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The Integration of Artificial Intelligence in Computer Graphics Education in Nigerian Tertiary Institutions: An Ethical and Developmental Imperative

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Abstract

This paper examines the integration of artificial intelligence in computer graphics education in Nigerian tertiary institutions as an ethical and developmental imperative. It argues that Artificial Intelligence (AI) should be adopted not as a substitute for graphic designers or design educators, but as a transformative educational tool that can strengthen creativity, improve technical competence, and align graduates with the demands of an increasingly digital creative economy. Drawing on recent literature, policy guidance, and comparative case studies, the paper situates AI within the historical evolution of graphic design technologies, showing how earlier innovations such as desktop publishing software, Photoshop, Illustrator, and Corel DRAW expanded rather than eliminated the role of designers. It further explores the opportunities AI presents for idea generation, workflow efficiency, personalised learning, accessibility, and industry relevance, while critically addressing concerns around academic integrity, intellectual property, bias, skill erosion, data privacy, and the risk of overdependence. The discussion is framed within the Nigerian higher education context, where uneven infrastructure, limited staff training, and policy uncertainty affect the pace and quality of AI adoption. The paper contends that an ethically governed integration of AI into computer graphics curricula can help Nigerian institutions produce graduates who are both technically competent and creatively adaptable. It concludes by proposing policy directions for curriculum reform, staff development, institutional guidelines, and responsible use frameworks that support innovation without compromising human creativity, authorship, or professional standards.

Keywords: Education, Graphic Design, Artificial Intelligence, Digital Development, Tertiary Education

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FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

Introduction

Every generation of graphic designers has faced a moment in which a new tool threatened to redefine, and in the eyes of skeptics, to diminish, the practice they had trained for. The shift from hand-lettering and manual paste-up to phototypesetting, the arrival of desktop publishing in the 1980s, and the subsequent dominance of Adobe Photoshop, Illustrator, and CorelDRAW each provoked resistance from practitioners who had built careers on manual craftsmanship (Crocker & Walden, 2019). In each case, the resistance eventually gave way to integration, and the tool once regarded as a threat to authentic creative labour became indispensable to the profession it was accused of undermining. Artificial intelligence, and specifically generative AI applied to image-making, layout, and ideation, represents the latest iteration of this pattern, and Nigerian graphic design education now stands at the same threshold that earlier generations of designers stood at when Photoshop first appeared in Nigerian design studios and polytechnic laboratories.

This paper takes a deliberate position that AI is not an aberration to be kept out of the graphic design and computer graphics curriculum, nor a neutral tool to be adopted without scrutiny, but an integral part of the creative industry's future that Nigerian tertiary institutions must integrate deliberately, ethically, and with proper attribution. This position is neither uncritical enthusiasm nor reflexive alarm. It is grounded in the historical observation that graphic design as a discipline has always been constituted by its tools, and this paper contends that the question facing design educators has never really been whether to adopt new technology, but how to adopt it in a manner that preserves the integrity of authorship, the rigour of

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

conceptual training, and the ethical obligations that the profession owes to originators of ideas and images.

The paper proceeds in six parts which first reviews the theoretical frameworks that make sense of technology transitions in creative fields, namely Diffusion of Innovation theory, Technological Determinism, and Walter Benjamin's theory of aura and authenticity. It then surveys the current state of AI adoption in Nigerian tertiary graphic design and computer graphics education, before weighing the pedagogical pros and professional cons of integration. The paper closes with a proposed framework for ethical adoption, covering attribution norms, curriculum safeguards, and policy recommendations for institutional and regulatory bodies, followed by a conclusion that restates the paper's central claim: AI in graphic design has come to stay, and Nigerian design education's task is to govern its use rather than deny its presence.

To be clear from the start, this paper isn't claiming that AI-generated images are as good, deep, or culturally specific as work from a trained human designer. It's also not saying that Nigerian design programs should let students use AI freely without proper instruction or attribution. And it's not arguing the opposite, that AI should be banned from studios and classrooms to protect traditional skills. History shows that banning things like this just pushes them underground, where they're used without supervision or proper disclosure, rather than getting rid of them. Instead, this paper suggests a middle ground: integrating AI as a policy, practicing transparency through disclosure, and building AI skills on a solid foundation of essential knowledge.

Literature Review and Theoretical Framework

Historical Continuity: From Manual Craft to Digital and AI-Assisted Design

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

Graphic design has undergone at least three major tool transitions since the mid-twentieth century (Rosyida et al., 2025) and understanding AI as a fourth transition rather than an unprecedented event is central to this paper's argument. The earliest of these transitions moved designers from hand-executed lettering, paste-up boards, and manual colour separation to phototypesetting and offset lithography. The second, and more disruptive to the profession's self-understanding, was the desktop publishing revolution of the 1980s, in which software displaced manual production entirely. Adobe's Photoshop, Illustrator, and later CorelDRAW were initially regarded by many trained designers as tools that would erode craftsmanship and devalue the manual skill that had defined the profession. Yet within a decade, these tools had become the default infrastructure of graphic design practice, and design curricula worldwide, including in Nigeria, restructured themselves around software competency as a core, rather than peripheral, skill. Generative AI tools for image synthesis, layout assistance, and ideation are, on this reading, not a departure from this trajectory but its continuation (Rosyida et al., 2025).

Diffusion of Innovation Theory

According to (Singh & Strzelecki, 2026), Diffusion of Innovation (DOI) theory offers the paper's first analytical lens. It contextualises diffusion as the process by which an innovation is communicated through certain channels over time among members of a social system, and identified five adopter categories, ranging from innovators and early adopters to a late majority and laggards, whose willingness to adopt a new technology depends on the innovation's relative advantage, compatibility with existing practice, complexity, trialability, and observability

Applied to educational technology specifically, DOI theory has been used to explain how faculty adopt computer technology for teaching and learning in higher education, with early

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FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

adopters distinguished from mainstream faculty by patterns of computer use, self-efficacy, and motivators to integrate new tools (Sherry & Gibson, 2002).More recent applications of DOI to language models in professional practice show that relative advantage, compatibility with existing workflows, and perceived complexity remain the decisive variables shaping whether a profession absorbs or resists an emerging technology, a pattern directly transferable to how Nigerian graphic design lecturers and students are currently approaching generative AI tools.

DOI theory is useful for this paper because it reframes the current unevenness of AI adoption across Nigerian design programmes, where some lecturers and students function as innovators experimenting freely with generative tools while others remain sceptical late adopters, not as a permanent ideological divide but as a normal and temporary stage in a diffusion curve that historically resolves toward near-universal adoption once relative advantage becomes undeniable and complexity is reduced through training and familiarity.

It is useful to acknowledge, in passing, that DOI theory is not the only lens through which scholars have examined technology adoption in education and professional practice (Turner, 2007). The Technology Acceptance Model (TAM) narrows the analysis to perceived usefulness and perceived ease of use as the two decisive predictors of whether an individual adopts a new tool (Davis, 1989), while the Unified Theory of Acceptance and Use of Technology (UTAUT) extends this further to include performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).Both models are compatible with, rather than opposed to, as the framework points toward the same practical conclusion for Nigerian design education: that adoption of AI tools among lecturers and students will accelerate to the extent that institutions can demonstrate the tools' usefulness, reduce the perceived complexity of using them well, and provide the facilitating

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
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FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

conditions, meaning infrastructure, training, and institutional endorsement, that determine whether an individually promising tool becomes a departmentally normalised practice.

Technological Determinism

"The second framework, Technological Determinism, holds that technological change is a principal force shaping social structures, cultural values, and professional practice sometimes framed strongly, as an autonomous force to which society must adapt, and sometimes framed more moderately as a factor that interacts with social context to shape both the adoption and the ultimate impact of a technology (Davis, 1989; Johnson & Wales University Online, 2020).

Softer versions of the theory acknowledge that although technology does not dictate outcomes in a strictly deterministic fashion, the social context in which a technology is adopted will have important effects on how it is used and thus on its ultimate impact, a formulation attributed to Smith and Marx (1998) and widely cited in subsequent technology-education scholarship.

A counter-tradition within technology studies, the Social Construction of Technology (SCOT) framework rejects determinism altogether, arguing instead that human actors, institutions, and social groups determine which technologies are adopted and how, such that what matters is not the technology itself but the society in which it is embedded. SCOT is a useful corrective against treating AI's rise in Nigerian design education as an unstoppable force beyond human control, and this paper draws on it precisely to insist that Nigerian institutions retain genuine agency over the terms of AI's integration, even while accepting the softer determinist claim that some degree of adoption pressure is already underway and difficult to reverse.

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
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FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

This paper takes a moderate stance, not a strong one. It agrees that AI, similar to past innovations like the printing press, desktop computers, and Photoshop, is influencing graphic design in Nigeria, and this influence cannot be ignored forever. However, it also stresses that how AI affects design education in Nigeria will depend on the social and educational setting. This includes the ethical standards, curriculum protections, and institutional rules that govern its use.

Walter Benjamin's Theory of Aura and Authenticity

The third framework is not a technology-related one but from cultural theory: which is an integral part of design, particularly in Africa. As agreed by Vassilev (2023), Walter Benjamin's 1935 essay on the work of art in the age of mechanical reproduction claimed that every work of art has an aura, a unique moment of presence in time and space that a mechanical duplication cannot replicate.

Benjamin saw the aura in the authenticity of an object, its essence from its substantive duration to its testimony to the history it has experienced (Vassilev, 2023), and believed that mechanical reproduction, most radically in film and photography, circulates images that lack this aura, as the artist's reach is expanded to those who never could have encountered the original.

This model is quite applicable for the discussions around AI-generated images. A concern that Nigerian design students and instructors have about AI – that an AI-generated poster is not quite as real as a handmade or software-generated poster – is very similar to Benjamin's concern about photos and movies 100 years ago. Benjamin wasn't only sad about this loss, he was on both sides. He knew that making copies mechanically could also be a force for change, making things more accessible. This is the same with AI, this paper suggests. Yes, there may be a loss of some of the "crafty feeliness", but there is also an opportunity to

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

produce, and use, visual communication by more people. This is particularly true of Nigeria, where design tools, education and employment opportunities are not equal.

All three frameworks contribute to organising the writing of the paper's argument dealing with the relationship between generative design, education and ethics. Nigeria's design education can be explained by the use of these new technologies using the Diffusion of Innovation theory.The Diffusion of Innovation theory explains why these new technologies can be implemented in Nigeria's design education. Technological Determinism also holds that the adoption of AI is inevitable and that the way it is managed is something that can be controlled. It also helps to defuse, or perhaps help mitigate, the sense of loss that accompanies this transition, and the sense of loss that is often enough a good enough reason to resist it, but is not enough reason to resist it, with the help of And Benjamin's theory of aura.

The Current State of AI Adoption in Nigerian Tertiary Graphic Design Education

The application of AI in higher education in Nigeria is at an early stage, uneven, and not well-managed; this is even more pronounced in the field of graphic design and computer graphics programmes. Obadiaru & Anih (2025) reported that there is currently no national policy specifically developed for the use of AI in education, which has posed challenges for the implementation of curriculum in most higher institutions, thereby leaving individual lecturers and departments to come up with their own ideas, without the coordinated guidance. However, generally, the Nigerian higher institutions are plagued by several challenges in the implementation of AI such as insufficient digital infrastructure, lack of qualified staff, expensive implementation, resistance to change, data connectivity issues, ethical and privacy concerns, and lack of a national policy framework for the use of AI (Temitope et al. 2025), which further reinforces the digital divide between the Nigerian institutions and other better-

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

resourced institutions globally. The availability of good infrastructure isn't the same everywhere in the country. Most universities in City centers such as Lagos, Port Harcourt and Benin tend to have better electricity, internet and computer hardware, particularly the well funded private institutions, and the federal funded one's. This isn't the case for schools in poorer states. The distinction is significant for graphic design and computer graphics programs which require adequate computer labs, sufficient bandwidth for cloud based AI applications and the correct software licenses. However, it seems that at the student level adoption is faster than institutional policies can follow it. When applied to design students specifically, this implies that generative AI is already embedded in students' independent design process—even if not explicitly taught in formal classroom settings—as it has been seen to impact student performance positively, even if its use has not officially become a part of formal curriculum.Ngonso et al. (2025) reported the positive impacts of AI on student performance, and if applied to design students, it implies that generative AI is already being incorporated into the students' independent design process; even though it may not have been formally integrated into the curriculum of their institutions.

At the moment, professors aren't staying on top of the use of AI in many areas. The level of awareness and skill of the academic staff varies greatly depending on eyeball tests. There are some design teachers having fun with AI to create images, motion graphics and even to create layouts, but others don't even know that their students are using these tools. This gap is somewhat similar to the entire spectrum from innovators to laggards in the Diffusion of Innovation theory. The danger exists that instruction and assessment of these tools will not align with what happens in the classroom. This is exactly what this paper is trying to solve: Students without rules or giving credit for using AI. The entire Nigerian creative economy is helpful to put in context. While AI-driven automation may be causing some job insecurity in

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

Nigeria's technology firms, as reported by Ogunsile (2025), some Nigerian creatives, including designers, writers and content creators, have been using AI tools to improve their productivity and scale their creative output, rather than to replace their jobs outright, indicating that the job destination to which Nigerian design education should be preparing students is one of AI augmented practice, not AI free or AI replaced practice, as reported by Autodesk (2025) in its push to embrace proficiency in generative AI in the design space.

The Case for Integration: Pedagogical and Professional Advantages

This is the context within which the proposals advanced in this paper must be understood; it is also where there is a real infrastructural constraint, where staff and students are not ready for the use of AI, and where there is no coordinated policy in place; but equally, it is also where AI is already a part of informal student workflows in Nigerian design classrooms and a part of the professional creative economy to which students will enter. There are appropriate guidelines on the use of AI and plagiarism in the education system for other non-creative courses. For Graphics Design, these are yet to be structurally implemented with rules and regulations for the academic curriculum.For graphic design and computer graphics units generally, informal observation in the Nigerian departments reveals that the current usage of AI is concentrated in a limited range of applications, such as generating images for mood boards and mock-ups; using AI to upscale image files or remove backgrounds as part of a commercial workflow; and the more recent applications of AI in motion graphics and video, which are the types of tools being explored by Nigerian students. By the same token, however, there is little in the way of a formal departmental framework as to the structure and disclosure of such tools, and the one aspect of current Nigerian practice that is most significant in this regard is not technological access but rather the lack of such access.

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

It is worthy to note that comparative context from other parts of Africa indicates that Nigeria is not alone in this situation. According to Wu & McAuley (2021), the use of AI in African Higher Education institutions identified across the continent, the ethical and academic integrity dimension is central and most contested, with concerns regarding authorship and integrity more prevalent than concerns of a technical or infrastructural nature with faculty and administrators. This is because, as this paper posits, the question of whether there are any AI tools to be used in Nigerian design education is no longer the urgent issue because these tools are becoming more ubiquitous, the real challenge is whether the institutions have established the ethical and pedagogical frameworks to responsibly manage their use.

Efficiency and Expanded Production Capacity

According to Chen et al., 2024, one of the most apparent benefits of AI in graphic design is its efficiency. Generative tools can take a task that used to take hours, like creating several concept variations, to make a mockup for a client to look over, or to do repetitive production jobs like removing backgrounds or colour correcting, and make it a matter of minutes. When it comes to the time Nigerian design students are in school, many are also engaged in informal income-generating design business, which means this efficiency directly equates to the capability to have more designs to show their clients, the ability to complete their short-term assignments on time and the ability to create a varied portfolio of design work (Olowoyeye ,2026)

Accessibility and Democratisation of Design Capability

In a Nigerian academic environment where access to advanced software training, mentorship and expertise is usually not well spread out between institutions and regions, AI tools reduce the technical hurdles to creating visually competent work. Like Benjamin's identification of a democratising potential in mechanical reproduction, AI-powered design tools enable students

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

to create professional-quality work even if their manual illustration skills are not as high, but with the understanding that it is an augmenting and not a replacement for conceptual and critical thinking in design.

Support for Research, Documentation, and Design Writing

In addition to visual production, AI tools can help Nigerian design students and early-career academics in the written aspects of design, which are often not well covered in studio-based design programmes, such as composing a design brief for potential clients, articulating design rationales and developing design portfolio documentation (Nanpan, 2026). When used with disclosure, this is yet another way that AI can help overcome one of the biggest problems of graphic design education; producing priority visual output rather than the written and analytical communication skills needed by practising designers for clients, employers, and academic panels.

The Case for Caution: Risks and Legitimate Concerns

Over-Reliance and the Erosion of Foundational Skill

The biggest worry in the field of graphic designing, in Nigeria and the world, is that AI technologies may result in designers who can trigger designs but are unable to actually create them; who can design a good layout but cannot articulate the compositional principle applied in the process; and who are not skilled in manual and conceptual design, as typography and illustration have always been the hallmarks of a trained designer and not a trained user of design software. The issue goes beyond sentimental thoughts as basic drawing, typography, colour theory and manual composition are the basis skills on which a designer is evaluating whether a product of their AI is good or not, and a student who has never acquired the skills of manual composition may not be able to tell the difference between a well-designed AI output and a superficially appealing but ineffective one (Hamdy, 2017). It is therefore

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

essential that curriculum design assumes that manual and conceptual foundations are a necessary phase that comes before (and not in place of) the production using AI support.

Authorship, Originality, and Intellectual Property

According to Ahmed E. et al. (2026) generative design raises a genuine and as yet unresolved authorship problem. In traditional graphic design, the final product is understood as the result of human creative activity, but generative design output is created collaboratively by a human and an AI system trained on vast repositories of existing images, many produced without the consent of the original artists, which complicates any straightforward claim to originality.

In education and the design ecosystem, legal responses to this problem particular have remained unsettled. The United States Copyright Office has consistently ruled that works generated without significant human creative contribution cannot qualify for copyright protection (Yang & Zhang, 2024), a position that has direct implications for Nigerian students producing client-facing commercial work, since a purely AI-generated logo or brand asset may not be legally defensible as the client's exclusive intellectual property in jurisdictions that adopt a similar standard.

For design education specifically, this ambiguity means that students must be taught not only how to use AI tools but how to reason about when AI-generated content requires disclosure, when it can be defensibly claimed as original work because of substantial human modification and creative direction, and when it should not be used at all in contexts requiring guaranteed originality, such as branding work intended for trademark registration (Luckin & Holmes, 2016).

Algorithmic Bias and Cultural Flattening

Because generative AI models are trained predominantly on globally aggregated image datasets weighted toward Western visual conventions (Su Park, 2024), AI-generated content

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

often lacks cultural depth and specificity, tending to default toward generic aesthetic patterns rather than reflecting the particular visual languages, symbolism, and traditions of the cultures its users belong to.This is a very real problem in Nigeria's graphic design education in particular, because the vision of Nigeria and its graphics, and the work of identity building within Nigeria are embedded in the design curriculum. The absence of reflective design practices in a course where generative tools are used to design is likely to yield technically competent designers who are not culturally differentiated against, which is one of the unique strengths that the design education in Nigeria can give the global creative economy.

Infrastructural Inequality and the Risk of a Widening Digital Divide

Because most capable generative AI tools require reliable internet connectivity, adequate computing hardware, and in many cases paid subscriptions, their integration into the curriculum risks widening rather than narrowing the gap between well-resourced and under-resourced Nigerian institutions, and between students who can afford consistent access to premium tools and those who cannot. A policy of AI integration that does not simultaneously address infrastructural and cost barriers risks converting a pedagogical opportunity into a new axis of educational inequality.

Professional Displacement Anxiety

Finally, there is a legitimate labour-market concern underlying much of the resistance to AI in design education. According to Oguanabi (2026) global analyses of job postings have shown measurable declines in demand for computer graphic artists and other creative roles coinciding with the mainstreaming of generative AI tools, and Nigerian technology-sector employment has already experienced AI-linked contraction in adjacent fields such as software development. While the same body of evidence suggests that Nigerian creatives, including designers, have so far been more likely to use AI as a productivity multiplier than

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

to be straightforwardly displaced by it, design education cannot responsibly ignore student anxiety about the durability of the profession they are training for, and this anxiety is itself a pedagogical reality that curriculum design must address directly rather than dismiss.

Assessment Integrity and the Challenge of Verification

There's another practical problem which is not necessarily related to ownership, but to the grading of designs in most departments in Nigeria, that was not geared towards an A.I. generated piece of work. This can make it difficult for the lecturer to discern the amount of design work that was completed independently by the student and that which was completed by AI. Later in the paper, the student will be required to reveal his/her use of AI. Otherwise, there's an implicit incentive for students to use AI without really having to put in the effort to develop their skills. Many programs are now concerned with the final product of the design, rather than the process, thought and steps involved in the design. But that said, disclosure must no longer be optional but rather a requirement when using AI.

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

Recommendations

1. Mandatory Attribution and Full Disclosure

Except for the call acceptance as AI in the graphic design class, it is essential to offer suggestions to do so in the academic rigour. All uses of AI in student work should be acknowledged (as with citations of generative AI for full image creation, ideation support, or producing images at a scale equivalent to "production," such as background removal or upscaling.Departments must provide a standard disclosure statement template to be attached to studio briefs and project submissions that asks students to identify any AI tools used, when in the design process they were, and what percentage of the final work product is created by the student without these tools. By personal experience, it has been found that this is not included in most tertiary institutions' graphic design program.What is being proposed should not penalize the use of AI, it should make it visible, auditable and part of the conversation about assessment, just as one always has to acknowledge stock photos, licensed fonts, or a fellow student's work.

2. Formal Referencing Style of AI Tools in Academic and Project Work

If you use AI-generated content in your design portfolio, thesis, or any written project, you need to cite it in your bibliography. Follow the current APA 7th edition guidelines for generative AI. This means listing the company that developed the tool as the author, describing the tool in brackets (like large language model or image-generation model), and providing the tool's URL.

For images created by AI, departments should also require a caption or note that includes the exact prompt you used and the tool that made the image. This is similar to how we already cite AI-generated images in academic work. Teaching this to undergraduate graphic design students in Nigeria would give them an edge. Clients and collaborators from other countries

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
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FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

are increasingly likely to expect clear attribution for AI work.If a designer further edits or works with AI-generated videos or images, they should still cite the AI tool. In these cases, list both the designer's name and the AI's name to show it was a collaborative effort. Also, for design related courses, a section, like a bibliography, should be suggested where the prompts used by the students can be seen and acknowledged in a form of reference with the format being included in the various formatting models.

3. Curriculum Safeguards That Protect Foundational Skill Acquisition

What needs to be emphasized is that AI tools cannot be used as a substitute for traditional drawing within the traditional education system, as is the case with typography, colour theory and compositional lessons. They need to be added on, after the essential skills have been learned, indicating that they need to be taught right from the beginning and reinforced. The first approach is a 'staged curriculum' model in which first and second-year students are allowed to work only with manual and traditional computer-based production, with a view to preparing students to be competent enough for them to use AI tools in their work, but only from the third year onward, as they are taught to understand and learn the vocabulary and meaning required to understand and evaluate the production of the AI tools and not simply to use them. In the process of designing the assessment, the use of AI tools should not be placed as a prerequisite for other tasks, since the design should also include aspects that are independent of the use of AI tools throughout the programme.

4. Bias Awareness and Cultural Grounding

Generative AI models often stick to visuals that are common worldwide. Therefore, students should be taught in classes to detect and correct this. Assignments should put students to the task of modifying or challenging what the AI defaults to, such as Nigerian and African styles of art, fonts and symbols associated with the region. This way, the concept of bias isn't an

JOURNAL OF ARTS OF SOCIAL SCIENCES, KONTAGORA (JASSK)
FACULTY OF ARTS AND SOCIAL SCIENCES
FEDERAL UNIVERSITY OF EDUCATION, KONTAGORA, NIGER STATE-NIGERIA
Vol. 1, No 2 September, 2026
E ISSN: 3156-5336

ethics lesson but rather a practical design process skill. Students learn to direct, manipulate and integrate AI creations within a local context rather than in a coutoure like fashion. In all cases there should be a model for internalising the usage and localisation of the outputs.

Institutional and Regulatory Policy Recommendations

There should be precise policies and guidelines within the Nigerian academic institutions that have graphic design and computer graphics programmes regarding the use of AI tools at the university level and comprehensive staff development programmes to ensure the lecturer's competence in operating the AI tools does not lag behind the students, thereby preventing any compromise on assessment integrity.

To promote coordinated policy framework by the National Universities Commission (NUC) and similar institutions responsible for the curriculum of polytechnic institutions and college of education on minimum disclosure standards and infrastructure investment priority and continuing professional development requirements for design faculty to address the current gap in national research on the readiness of Nigeria for this transition. If its use is to be considered ethical, such policy measures must be backed by investments in computing infrastructure and low-cost access to AI tools to institutions lacking adequate resources, or else, only the best resourced design programmes in Nigeria will be able to use the AI ethics.

Conclusion

The paper proposes that the introduction of Artificial Intelligence in computer graphics and Graphic design education in Nigeria is not a complete novelty but one of the recurrent pattern. Many people were skeptical of these new programs (Photoshop, Illustrator and CorelDRAW), thinking that they would be losing out on some of the personal control they felt they were in the process of losing as they moved from manual to desktop publishing, but eventually they found these programs to be a way of life and not just a reality. The

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phenomenon of adoption of AI in design education in Nigeria today with its different and heterogeneous rate of uptake is suitable for the application of the diffusion of innovation theory. The middle stance of the technological determinism theory is what makes it impossible to oppose it forever; it is not a wise thing to do as will be argued in this paper. In fact, Walter Benjamin's theory of aura is illuminating of the state of loss of all mechanical or algorithmic technologies, all technologies whose manufacturing was once in the hands of people. At the same time, this paper recognizes some of the actual risks inherent in the integration of AI: the possibility that basic skills may be neglected; that ownership of creative work and IP is not just a matter of consensus but of reality; that the output of the AI can be culturally bland; that there is a disparity in infrastructure between various institutions in Nigeria; and that the actual risks that students face in the future are what they are. By ignoring AI, it is clear that these issues will not be addressed. Need clear rules and guidelines. This includes asking for credit to be given for AI-generated content, applying standard citation formats for AI sources such as APA, developing curricula that maintain the teaching of basic skills, and implementing institutional and regulatory policies that offer explicit training on how to correct algorithmic bias. The policies should regard AI knowledge as a fundamental competence in the Nigerian design education and not an add-on.AI in graphic design is a game-changer and is set to become an integral part of the design landscape. This is not a challenge of whether Nigerian design educators should be okay with this reality, but how they can be shaped by it. The objective is to build a curriculum that effectively teaches designers how to use AI tools responsibly, ensuring proper attribution and referencing, and how to think critically, culturally and professionally about this new tool, similar to how previous generations of Nigerian designers have learnt to think about Photoshop, Illustrator and all the tools that came before.

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References

Ahmed, E., Mohamed, A., & Saaid, M. (2026). Analysis and optimization of renewable energy systems: A comprehensive review. *Renewable Energy Reports*, *5*(1), Article 100014. https://doi.org/10.1016/j.rer.2026.100014

Autodesk. (2025, June 15). *Autodesk launches 2025 AI jobs report: Demand for AI skills in design and make jobs surge*. Autodesk News. https://adsknews.autodesk.com/en/news/ai-jobs-report/

Chen, J. F., Ni, C.-C., Ni, P.-H., & Lin, R. (2024). Scientific research. *Creative Education*, *15*(3), 423–433. https://doi.org/10.4236/ce.2024.153028

Crocker, S., & Walden, D. (2019). Paul Brainerd, Aldus Corporation, and the Desktop Publishing Revolution. *IEEE Annals of the History of Computing*, *41*(3), 35–41. https://doi.org/10.1109/mahc.2019.2920174

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Hamdy, S. (2017). Teaching and learning anatomy in the digital age. *Research and Practice in Technology Enhanced Learning*, *12*(1), Article 12. https://doi.org/10.1186/s41039-017-0062-8

Johnson & Wales University Online. (2020). *Unraveling technological determinism: Navigating Big Tech's influence on society*. https://online.jwu.edu/blog/unraveling-technological-determinism-navigating-big-techs-influence-on-society/

Luckin, R., & Holmes, W. (2016). *Intelligence unleashed: An argument for AI in education*. ResearchGate. https://www.researchgate.net/publication/299561597_Intelligence_Unleashed_An_argument_for_AI_in_Education

Nanpan, J. (2026). Exploring the use of artificial intelligence in graphic designing: Opportunities, challenges, and future directions. *African Scholar Journals*, *11*(11).

Ngonso, B., Egielewa, P., Egenti, G., Uduehi, I., & Onwusinkwue, S. (2025). Influence of artificial intelligence on educational performance of Nigerian students in tertiary institutions in Nigeria. *Journal of Infrastructure Policy and Development*, *9*(1). https://doi.org/10.24294/jipd9949

Obadiaru, I., & Anih, A. A. (2025). Institutional capacity and policy gaps in ethical artificial intelligence adoption in faculties of education in Nigerian universities. *Faculty of Natural and Applied Sciences Journal of Computing and Applications*, *2*(4), 63–71. https://doi.org/10.63561/jca.v2i4.1075

Oguanabi, C. (2026, March 26). *AI and the Nigerian workforce: Which jobs are at risk and how employers should prepare*. MacTay. https://mactay.com/ai-and-the-nigerian-workforce-which-jobs-are-at-risk-and-how-employers-should-prepare/

Ogunsile, R. (2025, June 21). *AI creatives: Finding power for content innovations amid job losses in Nigerian tech space*. Naija News. https://www.naijanews.com/2025/06/21/ai-creatives-finding-power-for-content-innovations-amid-job-losses-in-nigerian-tech-space/

Olowoyeye, G. (2026). The role of information and communication technology (ICT) toward teachers education in South-West Nigeria. *European Journal of Computer Science and Information Technology*, *4*(1).

Rosyida, H., Syafei, A., & Nuha, M. (2025). The evolving field of graphic design: Challenges and opportunities in the integration of artificial intelligence. *International Journal of Game Development*, *1*(1).

Sherry, L., & Gibson, D. (2002). The path to teacher leadership in educational technology. *Contemporary Issues in Technology and Teacher Education*, *2*(2), 178–203.

Singh, S., & Strzelecki, A. (2026). Academics as adopters of generative AI: An application of diffusion of innovations theory. *Education and Information Technologies*, *31*(2), 621–645. https://doi.org/10.1007/s10639-025-13835-8

Smith, M. R., & Marx, L. (Eds.). (1998). *Does technology drive history? The dilemma of technological determinism*. MIT Press.

Su Park, Y. (2024). White default: Examining racialized biases behind AI-generated images. *Art Education*, *77*(4). https://doi.org/10.1080/00043125.2024.2330340

Temitope, A. B., Alanamu, T., Obisesan, & Oyeranti, R. (2025). Artificial intelligence in Nigerian higher education: An analysis of opportunities and threats. *International Journal of Multidisciplinary Research and Growth Evaluation*, *6*(3), 592–597. https://www.allmultidisciplinaryjournal.com/article/4267/artificial-intelligence-in-nigerian-higher-education-an-analysis-of-opportunities-and-threats

Turner, R. J. (2007). Diffusion of innovations. *Journal of Minimally Invasive Gynecology*, *14*(6), 776. https://doi.org/10.1016/j.jmig.2007.07.001

Vassilev, K. (2023). The aura of the object and the work of art: A critical analysis of Walter Benjamin's theory in the context of contemporary art and culture. *Arts*, *12*(2), Article 59. https://doi.org/10.3390/arts12020059

Wu, Y., & McAuley, J. J. (2021). *Cross-domain few-shot classification via learned feature-wise transformation*. arXiv. https://doi.org/10.62617/aie2054

Yang, S. A., & Zhang, A. H. (2024). *Generative AI and copyright: A dynamic perspective*. arXiv. https://arxiv.org/abs/2402.17801