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Generative AI – Creative Pedagogy Versus Creative Application

Dale Addy, Watkins College of Art, Belmont University, USA

Abstract

Generative Artificial Intelligence (GenAI) is rapidly changing and influencing the advertising and graphic design industries. GenAI is reimagining workflows and modifying the skills required for new graduates to secure their first jobs. Agencies are investing in AI technologies, and creative departments are leveraging GenAI for client engagement and conceptual development. However, design educators have been slow to adapt to this change. This lag risks leaving graduates unprepared for a creative industry in the midst of a technological transition. This qualitative study investigates how GenAI is being utilized in creative departments and how design educators are responding. Based on in-depth interviews with agency leaders and design faculty across the United States, a learning gap was made apparent. Agency leaders see GenAI as an essential creative tool for accelerating ideation and concept visualization, while educators remain cautious and prioritize foundational design training. Early pedagogical adopters understand the benefits of integration, but most curricula incorporate GenAI inconsistently, often relying on individual faculty initiative. The findings reveal the need for design educators to help students embrace GenAI as a tool that expands creative exploration and conceptual thinking. In an effort to remain relevant, graphic design educators must train students in both design and GenAI fundamentals. The ability for graduates to create authentic, human-centered design work will be the definition of success in an AI-driven creative industry.

Keywords

Graphic Design Pedagogy, Generative Artificial Intelligence, Creative Workforce Preparation, Conceptual Thinking, Authenticity in Design, AI in Creative Industries

Introduction

A design educator's goal is to teach students the necessary skills to gain employment upon graduation. The new point of differentiation is the understanding of Generative Artificial Intelligence (GenAI) in the marketing industry as a whole, but specifically within the creative department. A July 2025 *Business Insider* article stated, "The largest agency groups, like Publicis and Omnicom, have pledged to invest hundreds of millions in AI over the next few years as they adapt their businesses to harness the technology" (O'Reilly, 2025). Agencies, big and small, are embracing GenAI in hopes that this new technology will streamline business and creative processes. Because of this, design educators must embrace GenAI and train students how to appropriately and ethically harness this new tool.

The implementation of GenAI, along with an unstable business environment, has led to tighter marketing budgets. The marketing research firm COMvergence states, "Preliminary findings [2025] suggest a 68% decline in the number of pitches and a 37% decline in their value in the first half of this year compared to the same period in 2024" (O'Reilly, 2025). This uncertainty could lead to fewer new hires, which could be highly consequential for recent graduates. The

creative professional of the future must augment their creative skills with strong GenAI skills to secure and keep a job.

The goal of this research is to discover what GenAI skills design students need in order to compete in the modern creative agency. This is important because there seems to be a disconnect between the world of design pedagogy and design practice. Design educators are often hesitant to teach GenAI before students have a sound understanding of basic design principles and ideation techniques, which can only be achieved through rigorous training. However, design graduates must understand how and when to properly implement this new creative tool to stay relevant in today's creative workforce.

The Evolution of AI

Artificial Intelligence (AI), began as the concept of "Thinking Machines" at the Dartmouth Conference in 1956 and has been evolving ever since. The overarching concept of AI encompasses everything from Narrow AI, such as personal virtual assistants like Siri, dedicated to specific tasks within defined parameters, to General AI, which refers to machines that can learn and apply that knowledge to different scenarios. General AI is just theoretical, at this point, with research being conducted to one day make it a reality (Syracuse, 2025). Underneath that large umbrella of AI, there are three categories: Machine Learning, Deep Learning, and Natural Language Processing. Machine Learning (ML) is AI that "allows systems to learn from data without the need for specific programming" (Syracuse, 2025). Machine Learning can recognize patterns to predict outcomes. Deep Learning is a subgroup of Machine Learning which "mimics the structure of the human brain using artificial neural networks. These networks enable machines to recognize complex patterns and make sophisticated decisions" (Syracuse, 2025). Natural Language Processing (NLP) allows machines to process and respond with an accurate understanding of human language.

Generative AI (GenAI) uses DL [Deep Learning] to fabricate new content. This new content can be anything from text to music to imagery. "Generative AI can take raw data—say, all of Wikipedia or the collected works of Rembrandt—and 'learn' to generate statistically probable outputs when prompted" (College of Education at Illinois, 2024). GenAI trains on large data sets to recognize patterns and specific features. Using these patterns and features, GenAI can create new content that mirrors the characteristics of the data set it was trained to utilize (College of Education at Illinois, 2024).

Literature Review

AI & Pedagogy

Given the relative newness of GenAI being applied to the creative field, the academic literature on the implementation in creative pedagogy is limited (Hwang & Wu, 2025). For this reason, the literature review includes works that address teaching with artificial intelligence in general, not solely in the creative field. The literature that does exist regarding GenAI in creative pedagogy reveals mixed feelings regarding the implementation into design coursework. On one side, Mohd Firdaus Naif Omran Zailuddin et al from the Universiti Malaysia Kelantan state: "As AI tools become more advanced, there is a concern that students may rely too heavily on these technologies... (and) it could compromise their ability to think outside the box and develop their unique design aesthetic" (Zailuddin et al., 2024).

Conversely, Montathar Faraon et al., from Kristianstad University in Sweden, argue that GenAI could complement Bloom's Digital Taxonomy, citing that divergent thinking is a key component in the "creating" process. Faraon et al. assert that GenAI can be used to generate a myriad of divergent ideas by mixing "novel combinations" with familiar thoughts to supplement the pool of potential solutions (Faraon et al., 2023).

The literature shows cautious optimism toward the incorporation of GenAI. However, most of the literature issues warnings that the implementation of GenAI into design teaching could degrade the development of conceptual thinking in students (Muji et al., 2023; Faraon et al. 2023; Hwang & Wu, 2025). Therefore, GenAI's implementation should be coupled with the standard design curricula, focusing on design history, traditional ideation skills, and basic design principles, ensuring students receive solid foundational training (Hwang & Wu, 2025; Zailuddin et al., 2024). GenAI must also be implemented early and throughout the rigor of design training. This way, GenAI can be reinforced as a tool, where appropriate, and not just a quick answer to a creative problem. In the GenAI era, it is essential for design educators to not only prepare students for the repercussions automation is currently having in design, but also to explore what it means to be a designer in the future (Hwang & Wu, 2025).

AI & Business

Business leaders are embracing the use of AI to help their employees become more productive. An April 2025 *Inc*. article states that CEOs are demanding employees embrace AI, even saying, "Performance reviews will now consider employees' AI usage" (Blum, 2025). In the creative field, GenAI is openly embraced as a tool to enhance an agency's productivity, allowing them to deliver their creative product quicker than before (SCAD, 2024). This increased speed and productivity directly equate to the bottom line of any business.

Not everyone is on board with the AI push. According to a May 2025 *Inc.* article:

> *Researchers at Duke University's Fuqua School of Business, Management and Organizations determined that many employees attach a considerable degree of stigma to colleagues using AI in the workplace. They found that biases against apps not only dissuade many workers from using them in fear they may be looked down upon by AI-wary colleagues (Crumley, 2025).*

This sentiment is nothing new. The idea of "mechanophobia - the fear of machines - is a prime example of this resistance to technological change" (Fleischmann, 2024). Mechanophobia has been around since the Industrial Revolution. Even before that, in the mid-1400s, scribes who produced illuminated manuscripts tried filing suit to get the implementation of Johannes Gutenberg's movable type printing press stopped before it ever got off the ground (Meggs & Purvis, 2016). The perception of AI use is different depending on the perspective of the person being asked. Some think it will enhance creativity, while others feel it will cheapen the profession.

Methodology

Following the literature review, a qualitative research approach was deemed most appropriate for this study. Fifteen executives from regional to international creative agencies based in the United States were contacted via email. From this initial contact, eight agencies agreed to be interviewed. Eight in-depth interviews were initiated, with one agency choosing to end the

interview after a couple of questions. Along with the agencies, nine graphic design faculty at universities and colleges from across the United States were contacted. In total, 14 interviews were conducted, with seven being at the creative director level or above on the agency side, six from the academic side, and one hybrid who is an agency owner and adjunct faculty at a private career-focused art and design college. The academic participants ranged from visiting professors to department and program chairs. The average interview length was just under 33 minutes, with the longest being 47 minutes and the shortest being 24 minutes.

For the agency interviews, interviewees were asked a series of ten questions about their agency's use of GenAI. Follow-up questions were asked to gain insight into their opinions around GenAI, ethically and creatively. Finally, each creative leader was asked how they would approach teaching GenAI to the next generation of creatives.

For the academic interviews, design faculty were asked a series of seven questions to understand if and how they were implementing GenAI into their courses. Follow-up questions were asked to gain insight into how each professor's students felt about the incorporation of GenAI. Finally, each professor was asked about the ethics of GenAI and how they feel it could potentially change the creative industry.

Upon completion of the interviews, a hybrid deductive and inductive coding approach was taken. A sampling of the deductive pre-set codes is as follows: AI for Research; AI for Conceptual Development; AI for Finished Art; AI Ethical Challenges; AI Guardrails; Agency of the Future; Hireability of AI Portfolios. A sampling of the inductive open codes used is as follows: Caution toward AI; Optimism about AI; Industry Challenges Due to AI; Fear for the Next Generation.

Given the continually changing nature of GenAI, it is difficult to make concrete assumptions. However, while this is a limited study, paired with the literature, a clear picture has developed, showing an urgent need to address GenAI skills in creative pedagogy.

Agency Interview Findings

Account Service

The literature's conclusion that GenAI is being readily adopted by creative agencies is supported by the interviews. Every department is utilizing AI tools to improve workflow. Agencies are using AI tools like Google® Gemini® and Microsoft® Copilot® to help synthesize meeting notes and prepare a plan of action merely moments after a meeting. Nicole Satterwhite, Co-CEO and Owner of Willoughby located in Kansas City, Missouri, says Gemini "meeting notes are amazing...It allows us to immediately email a client and say, 'Here's what we heard. Here's everyone's to-do list.'" Satterwhite says this allows everyone in the meeting to be engaged and eliminates the need for a dedicated note taker. Mark Scrivner, CEO of Snapshot, located in Nashville, Tennessee, echoed Satterwhite's comments, saying that incorporating the AI features of CustomerIQ® into the agency/client interactions has sped up the time it takes to recap and relay next steps to the client. "What used to take our accounts team, maybe an hour after a call, may take them ten minutes to go through and proof before it gets sent over to the client," said Scrivner.

Conceptual Thinking

Creative departments are embracing the power of GenAI to help develop and present the

agency's conceptual thinking. Dan Magdich, VP/Executive Creative Director at Brunner with offices in Atlanta, Georgia, and Pittsburgh, Pennsylvania, stated, "I honestly can't think of a member of our creative team from myself down to our juniors who doesn't use some sort of AI integration daily…I'm using ChatGPT® more than Google®. It's a helpful tool just to do research." Creative departments are also harnessing the power of ChatGPT to enhance their conceptual thinking. Several interviewees said they will turn to ChatGPT to help add to the pool of ideas during a project's conceptual development. ChatGPT is asked to add ideas once a creative team has a lull in their thinking, while others are asking ChatGPT to role-play during conceptual development. Robert Froedge, Partner/Integrated Creative Director at Lewis with offices in Nashville, Tennessee, Birmingham, and Mobile, Alabama, stated: "We have asked ChatGPT to pretend they are a creative partner… I can say, as a strategist, as a writer, as an art director, as a designer…so giving it a context allows you to use it however you want."

Creative departments are moving away from scouring stock photo sites for hours on end in search of images to help bring visual form to concepts. Instead, they are turning to GenAI platforms like Midjourney®, DALL-E®, and Adobe® Firefly® to create the image they envision for presentations. Froedge explains that stock photography is often limiting.

> *You can't change the perspective. You can't change the type of camera used. You can't change the atmosphere. You can't change the environment. The clothes the person has on. All of that stuff is so easy with prompting. I can create a visual and say, 'I want the perspective to be lower, I want it to be a darker day. I want them to be in more casual clothes.' It makes experimentation much easier (R. Froedge, personal communication, March 18, 2025).*

The use of GenAI is not limited to imagery either. Copywriters are using GenAI platforms to help overcome writer's block, or to take their copy and craft it in different voices. Rodrigo Foggiato, UX Designer and Business Analyst at Integritas Solutions, Inc., headquartered in Austin, TX, said, "It [ChatGPT] is able to shave off several hours of work, just to unblock you from having that initial documentation done." GenAI platforms allow creatives to flex their creativity in ways they were unable to before GenAI. Designers and art directors are utilizing built-in Adobe® AI functions to help generate thumbnails in greater quantity than could be done by hand in the same amount of time (P. Bukengolts, personal communication, May 22, 2025). This idea aligns with Stanford University's "Human-Oriented" Artificial Intelligence Institute (HAI) philosophy that "artificial intelligence should enhance human skills, not replace humans" (Li et al., 2020). It is not that creatives are allowing GenAI to do the conceptual thinking for them; instead, they are using GenAI to help add to the pool of potential ideas that could then be reviewed, combined, and massaged to create better ideas.

Broadcast Presentation

Agencies are utilizing GenAI platforms like Runway® (runwayml.com) to create pitch videos that mirror the final product. Combined with an AI voice model like ElevenLabs® (elevenlabs.io), and presenting video concepts with still image storyboards is a thing of the past. This is not to say that Runway and ElevenLabs will replace producers, directors, and voiceover talent. These platforms are just tools to get presentations closer to the finished product, faster and more economically than previously possible. Magdich explained:

> *We use ElevenLabs for [preliminary] scratch voiceover. I feel like [scratch voiceover] is always a pain…It's like, 'Okay, who's available to read this? Well, I don't really want to keep pulling people away from this project to record a scratch read. Now with ElevenLabs, you upload the script, pick the voice, and modify it. It sounds like AI, but that's [still] really helpful for a scratch read (D. Magdich, personal communication, March 28, 2025).*

AI Concept Development Versus Finished Work

It is important to note that all of the agency leaders interviewed were adamant to emphasize that GenAI is only used for conceptual development and as proof-of-concept client presentations. GenAI work is never used as final art unless the client is notified and a paid subscription is used (N. Satterwhite, personal communication, April 11, 2025). Even then, GenAI work is avoided for final art unless there are no other viable or feasible options. All of the agencies are aware of copyright issues with GenAI products and are striving to ensure their work is ownable and not derivative. The ownership issue surrounding GenAI use has prompted the 4As (American Association of Advertising Agencies) to explore standards for content provenance, trust in advertising, and potentially the need to disclose when AI is used in advertising (American Association of Advertising Agencies, 2025). This initiative is just getting started, but it is fraught with issues of when disclosure is necessary. As stated in the 4As Guide to Content Provenance:

> *Should disclosure be mandated only for content created entirely by AI, or should it also apply when AI is used for more subtle adjustments? Establishing these thresholds is a nuanced task, and over-disclosure may risk diminishing the impact of transparency altogether (American Association of Advertising Agencies, 2025).*

The issue is that GenAI is already integrated into the industry-standard Adobe® Creative Cloud® software, so it is virtually impossible to say without a doubt that any artwork does not incorporate some type of AI manipulation.

Maintaining Authenticity

Another key point mentioned was the need to maintain authenticity. Both Scrivner and Froedge work with clients in the healthcare/medical field, where trust is paramount. Both stated that they would never use GenAI to produce anything that represented a patient statement or testimonial. Scrivner even said, "We don't even proof [medical-related work] through an AI platform. We don't ever want it to show up as it's been written by AI." This added layer of scrutiny may be unnecessary, but it is something Scrivner feels strongly about in trying to protect the integrity of his agency's work.

Other Cautionary Tales

Several agency leaders mentioned pitfalls they have encountered, such as AI hallucinations. An AI Hallucination is a fabrication that contains misleading or even false information presented as fact (IBM, 2023).

Others mentioned bias and stereotypes that are common among GenAI models (Fleischmann, 2024; L. Haines, personal communication, April 7, 2025). Maria Gualtieri of Brunner states:

> *[There is an] inherent bias that's in AI because it's all information that we [community at large] put in, and that reflects sometimes the worst part of our society. I don't think it's something that students are even aware of unless you've been affected by it (M. Gualtieri, personal communication, March 28, 2025).*

Still another risk is that while GenAI platforms are enabling creative departments to bring their concepts to life, there are also significant budget considerations. Gualtieri warns, "The danger of [GenAI] is misrepresenting what's possible based on the client's budget." This means GenAI can produce something that would be cost-prohibitive to recreate for final art, which can cause awkward conversations with agency clients.

Finally, all the agency leaders stated that GenAI is not as simple as it seems. There are often frustrations with image creation and getting the exact content being sought. There are specific nuances in how prompts need to be written for the best output. Daniel Summers, Director of User Experience at Integritas Solutions, Inc. said that while AI incorporation is encouraged, "People can waste a lot of time trying to get AI to do a task that they can knock out relatively quickly." While GenAI is the new tool agencies are trying to find ways to use, it is evident that GenAI tools are not suited for every task. The challenge is in determining the best ways to utilize GenAI.

Agencies are harnessing the power of GenAI tools for creative workflows. For this reason alone, young creatives also need to embrace GenAI, not to use it as a crutch, but rather as a tool to enhance their own productivity.

Academia Interview Findings

Early Adopters

Of the seven schools represented in this study, only one is teaching GenAI in every aspect of the curriculum. That one outlier is a non-traditional finishing school specifically for advertising creatives. Most students at this school have already worked professionally and seek to change careers or enhance their portfolios (B. Cleveland, personal communication, March 11, 2025). At the other universities and colleges in this study, GenAI is being introduced at the class level, based on the individual professor's preference, not as an institution-wide mandate. Professor Leslie Haines at Middle Tennessee State University School of Journalism and Strategic Media stated:

> *I had students not get jobs a few years ago because they didn't have any motion graphics. I think it's going to be the same with AI. If we can't at least have them demonstrate some understanding…then we're doing them a disservice (L. Haines, personal communication, April 7, 2025).*

From this study, California Polytechnic State University, San Luis Obispo (Cal Poly SLO), and Savannah College of Art and Design (SCAD) are making the biggest strides towards GenAI implementation. The Cal State University (CSU) system as a whole seeks to become the premier university system in AI technology (S. Frantz, personal communication, April 4, 2025). In January 2025, the CSU system put out a visionary statement reading in part: "The California State University system is taking a bold step forward with an innovative artificial intelligence strategy designed to enhance student success and transform the educational experience…ensuring students are well-prepared for an AI-driven workforce" (California State University, 2025).

Likewise, professors and administrators at SCAD worked with industry leaders to publish their *AI Insights 2024*, which compiled what SCAD sees as the proper way forward in utilizing GenAI in creative development. Even as Cal Poly SLO and SCAD embrace GenAI, the implementation is still very much an individual professor's decision.

GenAI is clearly on the radar of every school and is being reviewed as a way to prepare graduates for their careers. The June 2025 *Report: Higher Ed 'Re-Norming' With Tech* by Tyton Partners stated, "While only four percent of administrators agreed that student literacy of generative AI is measured as a learning outcome at their institution currently, 39 percent indicated it will be in the next three years" (Mowreader, 2025).

Rapid Change

The implementation of GenAI in design curriculum is more complex than adoption in the creative business. While design educators recognize the need to incorporate GenAI, modifying curricula is often a lengthy process. Also, the GenAI space is changing so rapidly, educators struggle to discern which applications are the best to promote and teach. Bart Cleveland, Founder of Job Propulsion Lab, stated, "It's kind of like the early days of browsers…when there were so many early browsers that thought they were going to be king, and ended up being nothing." Even with so many options, educators understand they cannot take a wait-and-see approach to GenAI (B. Cleveland, personal communication, March 11, 2025). For this reason, most faculty are staying with the Adobe products for now (S. Frantz; L. Haines; F. McGill, personal communications, 2025). The Adobe Creative Suite, the industry-standard software, already has several built-in GenAI functionalities. Adobe Firefly is a text-to-image GenAI platform similar to DALL-E and Midjourney. Some faculty members interviewed for this study stated they prefer the Adobe Firefly application because it is trained on the Adobe Stock Library, while other platforms are trained on imagery from the internet at large (L. Haines; F. McGIll, personal communications, 2025). Also, most design students have the Adobe Creative Cloud's monthly subscription included, in full or in part, through their institution's tuition, making the adoption of Adobe Firefly a more cost-effective option (L. Haines, F. McGill, personal communications, 2025).

Also, it is difficult to tackle the enormity and ethical implications of GenAI while also teaching basic layout and typography. As Fish McGill, Program Director, Dynamic Media Institute/Associate Professor, Communication Design at Massachusetts College of Art and Design (MassArt), stated, "Students just getting their head around being a designer is so enormous for them." There is something about struggling to find a design solution that is good for a design student's growth. A firm foundation in design fundamentals is critical for students to develop the necessary design taste and skills to succeed (F. McGill, personal communication, April 24, 2025). For seasoned professionals, a tool that speeds up the creative development process is a welcome addition to their workflow. However, for students who are just beginning to understand the design craft, adding a quick workaround is not the best idea.

Design educators have recognized the need for students to be familiar with GenAI as demanded by the professional community (Fleischmann, 2024). Design faculty also have to work to destigmatize the GenAI issue with students and encourage a sense of discovery and play, while also helping students understand that GenAI might not always be the right choice (J, Cooper & S. Frantz, personal communications, 2025).

Discussion

Employability

This study has explored how the creative business is evolving because of GenAI. This technological shift is reminiscent of the one that occurred in the latter part of the 1980s through the early 1990s with the introduction of the Macintosh® computer and Adobe software, which ushered in the current agency production workflow and completely changed the production process (King, 2011). The introduction of GenAI is a similar revolutionary change. Most of the creative professionals in this study saw the potential of GenAI to help their agencies work faster, giving them time to focus on the creative part of their jobs (P. Bukengolts; R. Froedge; D. Magdich; N. Satterwhite, personal communications, 2025). However, tasks that can now be handled quickly by AI applications, such as photo searches, photo manipulation, and comp preparation, were typically relegated to entry-level employees. These tasks were how young creatives often broke into the business (L. Haines, personal communication, April 14, 2025). The potential lack of job opportunities for new graduates is a widely mentioned concern among design educators (Fleischmann, 2024; Matthews et al., 2023; Meron, 2022). However, as Foredge specifically states:

> *If a student came in with a book [portfolio] full of AI work, I would want to talk to them about it… I'd want to know how you used the tools. If the book is fantastic, and it was AI, I would have to strongly consider making a play for that person (R. Froedge, personal communication, March 18, 2025).*

Mark Scrivner from Snapshot Interactive put it even more succinctly, stating, “AI is not going to replace people. It's gonna replace people that don't learn AI” (M. Scrivner, personal communication, March 11, 2025). It is currently unknown how GenAI will affect hiring decisions in the creative field. However, it is obvious that employers who participated in this study are seeing GenAI usage as a necessary skill for new graduates.

GenAI for Final Art

How long agencies will use GenAI just for concept development is yet to be determined. An example of GenAI art as final art comes from the highly respected design firm Pentagram and the Performance.gov website they created. Through initial handmade explorations, coupled with the GenAI application Midjourney, Pentagram created a total of 1,500 icons for the website (Pentagram, 2024). The GenAI-generated artwork used in the Pentagram project was based on original sketches by designers at Pentagram; however, the firm received backlash when the process was documented on Pentagram’s social media and in a December 2024 article in *Fast Company* titled “Pentagram partner Paula Scher unapologetically defends using generative AI” (Wilson, 2024).

As agencies and the public get more comfortable with GenAI, there will assuredly be more examples of GenAI-created artwork making its way into the mainstream for commercial purposes. Not using GenAI tools will almost seem like a hindrance to a creative agency. However, we must understand and stay focused on the fact that GenAI is simply a tool, not the solution, and not a replacement for human creativity (Zailuddin et al., 2024).

Roadblocks to Acceptance in Academia

Issues of plagiarism and academic misconduct due to students’ use of ChatGPT on academic

papers aside, the main issue preventing design professors from embracing GenAI is the inherent value of struggle. It takes time and exposure to good work, along with trying, failing, and trying again, to hone the craft. Design faculty must be deliberate in how GenAI is introduced. They cannot simply transition coursework over to prompt creation (Fleischmann, 2024; Matthews et al., 2023; Meron, 2022). Educators must first ensure that design fundamentals are firmly in place. Sara Frantz, Chair of the Art and Design Department at Cal Poly SLO, put it this way. "We're treating it like new Adobe software. We can be freaked out about this, and it could put people out of business, or we could harness it for good" (S. Frantz, personal communication, April 4, 2025).

GenAI for Divergent Thinking

Divergent thinking is essential for creative development. It is also an area where many design students struggle. Typically, students come up with two or three ideas and consider the concept phase complete. However, design educators and professionals alike recognize that the first ideas are often trite and superficial, and the best ideas require effort to uncover. This is where GenAI can be especially helpful. The more ideas that are generated, the better. Eventually, everyone hits a creative wall—when no new ideas come to mind. At that point, GenAI applications can be a valuable tool. With a simple query, an application like ChatGPT or Copilot can provide a range of new ideas to consider. Keep in mind, these are just ideas, not necessarily "good ideas." Maria Gualtieri of Brunner suggests, "Using [GenAI] like a creative partner to springboard, not replace the creative process" (M. Gualtieri, personal communications, 2025). This underscores the purpose of divergent thinking: to generate as many ideas as possible, whether good or bad. These ideas can then be combined, reshaped, twisted, tweaked, or revised to develop better ideas. GenAI didn't come up with the ideas, but it instead played the part of collaborator, feeding the idea engine to help bring forth the truly original ideas.

The importance of Traditional Design Skills and Context in the GenAI Era

As stated, GenAI has the ability to enhance the conceptual development process by introducing new and different ideas quickly. With skilled designers, this can be an enormous time saver. However, Jonas Oppenlaender from the University of Jyväskylä, Jyväskylä, Finland, argues that "little to no human creativity may be involved in producing art with text-to-image synthesis" (Oppenlaender, 2022). An effective concept is created when meaning is built into the imagery. That can only happen through an understanding of contemporary or historical context and audience understanding and empathy. For these reasons, design academia must continue to focus on traditional design skills, art and design history, and audience empathy to train students to create art that is meaningful beyond pure aesthetics. GenAI can be a helpful tactical tool, but design faculty must never let it supplant the humanness of the creative process.

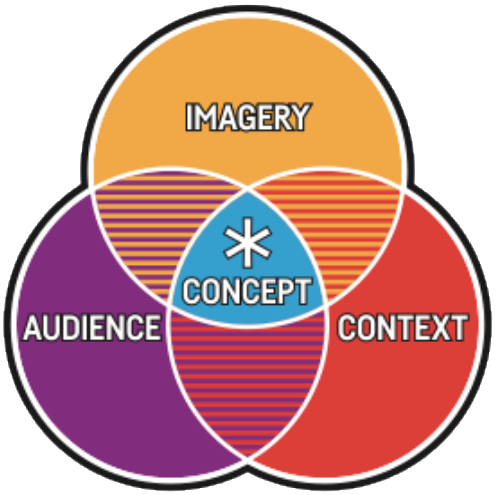

Figure 1. A meaningful concept is more than just an image. The image must be paired with audience insight and contemporary or historical context to be effective

Roadmap for Teaching GenAI

Based on the study's findings, it is imperative to implement a pedagogical framework to address teaching GenAI. From speaking with the academic study participants, there is a reluctance among design students to embrace AI. The rationale for this is not easily identifiable. Environmental concerns were mentioned, along with the fear of AI taking jobs. Some feel that using GenAI is cheating the creative process. However, what some may think of as cheating may just be using new tools as effectively as possible (Michels, 2023). This is certainly the approach creative agencies are taking. Even with these fears, GenAI must be taught to prepare graduates for a creative career. Based on the study, an approach similar to Bloom's Digital Taxonomy is recommended.

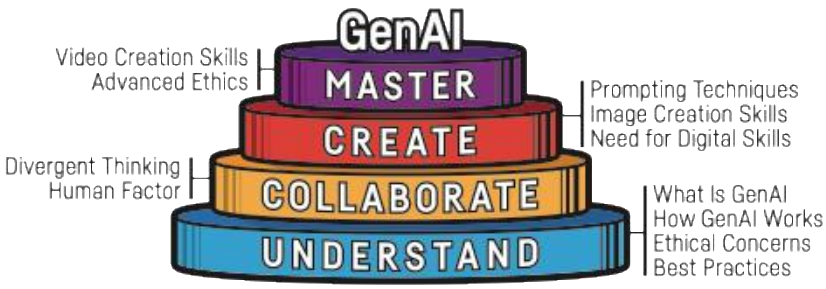

Figure 2. A stair-stepped approach to teach GenAI skills

1. ***Understand: Demonstrate what GenAI is and how it works***
2. ***Collaborate: Utilize GenAI as a creative collaborator***
3. ***Create: Construct conceptual imagery utilizing GenAI and human-centered insights***
4. ***Master: Compose video elements with GenAI and discern the proper applications***

STEP 1: Understand

This initial stage will work to demystify AI in general. "An initial pedagogical approach to AI can aptly begin with addressing preconceptions and attitudes among learners. This includes alleviating both unfounded fears and tempering inflated expectations" (Jaakkola, 2025).

Discussions and assignments could focus on how AI works and how it should be used. The focus of this stage is to use AI as a research companion, with special emphasis placed on the ethical questions surrounding AI.

Step 1 Goals: Gain a general understanding and comfort level with AI.

Appropriate Applications: Large Language Models (ChatGPT, Copilot, etc.).

STEP 2: Collaborate
This stage will demonstrate how to use AI as a concepting partner. When creating concepts, human intuition and ideation should always be exhausted first. However, once the creative wall has been reached, LLMs can be used to insert a new batch of ideas to help start the next round of concept development. This phase will not only introduce AI as a collaborator but also stress the importance of continual concept development well past an initial set of ideas.

Step 2 Goals: Use AI as a tool to break creative blocks.

Appropriate Applications: Large Language Models (ChatGPT, Copilot, etc.).

STEP 3: Create
This stage will introduce prompt writing skills necessary to achieve the desired still-image results with a GenAI application. Special attention should be placed on the exploration of how different prompt development can shift the emphasis and appearance of the image produced. This phase will help students understand proper prompting techniques and demonstrate that GenAI applications are not the end of the image development process. More often than not, GenAI-generated images need to be edited or manipulated with other digital tools, such as Photoshop, to achieve the desired effect. Understanding this shows how GenAI can be used as a tool to enhance creativity in skilled hands, rather than making everyone a prompt engineer.

Step 3 Goals: Use GenAI as a building block tool to enhance image creation.

Appropriate Applications: Text-to-image GenAI image applications (Midjourney, Adobe Firefly, etc.).

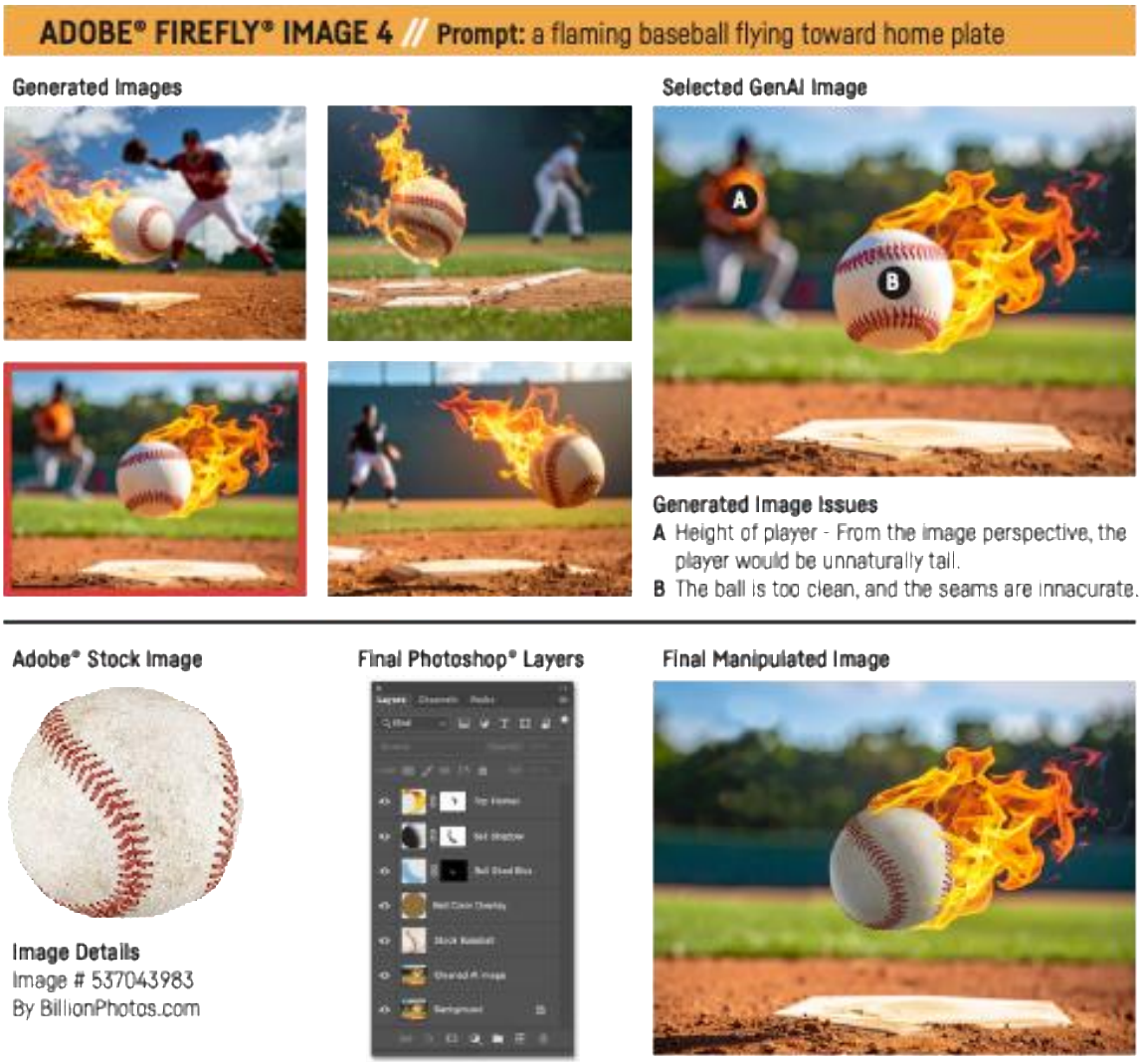

Figure 3. GenAI as a creative aid, not a creative solution. Even with the most basic imagery, there is a need for further manipulation before an image can be finished in a way that appears correct to the human eye

STEP 4: Master

This final stage will expand on prompt writing skills necessary to create video results with a GenAI application. As with still imagery, generated video will need to be edited using other methods to achieve the desired effect. Understanding this will show how GenAI should be used as a tool and not a result. During this stage, special emphasis must be placed on ethical questions surrounding GenAI-created video, such as deep fakes, personal privacy, and copyright infringement concerns.

Step 4 Goals: Use GenAI as a building block tool to enhance video creation and engrain ethical standards.

Appropriate Applications: Text-to-video GenAI applications (Runway, Midjourney, Adobe Firefly, etc.).

Even with the implementation of these steps, there must be a continuous evolution in the training around GenAI. The GenAI landscape is changing at such a rapid pace, professionals, faculty, and students must keep themselves up to date with the latest applications and trends through a willingness to embrace change (Alenezi & Alenezi, 2025).

Conclusion

While GenAI skills may start in the classroom, the real learning happens when students embrace challenges and use them as an opportunity to learn outside the formal classroom setting. For this reason, design educators need to encourage a mindset of play in discovering what these platforms can do. Educators need to embrace GenAI as a supplemental tool to enhance the creativity of their students' work. This will help destigmatize GenAI in the minds of students and encourage them to experiment and push boundaries.

As discussed, GenAI has the potential to reduce entry-level jobs. This shift requires design educators to adjust their approach to teaching design. Greater emphasis must be placed on conceptual thinking (Petrosyan, 2025). Design programs already include technical skills, but we must never lose sight of the creative problem-solving challenges, with special emphasis being placed on empathy and understanding audiences and user groups. Students need to learn how to build richer concepts by looking back through history to create new solutions. The past is full of talented designers who did not have the advantage of current creative tools. Exploring how problems were solved in the past will help students craft better solutions moving forward.

Design educators need to instill a sense of experimentation and curiosity. Exceptional designers don't lean on technology. Instead, they use technology as a tool to craft their way of thinking into something real. GenAI can help students explore ideas much faster than ever before. We must encourage this exploration and discourage stopping before ideas are fully exhausted.

Finally, design faculty need to teach students to strive for authenticity. GenAI can do incredible things, but it cannot engage on a human level. Jessa Wilcoxen, Professor and Founding Director of the School of Art and Creative Media at Millikin University, stated:

> *I continue to believe that authenticity is what people will pay for… I think most business owners understand that when they need something that really sells…authentic voice, authentic look, or feel still matters. That's harder to get through AI. So, really teaching students how to develop [authenticity] is critical (J. Wilcoxen, personal communication, April 9, 2025).*

GenAI is not capable of creating something new; it merely assimilates what already exists. Used properly, it can be an efficient and powerful tool. The challenge for educators is to train students on how and when to ethically utilize GenAI to its fullest, without losing the humanity in design that makes it compelling and effective.

"100 years from now, the idea is still going to be more important
than all the technology in the world."

-Bill Bernbach
Co-Founder of Doyle Dane Bernbach (DDB) advertising agency, founded in 1949

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