Generative AI and its impact on Creative Education: Thought Piece

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Heading into the unknown: the intersection of AI and Creative Education

Education across the Creative Disciplines aims to prepare individuals not only for academic success but also for a future where creativity and innovation are highly valued. With the advances in Artificial Intelligence (AI), consideration is needed as to what this intelligent machine capability means for education of the creative disciplines.

The intersection of AI and artistic disciplines is redefining the very essence of creativity, challenging existing notions and practices. We are questioning how we place value on creativity, the role of the artist and the ethics of creating without attributing inspiration.

In Higher Education, we need to consider how AI is transforming the wider creative arts and subsequently how we integrate AI into our educational practices. As boundaries between technology and artistic expression blur, then educators, students, and practitioners find themselves navigating uncharted territories.

This thought piece delves into the complex and multifaceted impact of Generative AI on education of the creative disciplines.

What is Generative AI

AI is all about making computers smart enough to perform tasks that would usually require human intelligence. Although not new, AI advances have accelerated in recent years driven by improvements in computing power, large datasets availability, and breakthroughs in machine learning techniques.

It is Generative AI that has really taken hold of everyone's imagination since ChatGPT, the human-like text generator which responds to word prompts, was launched by OpenAI in 2020. Today ChatGPT has180 million users and more than 1 billion visits each month.

Generative AI is about using machine learning to create unique content, such as images, words, audio, and videos. It relies on sophisticated generative models which trawl vast quantities of data and from which new responses are produced. In simple terms, it learns what it has seen from existing information and produces new samples which imitate or draw on that input. Its new content, but heavily influenced on what it has drawn on from existing data.

Generative AI tools…and they keep on coming

There is a raft of AI tools for use in Creative Industries, and we are seeing continuous upgrades or launches.

Examples of tools and uses include:

In **Architecture**, design software can employ algorithms to explore thousands of design options based on specified parameters. Image diffusion apps like **Midjourney** and **Stable Diffusion** can produce concept design images from text prompts alone. This enables architects to optimise structures for factors such as material usage, energy efficiency, and aesthetics. The AI-driven design process not only enhances creativity but can also accelerate the development of sustainable and innovative architectural solutions

Concept Designs by AI – RIBA 2024

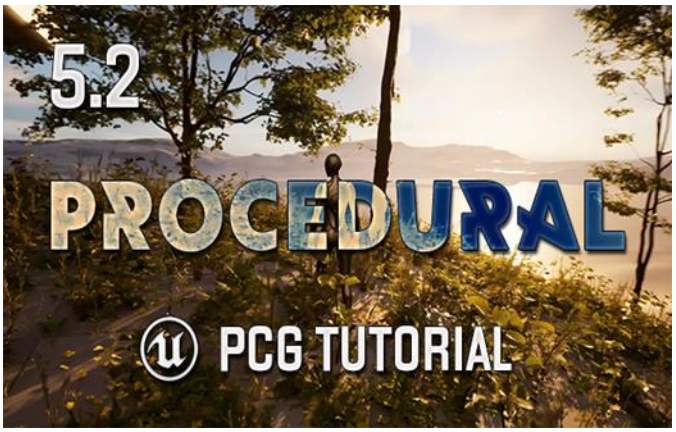
Musicians and composers are leveraging AI to push the boundaries of music composition. **AIVA (Artificial Intelligence Virtual Artist)**, for instance, is an AI tool that composes original pieces of music in various genres. By analysing vast musical datasets, AIVA creates compositions that can serve as inspiration for human musicians or be used as original tracks in film and advertising. This collaboration between AI and musicians showcases the potential for technology to inspire and augment artistic expression

AI-Generated writing assistance from the likes of **ChatGPT** and the more advanced novel writer **Story Engine**, help writers come up with ideas, generate creative content, and explore narrative structures.

Generative AI **design tools** are now used across the **arts and design disciplines and** can be seen in a multitude of areas including advertising, magazine publishing, the art world, the fashion industry and product design. Some of the leading tools include **DeepDream** and **Dall-E3** which generate images from text.

Image created by a prompt asking for a photo of fashion models on a catwalk in the style of Vivien Westwood with frogs in the design

Procedural Content Generation (PCG) is a technique used in **game design** to generate content such as virtual environments, backgrounds, character narratives and game rules.



PCG tutorial by EpicGames

These AI tools illustrate the versatility and impact of artificial intelligence across various creative disciplines, offering a glimpse into the variety of collaboration between human creativity and technological innovation. The arts industry can benefit significantly from the application of various AI tools, enhancing creativity, efficiency, and innovation.

Benefits of AI to Creativity

Generative AI can be a powerful tool in **making some jobs more efficient**, enhancing rather than stemming the creative process.It can be used to provide valuable insights by analysing vast datasets, which can in the research process be a way for information to be quickly and extensively gathered. This data-driven approach can empower many creatives by streamlining the upfront research that they carry out. For example, Designers can quickly gather insight to make informed decisions about the direction of their ideas; Fashion journalists have a tool to miminise the mundane desk research; and Novelists can assimilate information quickly about a city they are including in a plot line.

One of the most evident uses of Generative AI is for artists and designers is the generation of new ideas, words, visuals and music. The production of this content can then be refined and reshaped into something more; it is like a **springboard for ideas**. Creatives can leverage this starting point which AI provides, to kick start and accelerate the creative process, adding and enabling individual thoughts and ideas to take shape. This not only accelerates production but also provides creative professionals with more time for higher-level conceptualisation. We are seeing this for example in Game Design with landscapes and backdrops being created, allowing the more visually exciting elements to be conceptualised and brought to life by the designer.

When considering what AI can bring us, it can enrich the creative process, providing a catalyst to expand creative horizons. As many other technological advancements have done before, AI can be deemed as an enabler for even greater human creativity.

Challenges of AI in the Creative disciplines

While AI, it can be argued, augments creativity, concerns abound regarding as to what it means to the erosion of individual **artistic autonomy**. As algorithms influence the decision-making processes, there is a risk of homogenising artistic expressions. This could stem the expansion of new ideas, perspectives and concepts.

My works are an imitation of my own past and present.

Barbara Hepworth Artist and sculptor

Another key concern is the **bias factor** which could lead to narrowing of the creative perspective. If what is produced by AI is generated from what has come before, and if what has come before is the collection of bias voices, be that culturally, socially or gender based, then are we not going to get history repeating itself? Creativity comes from expressions which consider the minority, push the boundaries and challenge the status quo. AI has the potential to step us backwards, not forwards to a more inclusive world.

A big concern surrounding AI is the **impact on jobs and roles**. With more and more tasks being seen as delivered competently by AI, our entire sector is undergoing a transformation akin to the advent of other technological advances such as the internet or the smartphone. Across the entire creative spectrum designers, artists, photographers, copywriters, journalists, musicians, and film makers are seeing a shift in the way of working which is radically changing jobs and roles. AI is challenging the workforce for creatives – the image library Shutterstock for example has integrated Dall–E, the AI image generator, into its offering – and strange as it may be to find yourself competing with a machine, creatives are seeing the emergence of this new competitor.

Portrait of Edmond de Belamy, a work of art made by Obvious art collective, which was generated through AI, and sold in 2018 at Christies auction house for $432,500

The children book, 'Alice and Sparkle', was created by Ammaar Reshi within a weekend using ChatGPT, MidJourney, and other AI tools.

The Evolving Role of Educators in the AI landscape

Educators in creative disciplines find themselves in a transformative role as they navigate the integration of AI into their teaching practices and assessments. In education, we must face the emergence of AI by discussing and debating the issues, and working through effective ways to include it in our teaching.

As well as **imparting technical skills**, we must **cultivate adaptability and resilience** among students, **preparing them for a rapidly evolving professional landscape**. The role of the educator extends to guiding students in critically assessing the impact of AI on art and design, ensuring they graduate with a nuanced understanding of both the possibilities and limitations of these technologies.

Educators face the delicate task of fostering a balance between technological integration and preserving the unique voices of their students. Emphasising the importance of individual critical thinking becomes imperative to ensure that AI is a tool for artistic growth rather than a force that stifles creativity.

Creative education recognises the importance of self-expression as a means of bringing to life ideas - something that AI can not (yet) do

Integrating AI into learning and assessment

What about those who copy to succeed?

If we still believe that assessment matters in Higher Education, then generative AI is causing huge challenges in keeping plagiarism and cheating at bay.

This problem has been around for a long time yet is being exacerbated by Generative AI advances, with the integrity of student work become more complex to manage.

For those who are intent on not doing their own work then generative AI is getting more difficult to detect in many standard forms of assessment. For those more morally inclined students there is still the dilemma as to what their own work is as opposed to the computer if AI is used even as a research tool.

The usage of generative AI in assessment is a dilemma facing all academic subjects and for once perhaps the creative disciplines may have the edge. It can be argued that the continuous evolution and feedback on a student's piece of creative work makes it harder to produce a final piece generated solely by AI. And likewise, a piece of content that is

produced which seems out of step with the student's previous efforts or skills, can with some investigative skills be traced back to original sources. Authentic assessment is very much common practice in the creative disciplines, and to our advantage not so reliant on essay formats and online exams.

Ethical and legal Considerations

The integration of AI in creative disciplines brings forth ethical considerations that demand careful examination. Issues such as data privacy, algorithmic bias, and the implications of AI-generated content raise questions about the responsible use of technology. Educators play a pivotal role in instilling ethical awareness among students, prompting discussions about the societal impact of AI within artistic contexts. By addressing these ethical considerations head-on, higher education institutions can contribute to the responsible development and application of AI in the creative fields. Educators can look at integrating AI into their students learning, fully teaching the benefits that AI can bring to their creative work, whilst highlighting the considerations of imitating and copying artist work.

I've heard amazing creations that AI has made of music that sounds like something that I would have written, that sounds like me, and some people would be convinced that I did it, that I sung it. And it will continue to get better. How do I feel about that? I feel that regulations need to be put in place around essence and likeness ASAP.

Will.i.am

American rapper, singer, songwriter, and record producer

Show and tell

Examining case studies and success stories within the realm of AI and creative disciplines can provide concrete examples of how generative AI can be used in the creative fields. From AI-powered design tools helping product development to generative algorithms inspiring new forms of digital art, real-world examples highlight the tangible benefits of embracing AI in higher education.

It is by highlighting case studies that students can be inspired to embed AI into their creative work, showcasing the intersection of creativity and technology.

This will help students understand not only how they can work collaboratively with this technology, it enables them to be better prepared for the changing work landscape.

In June 2022, Cosmopolitan published the first AI-generated magazine cover, a collaboration between digital artist Karen X Cheng and OpenAI.

Nutella created an advertising campaign where they enlisted AI to generate 7 million unique labels for jars of Nutella. No two special edition jars were the same. Every single jar sold.

We can also use current debates to stimulate discussions and learnings about key aspects relating to ethics and legal which are critical for our students to understand.

Image: Spotify
Created by an anonymous artist named Ghostwriter, "Heart on My Sleeve" went viral in April. 2023. It mimics the voices of Drake and Weekend and has caused controversy since it dropped in April 2023. Universal Music Studios (who represent both artists) have come out strongly against this

" the training of generative AI using our artists' music (which represents both a breach of our agreements and a violation of copyright law) ... begs the question as to which side of history all stakeholders in the music ecosystem want to be on: the side of artists, fans and human creative expression, or on the side of deep fakes, fraud and denying artists their due compensation. "

Case studies and success stories highlight the diverse ways in which AI is influencing and transforming creative disciplines. From architecture to music, visual arts, performing arts, fashion, video games, and film, the collaborative potential between human creativity and AI capabilities is continuously expanding, and student

Technological Literacy in Creative Education

As AI becomes integral to the creative process, arts education must evolve to include technological literacy. Institutions must equip educators and students with the skills to navigate and leverage AI tools effectively. This involves incorporating AI-related coursework, workshops, and collaborative projects into the curriculum.

This may be hard as many educators themselves may lack the skills or interest to work with this new technology, needing to also be trained and educated in the world of AI

So...what do we think

It is clear that the impact of AI on higher education in creative, arts, and design disciplines is enormous and will fundamentally change how we operate in the creative landscape. It will be a complex journey littered with ethical, legal, and moral dilemmas. But hasn't that been the path with all advances in technology.

By demystifying AI and fostering an environment for experimentation, higher education can empower the next generation of artists and designers to harness the full potential of AI

As educators, students, and practitioners navigate this landscape, we must embrace the relationship between human creativity and AI. By ignoring it we will fail our students to understand, embed or step around it. We must prepare them for AI and see it as another change in the advances of our disciplines.

Like the printing press or the video camera, the tools used to help produce our creative outputs may have changed, but the creative minds behind the ideas haven't.

By fostering a balance that preserves artistic autonomy, addresses ethical considerations, and promotes collaborative possibilities, higher education institutions can prepare the next generation of creative minds to thrive in an AI future.

Otherwise, what's the option. Machines really will take over the world.

This piece was written by a human, with only a little bit of help by Generative AI.

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