display my own creative process without any interference from AI. Using AI in this case made getting the assignment done more efficiently, since students didn't have to worry about the writing element, and focus on the visuals.

This also can reflect the creative industry's production process, as multiple specialized teams are organized to work on the text, visuals, audio, etc. of projects. For example, an artist who is a part of the visuals team can focus more on the visuals of the font, and ask AI to generate sample text to understand how the font will look. This helps to expedite the process for the visual team to make a prototype, and later have the writing team replace the text for that project. By enabling students to use AI early on, they are able to develop their own understanding for how to use the technology ethically in their design process without hindering their creative development.

Integrating AI into visual arts education is a challenge, but some colleges have begun to explore solutions. Aaron Winey, an assistant professor of visual communication and program director of visual arts at Grace College, describes methods he uses when guiding students to use AI. He discusses how "students at Grace College are using AI for projects, but they aren't allowed to use found imagery unless it's specified in the project brief. We're very clear about when they can and can't use AI. Ultimately, even if you believe that it's ethically okay to use AI in art in a certain way, you shouldn't do it if it's undermining guidelines set up for you in your coursework or your job" (Winey). Since AI can be used for numerous purposes in the visual arts, Winey cautions students when using the technology to make sure it adheres to project guidelines. If it is relied too heavily upon, students can harm their own creative skill development. The process of artmaking is ultimately what allows students to grow, and Winey emphasizes that "valuing the struggle hopefully gives students the mindset that they don't want to take; they want to create." This serves as an important reminder for students to keep their own ideas and creativity at the forefront of their artmaking, as it is their own individuality that adds significance to their artwork.

Another way AI can be used in visual arts education is providing feedback to students and instructors. Xiaoxia Fan and Jiayin Li argue in the scholarly article "Artificial Intelligence-Driven Interactive Learning Methods for Enhancing Art and Design Education in Higher Institutions" that AI can help evaluate interactive learning in art and design education. According to the results of the study conducted in the article, the AI algorithm that was used can provide objective, personalized, and detailed feedback for students regarding their understanding of essential art and design principles (Fan and Li 2228). The authors conclude that this feedback from AI can be more efficient to help students and instructors understand the effectiveness of

interactive learning. However, they still argue that maintaining human creativity and considering ethical challenges are key to account for when implementing the use of AI in art and design education at universities (Fan and Li 2228).

Students and instructors should still be cautious when using the technology, since it can still make mistakes. However, the detailed feedback it provides can give students individualized feedback on their artwork when their instructor may not be available. Fan and Li also provide evidence of how the feedback the AI provides can reflect "industry trends and demands" leading to instructors creating "more relevant and up-to-date curriculum" (16). With the art industry constantly evolving, developing a curriculum that can keep up with these demands is crucial to prepare students for their careers. With AI being able to analyze industry trends through up-to-date data, this can give instructors a scope into what skills need to be prioritized to teach to students.

For visual arts students to learn how to ethically use AI, they can observe how artists in the field currently use AI, and take note of the relationship they have with the technology. Patrick Tesset, the inventor of the sketching robot, "claims that machines cannot be creative and that real art is done by humans" (qtd. in Leonard 24). The sketching robots that Tesset programmed (See Fig. 1) do not spontaneously draw, but rather, draw based on an algorithm. This algorithm is made by humans, therefore, human creativity is at the center of the robot's sketch. The robot itself can never be as creative as humans if humans are the ones supplying it with creativity. In relation to art education, this hints to the idea that students cannot fully rely on machines or AI to do the creative thinking for them. The students themselves should develop and maintain their own artistic visions, and use AI as a tool to assist them in bringing those ideas to life.

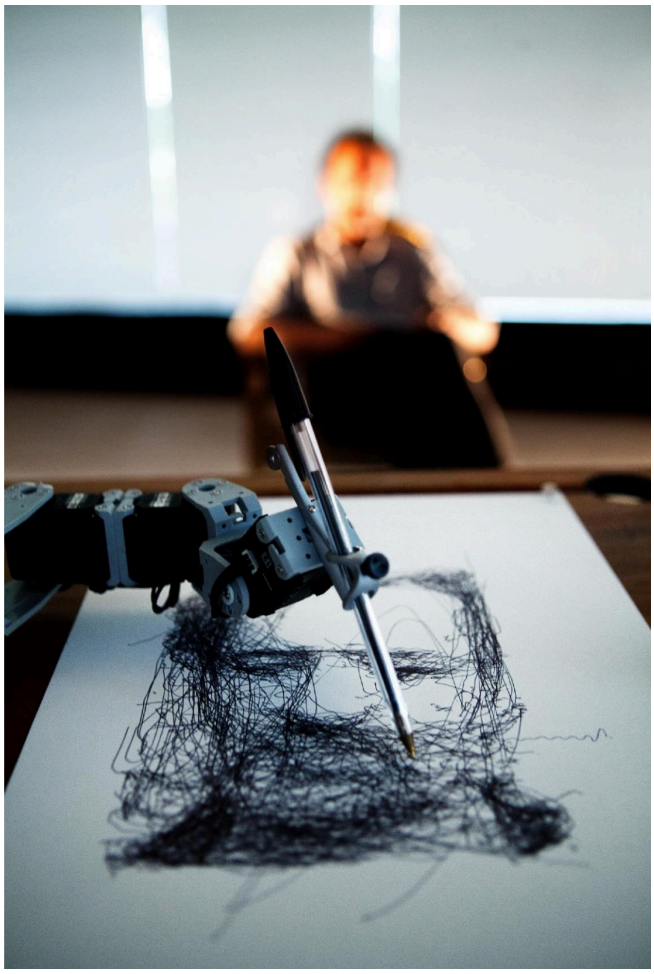

Fig. 1 Patrick Tesset's drawing robot using a pen to draw a face. Leonard, Nicholas. "Emerging Artificial Intelligence, Art and Pedagogy: Exploring Discussions of Creative Algorithms and Machines for Art Education." Digital Culture & Education, vol. 13, no. 1, Jan. 2021, pp. 20–41. EBSCOhost, research.ebsco.com/linkprocessor/plink?id=ec54f40a-69ff-387b-94f1-8ddc881b1fe5.

Another example of using AI as a tool can be seen in a popular program taught to visual arts students: Adobe Photoshop. Content-Aware Fill, a feature of Photoshop, uses AI to seamlessly remove unwanted features in a photo (Leonard 23). Students' creative choices are not limited by this tool since they control what is modified using the tool. One case in which I've

personally used this tool is to edit a photo for my portfolio website. I wanted the main focus of the photo to be me, since this was for my "About Me" page. However, there were people in the background of the photo that I felt distracted from the focus, so I used the tool to remove them. As the artist in this case, I made the choice to remove them from the photo, and had reasoning for my artistic choice. Therefore, when students use AI, they should be the ones making conscious, creative decisions to achieve their original purpose. The tool is not replacing their ideas, but rather, expediting the process to execute that idea.

In addition to treating AI as a tool, practicing artists have begun to explore using AI as a collaborator in their creative practices. One of these artists, Sougwen Chung, has created collaborative drawings with a robot programmed to mimic her hand movements (Park 417). Chung described how the mistakes the robot made during the drawing process "made the work more interesting," and expressed how she and the robot "were adapting to each other in real-time.… [she] was excited because it led [her] to the realization that maybe part of the beauty of human and machine systems is their shared inherent fallibility" (qtd. in Park 417). Rather than viewing the technology as merely a tool, AI collaborating with humans to create art is a more optimistic view of this creative relationship. This approach could benefit students in their practice by opening up experimentation with the technology, using it as a means for creative exploration rather than just a tool. However, as Chung pointed out, the robot did in fact make mistakes, but she believed that these mistakes added more to the work itself. However, in an art education context, there is little room for AI to be able to make mistakes, especially if this could hinder learning for students. This could potentially be one of the main reasons AI use is discouraged for visual arts students.

If students were to rely too heavily on AI, their own skill development and creative process would suffer as a result. In an interview I conducted with Les Duffield, a professor of new media at Virginia Tech, some questions he asks students to consider when using AI are: “Are the results you get from AI consistent with your own efforts? Does using AI help me understand the tools and processes I use better? ” One key point that Duffield encourages students to consider is whether they are using AI to further their understanding of their own creative processes. If using AI interferes with a student’s ability to learn about art-making and creative thinking, then the technology is hurting their creative development. This can occur if students use reference images generated by AI that contain errors. Duffield stated in the same interview that as a panelist for the Southeastern College Art Conference (SECAC) in 2024, which discussed “the use of AI in 3D CGI (computer generated imagery) applications,” stated that AI “3D CG (computer graphics) makes convincing looking images of 3D models, but they are obviously fake once you break them apart.” For students who are not familiar with 3D modeling, using AI to assist them in learning can be harmful since the models produced by AI are flawed in ways that may not be obvious to them. This not only applies to students learning computer graphics, but to all art practices. An example of this can be seen through a study conducted at St. Paul University in Manila which investigated how practicing artists felt about AI. The study found that in regards to learning for students, “participants noted that referencing using AI image generators is currently not viable due to its inaccuracy” (Javier et. al, 564). Due to its inaccuracy, students should not fully rely on AI to learn creative thinking and design skills.

When addressing how AI can impact student creativity, it’s important to note the value of students’ own originality. In the same interview with Les Duffield, he tells students that “the computer is only a part of a creative future. They are not the be-all, end all. No amount of

computing power is a substitute for your personal processes and interests." If AI replaces a student's creative thinking, then the student loses the identity that makes them an artist. In conversations we've had in my visual arts classes, more emphasis is put not on the final artwork, or even the student's skills, but rather, the originality and ideas that a student imbues into their work. Without that authentic intention, the student's work ultimately lacks what it means to make "art." As visual arts students, we need to understand our own relationship to art, and that requires our own individual creative thinking. If AI replaces that thinking, the art loses its meaning, since the source of its meaning comes from the artist.

In an educational context, this can ultimately damage the student's value as a creative thinker, which, in conversations I've had with my professors, are what companies and industries search for when looking for employees. It's less about their skills and more about the person and their own ideas. When using AI, the output that is generated is based on the prompt that a student provides. The wording of that prompt, however, may not fully reflect a student's own intentions. When a student sees the results, they may be inspired by an image or idea, or that may completely replace their idea. It's the replacement of their own ideas that becomes harmful to their artistic identity. Maintaining their own creative originality allows students to become valued artists through their own ideas, rather than relying on AI to make ideas for them.

To further discuss this point, a panel held by MIT in 2024 discussed how generative AI will influence art and design. One panelist, multimedia artist and social science researcher Ziv Epstein, questioned "how do we embed meaningful human control into these systems," in a way to "transform [our] artistic intention into outputs" (Shulman). Epstein brings up a key limitation of AI for visual arts students. Visual art is a sensory experience, and the emotions and ideas it evokes are difficult to fully describe in words. For university students, this means that the extent

to which AI can help assist in developing their ideas is limited by the words they provide to describe it. Therefore, while AI can be helpful to provide feedback on principles of design, it cannot fully develop the idea for the student; they must learn to maintain their originality when using this tool.

In all discussions regarding AI and visual arts, one key issue that continues to arise is copyright and ownership. While this issue can be discussed more extensively, I will be focusing on copyright in an educational context for visual arts students. In the same study conducted by Javier and his colleagues, participants "note that AI image generators are legally questionable due to copyright issues and their lack of regulation, allowing companies and individuals with ulterior motives to exploit them," and that "AI image generators may foster a false sense of ownership among users" (563). Many artists are concerned for the ownership of their artwork, as it may be used as data to train an AI model, or that the images it generates stems from other artworks that aren't cited. One example of this can be seen with the cover art for a book written by Sarah J. Mass, which uses an AI image from Adobe Stock (See Fig. 2). Compared to Adobe's AI image generator, Firefly, which is trained on "content that's licensed or out of copyright, [...] those assurances don't apply to images found in Adobe Stock, raising questions about whether copyrighted work was used to train the image generator that produced it" (Weatherbed). For students engaging with AI, not knowing where an image is referenced from can be detrimental to their creative development. In my own experience, we are encouraged to research the artists themselves, and try to understand the intention behind their works. However, if students do not know the artist of an artwork or the underlying themes behind it, they are unable to learn about the ideas or techniques used by artists. This therefore hinders their creative development by

limiting the variety of perspectives they can learn from. Instead, they must look at an image made purely for aesthetic purposes without underlying themes.

Fig. 2 Cover art for Sarah J. Maas' book, *House of Earth and Blood*, which was made using an AI-generated Adobe Stock image. Weatherbed, Jess. "A Bestselling Fantasy Novel Is Using AI-Generated Cover Art." The Verge, 15 May 2023, https://www.theverge.com/2023/5/15/23724102/sarah-j-maas-ai-generated-book-cover-bloomsbury-house-of-earth-and-blood.

AI is rapidly evolving, and is currently used by many professionals in the visual arts industry. Some colleges are beginning to introduce students to AI, but some are less enthusiastic. While introducing this technology to classrooms should be approached with caution, AI can offer many benefits to students. This includes providing individualized and efficient feedback, generating new ideas, and expediting workflows for students. While using AI, students should

still remain vigilant in order to maintain both their own original ideas and the ideas of other artists. Students and instructors can pursue a collaborative approach with AI to create artwork, which can therefore prepare students for a growing technological industry. As AI continues to evolve, students and professionals across all industries will need to learn to adapt. By understanding the benefits and challenges of its current capabilities, students will be more capable of smoothly adapting to the changes that may come in the future.

Works Cited

Fan, Xiaoxia, and Li, Jiayin. “Artificial Intelligence-Driven Interactive Learning Methods for Enhancing Art and Design Education in Higher Institutions.” *Applied Artificial Intelligence*, vol. 37, no. 1, Dec. 2023, pp. 1–20. *EBSCOhost*, https://doi-org.ezproxy.lib.vt.edu/10.1080/08839514.2023.2225907.

Javier, Jann Gabriel T., et al. “Sketching the Future with AI Image Generators: Implications on Visual Arts Higher Education.” *St. Paul University Manila*, https://wpuat-commarts.utcc.ac.th/wp-content/uploads/2024/08/05-Sketching-the-Future-with-AI-Image-Generators-Implications-on-Visual-Arts-Higher-Education_P.558-567_compressed.pdf.

Kainz, Natalie. “Christie’s AI Art Auction Draws Big-Money Bids — and Thousands of Protests Signatures.” *NBC News*, 26 Feb. 2025, https://www.nbcnews.com/tech/tech-news/christies-ai-art-auction-draws-big-money-bids-thousands-protests-signa-rcna193722.

Leonard, Nicholas. “Emerging Artificial Intelligence, Art and Pedagogy: Exploring Discussions of Creative Algorithms and Machines for Art Education.” Digital Culture & Education, vol. 13, no. 1, Jan. 2021, pp. 20–41. EBSCOhost, research.ebsco.com/linkprocessor/plink?id=ec54f40a-69ff-387b-94f1-8ddc881b1fe5.

Park, Ye Sul. “Creative and Critical Entanglements With AI in Art Education.” Studies in Art Education, vol. 64, no. 4, Oct. 2023, pp. 406–25. EBSCOhost, https://doi-org.ezproxy.lib.vt.edu/10.1080/00393541.2023.2255084.

Shulman, Ken. “The Creative Future of Generative AI.” MIT News | Massachusetts Institute of Technology, 2 Jan. 2024, https://news.mit.edu/2024/creative-future-generative-ai-0102.

Weatherbed, Jess. “A Bestselling Fantasy Novel Is Using AI-Generated Cover Art.” The Verge, 15 May 2023, https://www.theverge.com/2023/5/15/23724102/sarah-j-maas-ai-generated-book-cover-bloomsbury-house-of-earth-and-blood.

Winey, Aaron. “The Benefits and Downfalls of AI and Art: A Faculty Blog by Aaron Winey.” Grace College, 4 Apr. 2024, https://www.grace.edu/the-benefits-and-downfalls-of-ai-and-art-a-faculty-blog-by-aaron-winey/.