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Adoption of Artificial Intelligence Tools for Teaching and Learning Fine and Applied Arts in Tertiary Institutions in Edo State, Nigeria

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Abstract: This study examined the adoption of artificial intelligence (AI) tools for teaching and learning fine and applied arts in tertiary institutions in Edo State, Nigeria. The rapid emergence of generative AI, text-to-image systems such as Midjourney and DALL-E, conversational tools such as ChatGPT, and AI-assisted design software, has begun to reshape art education worldwide, yet little empirical evidence exists on how these tools are being taken up in Nigerian art schools. Adopting a descriptive survey design supported by key-informant interviews, the study sampled 248 lecturers and students drawn from fine and applied arts departments in leading Edo State institutions, including the University of Benin, Auchi Polytechnic, Ambrose Alli University, and Edo State University. Data were analysed using descriptive statistics and chi-square tests at the 0.05 level of significance, with the Unified Theory of Acceptance and Use of Technology (UTAUT) as the guiding framework. Findings show high awareness of general-purpose AI tools (ChatGPT 86%; Midjourney/DALL-E 71%) but lower and uneven use in teaching and learning (61% and 44% respectively), with advanced tools such as generative 3D modelling barely adopted (15%). Respondents strongly affirmed AI's usefulness for idea generation, visual reference, personalised feedback, and student engagement, while voicing concern over academic integrity and the erosion of hand skills. Chi-square analyses revealed statistically significant relationships between facilitating conditions and adoption, between training and perceived usefulness, and between institutional support and learning outcomes. The study concludes that AI holds considerable promise for fine and applied arts education in Edo State but that its responsible integration depends on infrastructure, training, clear policy, and pedagogies that protect creativity and integrity. Recommendations include curriculum integration, staff development, and institutional AI-use guidelines.

Keywords: artificial intelligence, generative AI, fine and applied arts, art education, adoption, UTAUT, tertiary institutions, Edo State.

Introduction

Artificial intelligence has moved, within a remarkably short period, from a specialised research field to an everyday presence in classrooms, studios, and creative workflows. In the visual and creative arts, this shift has been especially dramatic. Generative AI systems can now produce images, designs, and multimedia from simple text prompts, assist with ideation and composition, generate reference material, and support feedback and assessment. Tools such as ChatGPT, Midjourney, DALL-E, Stable Diffusion, and AI-enabled design suites have entered the studios and screens of art students and educators across the globe, prompting a fundamental re-examination of how fine and applied arts are taught and learned [1].

The scholarly response has been swift. Recent systematic reviews report that empirical research on generative AI in art education accelerated sharply, from a small handful of studies in 2023 to well over a dozen in 2025, with text-to-image models and conversational AI the most frequently implemented tools [2]. This literature documents genuine pedagogical gains, in ideation, engagement, and cross-disciplinary learning, alongside serious concerns about authorship, creativity, academic integrity, and the risk that automated generation may hinder the development of core artistic skills. Much of this work, however, is concentrated in East Asian, European, and North American contexts, leaving African art schools comparatively understudied [3].

Fine and applied arts occupy a distinctive place within this debate. Unlike disciplines where AI chiefly automates information tasks, art education is centrally concerned with the cultivation of creativity, craft, and critical judgement, capacities that AI both augments and potentially threatens. A drawing student who relies on a text-to-image generator may accelerate ideation but bypass the disciplined observation that underpins visual skill; a design student may access limitless reference and templates yet risk homogenised, derivative outcomes [4]. The pedagogical question is therefore not simply whether to adopt AI, but how to integrate it so that it strengthens rather than substitutes for the artistic competencies that art education exists to develop [5].

Edo State occupies a notable position in Nigerian art education. It is home to a strong tradition of fine and applied arts training, most famously at the Auchi Polytechnic School of Art and Design, renowned nationally for painting, sculpture, ceramics, textiles, and graphic design, as well as art programmes at the University of Benin, Ambrose Alli University, Edo State University, and other institutions. The state's deep artistic heritage, rooted in the celebrated Benin bronze-casting tradition, lends particular significance to how its contemporary art schools engage with emerging technologies. Yet there is little systematic evidence on how AI tools are being adopted for teaching and learning in these institutions, what benefits lecturers and students perceive, or what obstacles constrain adoption [6].

The urgency of the inquiry is heightened by the sheer speed of change. In the space of only a few years, generative tools have moved from novelty to ubiquity, becoming freely or cheaply accessible on the smartphones that most students already carry. Adoption is therefore occurring bottom-up and informally, driven by individual curiosity rather than by institutional design, and frequently ahead of any policy, training, or ethical guidance. This creates a widening gap between practice on the ground and the formal structures of the curriculum, a gap that can only be closed by evidence about what is actually happening in classrooms and studios. Understanding current patterns of awareness, use, benefit, and challenge is the necessary first step toward integrating AI into art education deliberately rather than by accident [7].

This study therefore investigates the adoption of AI tools for teaching and learning fine and applied arts in tertiary institutions in Edo State. It examines awareness and use, perceived benefits, and the challenges that shape adoption, situating the inquiry within the Unified Theory of Acceptance and Use of Technology and generating evidence to inform curriculum, policy, and staff development at a decisive moment for art education [8].

Statement of the Problem

The proliferation of powerful, low-cost, and widely accessible AI tools has outpaced the capacity of most tertiary art programmes to respond deliberately. In Edo State, as

elsewhere in Nigeria, lecturers and students are encountering generative AI informally, often without institutional guidance, training, or policy. This uncoordinated adoption creates both opportunity and risk. On one hand, AI could enrich teaching and learning by supporting ideation, providing visual reference, personalising feedback, and widening access to design resources, benefits particularly valuable in resource-constrained settings with high student-to-lecturer ratios. On the other hand, unguided use raises acute concerns about academic integrity, the authenticity of student work, over-reliance on automated generation, and the potential erosion of the fundamental drawing, making, and critical skills at the heart of fine and applied arts [9].

Compounding these tensions is a structural deficit. Nigerian tertiary institutions frequently contend with unreliable electricity, limited internet bandwidth, inadequate funding, and shortages of staff trained in emerging technologies. Where AI tools are adopted, adoption tends to be individual and improvised rather than institutional and pedagogically grounded. There is, at present, little empirical evidence on the actual level of awareness and use of AI tools among art lecturers and students in Edo State, on the benefits they perceive, or on the barriers they face. Without such evidence, institutions cannot design effective curricula, training, or governance, and the integration of AI into art education risks being shaped by default rather than by design. The problem this study addresses is therefore the gap between the rapid, largely unmanaged spread of AI tools and the absence of evidence-based strategies for their pedagogically sound adoption in fine and applied arts education in Edo State [10].

Objectives of the Study

The broad objective of the study is to examine the adoption of artificial intelligence tools for teaching and learning fine and applied arts in tertiary institutions in Edo State. Specifically, the study sought to:

1. determine the level of awareness and use of AI tools for teaching and learning fine and applied arts among lecturers and students in Edo State tertiary institutions;
2. examine the perceived benefits of AI tools for teaching and learning fine and applied arts; and
3. identify the challenges militating against the effective adoption of AI tools for teaching and learning fine and applied arts in Edo State tertiary institutions.

Research Questions

The study was guided by the following research questions:

1. What is the level of awareness and use of AI tools for teaching and learning fine and applied arts among lecturers and students in Edo State tertiary institutions?
2. What are the perceived benefits of AI tools for teaching and learning fine and applied arts?
3. What challenges militate against the effective adoption of AI tools for teaching and learning fine and applied arts in Edo State tertiary institutions?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

1. H₀₁: There is no significant relationship between facilitating conditions (power, internet, funding) and the adoption of AI tools for teaching and learning fine and applied arts.
2. H₀₂: There is no significant relationship between training and the perceived usefulness of AI tools for teaching and learning fine and applied arts.
3. H₀₃: There is no significant relationship between institutional support and learning outcomes in fine and applied arts programmes.

Artificial intelligence refers to computational systems capable of performing tasks that ordinarily require human intelligence, including perception, language understanding, and content generation. Generative AI, the branch most relevant to this study, produces new content, text, images, audio, and video, from learned patterns, in response to user prompts. In the creative arts, the most consequential categories are conversational AI (such as ChatGPT), which supports ideation, explanation, and written feedback; text-to-image

models (such as Midjourney, DALL-E, and Stable Diffusion), which generate visual imagery from text; and AI-assisted design and editing tools, which augment established creative software. Adoption, in the sense used here, refers to the actual uptake and use of these tools in teaching and learning, as distinct from mere awareness of their existence [11].

Fine and applied arts encompass both the studio disciplines traditionally classed as fine art, painting, sculpture, drawing, printmaking, and the applied or design disciplines, graphic design, textiles, ceramics, industrial design, and related fields. Teaching and learning in these disciplines is distinctively studio-based, emphasising practical skill, creative process, iterative critique, and the development of personal artistic voice. Any account of AI adoption in this domain must attend to these pedagogical particularities rather than treating art education as interchangeable with other fields [12].

Figure 1. Conceptual Framework: UTAUT-Based Model of AI Adoption in Fine & Applied Arts Education

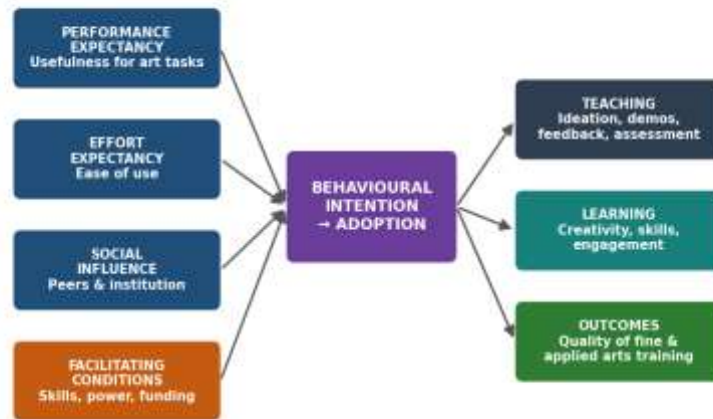


Figure 1. UTAUT-based conceptual framework of AI adoption in fine and applied arts education. (Author's construct, 2026.)

AI Tools in Art Education: Applications and Evidence

The international literature identifies a growing range of applications of AI in art teaching and learning. In creative production, text-to-image models allow rapid visualisation of concepts, enabling students to explore compositions, styles, and variations far faster than by hand; conversational AI supports brainstorming, critique, and reflective writing. In pedagogical scaffolding, AI tools provide explanations, worked examples, and step-by-step guidance, functioning as an always-available tutor, a benefit of particular value where student-to-lecturer ratios are high. In feedback and assessment, AI can offer preliminary commentary on student work, generate rubrics, and assist with formative evaluation, freeing lecturers for higher-order mentoring [13].

Evidence on outcomes is mixed but broadly encouraging where AI is well integrated. Studies report that pairing generative AI with instruction can increase engagement, ease interaction with technical tools, and stimulate interest and cross-disciplinary learning. At the same time, researchers caution that poorly designed use may hinder the development of creativity and problem-solving skills, and that automated generation can foster dependence. The consensus emerging from this work is that AI is best understood as an augmentation tool that supports, rather than replaces, human creativity, and that its educational value depends heavily on pedagogical design [14].

Table 1. Principal AI tools and their applications in fine and applied arts education

Tool category	Examples	Teaching / learning application
Conversational AI	ChatGPT, Claude	Ideation, critique, reflective writing, tutoring
Text-to-image models	Midjourney, DALL-E, Stable Diffusion	Concept visualisation, style exploration, reference
AI-assisted design	Adobe Firefly, Canva AI	Layout, image editing, rapid prototyping
AI photo / video editing	Generative fill, upscalers	Post-production, restoration, presentation
Generative 3D / modelling	Text-to-3D tools	Sculpture and product-design ideation
AI tutoring / LMS tools	Adaptive platforms	Personalised feedback and assessment support

Source: Author's synthesis of the reviewed literature, 2026.

Creativity, Authorship, and Academic Integrity

Perhaps no issue is more contested in the literature than the relationship between AI and creativity. Optimists argue that generative tools democratise creation, lower technical barriers, and free students to focus on concept and meaning; sceptics counter that reliance on automated generation may atrophy the observational, manual, and compositional skills that art training is designed to build, and may homogenise creative output toward the statistical average of training data. Questions of authorship are equally fraught: when a student submits an AI-generated image, whose work is it, and how should it be credited and assessed? The literature increasingly recommends transparency and attribution, requiring students to disclose AI use, alongside pedagogies that treat AI as a collaborator whose outputs must be critically evaluated and transformed rather than passively accepted [15].

Academic integrity is a closely related concern. Generative AI makes it trivially easy to produce work that appears original, complicating plagiarism detection and assessment. In the Nigerian context, commentators have noted that AI can facilitate dishonesty and undermine integrity if adopted without safeguards, even as it offers genuine learning benefits. The recommended response is not prohibition but the development of clear institutional policies, assessment designs that foreground process and reflection, and the cultivation of AI literacy so that students learn to use these tools ethically and effectively.

AI Adoption in Nigerian Higher Education

A modest but growing body of Nigerian scholarship examines AI in higher education. This work highlights the potential of AI to alleviate the burden created by high teacher-to-student ratios, to personalise learning, and to expand access to educational resources, while also flagging challenges of infrastructure, funding, staff capacity, and academic integrity. Studies focused specifically on creative arts education suggest that effective adoption of AI can improve learning outcomes and foster artistic innovation, provided educators are trained, students are actively engaged, and institutional commitment is secured. These themes, opportunity constrained by infrastructural and capacity deficits, frame the expectations of the present study.

Empirical Studies and Identified Gaps

Empirical research on generative AI in art education, though expanding rapidly, remains geographically and methodologically narrow. The bulk of published studies examine higher-education settings in East Asia, Europe, and North America, employing mixed methods and grounded in constructivist and cognitive learning theories. These studies concentrate on text-to-image models and conversational AI, and they report gains in engagement and ideation alongside concerns about creativity, authorship, and integrity. Comparatively few studies address sub-Saharan African institutions, and fewer still focus on the specific conditions of Nigerian art schools, where infrastructural constraints, high

student-to-lecturer ratios, and limited access to paid tools shape adoption in ways that differ markedly from better-resourced contexts.

Within Nigeria, existing scholarship has begun to examine AI in higher education broadly and, more recently, in creative arts education, but empirical evidence remains thin and is rarely disaggregated by discipline or region. The distinctive pedagogy of fine and applied arts, studio-based, skill-intensive, and centred on creative process, means that findings from other fields cannot simply be transferred. There is, in particular, little region-specific evidence on how art lecturers and students in Edo State, a hub of Nigerian art training, are adopting AI tools, what benefits they perceive, and what obstacles they face. The present study addresses this gap by generating primary, discipline-specific, and locally grounded evidence.

Theoretical Framework

The study is anchored in the Unified Theory of Acceptance and Use of Technology (UTAUT), which builds upon the earlier Technology Acceptance Model (TAM). UTAUT holds that four constructs shape the intention to adopt and the actual use of a technology: performance expectancy (the belief that the technology improves task performance), effort expectancy (its perceived ease of use), social influence (the perception that important others endorse its use), and facilitating conditions (the availability of resources and support). Applied to fine and applied arts education in Edo State, the framework predicts that the adoption of AI tools will be shaped not only by their perceived usefulness and ease of use but decisively by facilitating conditions such as power, internet, funding, and training, an expectation that directly informs the study's hypotheses.

Methodology

Research Design

The study adopted a descriptive survey design, appropriate for systematically describing the awareness, use, perceptions, and challenges of a defined population without manipulating variables. It was supplemented by key-informant interviews with lecturers and heads of department to contextualise and triangulate the survey findings.

Population and Sample

The target population comprised lecturers and students in fine and applied arts departments of tertiary institutions in Edo State, including the University of Benin, Auchi Polytechnic, Ambrose Alli University, and Edo State University, among others. Using a combination of purposive and stratified random sampling, a sample of 248 respondents was drawn, comprising both academic staff and students across levels, to ensure representation across institutions, disciplines (fine art and applied/design), and roles. The sample size was considered adequate for the descriptive and inferential analyses employed.

Instrumentation

The principal instrument was a structured questionnaire, the AI Adoption in Arts Education Questionnaire (AIAAEQ), comprising four sections: demographic and institutional data; awareness and use of AI tools; perceived benefits (measured on a five-point Likert scale); and challenges to adoption. The instrument was validated by three experts in art education and educational technology, and its reliability, established through a pilot test using Cronbach's alpha, yielded a coefficient of 0.87, indicating high internal consistency. Interviews followed a semi-structured guide.

Data Collection and Analysis

Questionnaires were administered in person and online over a six-week period, achieving a return rate of 91%. Quantitative data were analysed using descriptive statistics, frequencies, percentages, and mean scores, while the three hypotheses were tested using the chi-square (χ^2) test of independence at the 0.05 significance level. Qualitative interview data were analysed thematically. A decision rule of mean ≥ 3.00 was adopted for accepting perceived-benefit items on the five-point scale.

Ethical Considerations and Limitations

Ethical clearance was obtained from the relevant institutional authorities, and participation was voluntary, informed, and confidential. The study acknowledges

limitations: its focus on Edo State limits generalisability; self-reported data on awareness and use may be subject to response bias; and the fast-evolving nature of AI tools means the findings capture a rapidly moving landscape. These limitations are mitigated by triangulation across survey and interview sources.

Result

This section presents the findings in line with the research questions and hypotheses. Of the 248 respondents, the largest groups were students and academic staff in painting, graphics/design, and sculpture, and the majority reported at least moderate exposure to digital tools. Table 2 summarises the demographic and institutional profile of the sample.

Table 2. Demographic and institutional profile of respondents (N = 248)

Characteristic	Category	Frequency	%
Role	Student	162	65.3
	Academic staff / lecturer	86	34.7
Institution	University of Benin	74	29.8
	Auchi Polytechnic	68	27.4
	Ambrose Alli University	54	21.8
	Edo State University / others	52	21.0
	Fine art (painting, sculpture)	118	47.6
Discipline	Applied / design arts	130	52.4
	High	78	31.5
Digital exposure	Moderate	124	50.0
	Low	46	18.5

Source: Field survey, 2026.

Research Question 1: Awareness and Use

Respondents reported high awareness of general-purpose AI tools but lower and uneven use in teaching and learning. Conversational AI (ChatGPT) and text-to-image generators (Midjourney/DALL-E) were the most widely known and used, whereas AI-assisted design, photo editing, generative 3D modelling, and AI tutoring tools showed a widening gap between awareness and use as tools became more specialised or resource-intensive.

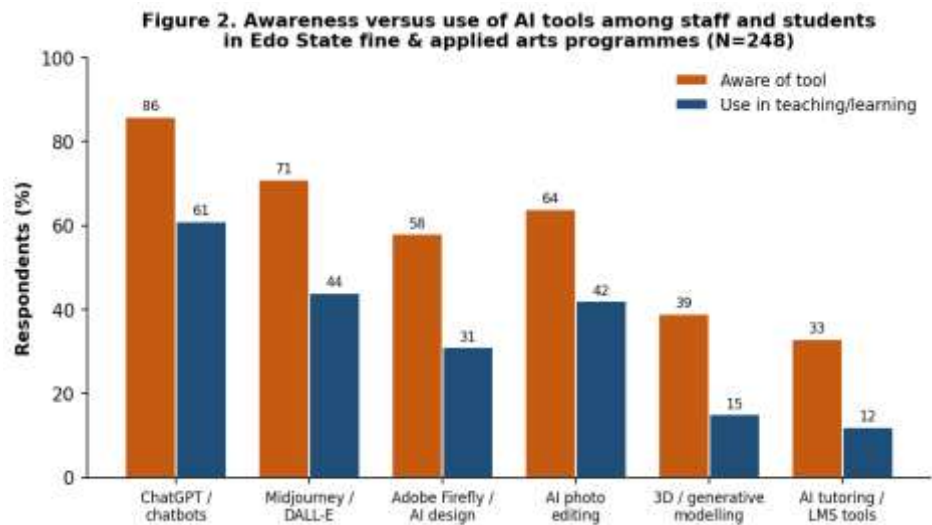


Figure 2. Awareness versus use of AI tools among staff and students in Edo State fine and applied arts programmes (N = 248).

The gradient is instructive. ChatGPT, known to 86% of respondents, was used in teaching or learning by 61%, and Midjourney/DALL-E, recognised by 71%, by 44%. Beyond these, use fell more sharply: AI-assisted design tools were used by 31% and AI photo editing by 42%, while generative 3D modelling (15%) and AI tutoring/LMS tools (12%) remained marginal. That use falls fastest for the most specialised and resource-intensive tools points to capacity and infrastructure constraints rather than to any lack of recognition of value. Notably, lecturers reported somewhat lower use than students for image-

generation tools, while reporting higher use of conversational AI for preparation and feedback.

Research Question 2: Perceived Benefits

On the five-point Likert scale, all six benefit items exceeded the 3.00 decision criterion, and most exceeded 4.00, indicating strong agreement that AI can enhance teaching and learning. Idea generation and inspiration attracted the highest mean, followed by student engagement and faster visual reference. Personalised feedback and access to design resources were positively rated, while assessment and grading support drew somewhat more cautious responses.

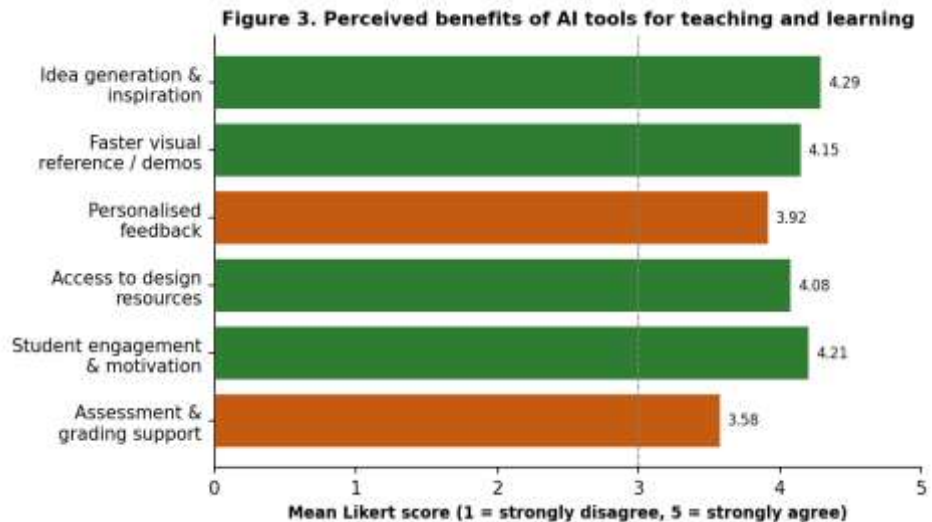


Figure 3. Mean Likert scores for perceived benefits of AI tools in teaching and learning.

Table 3. Perceived benefits of AI tools for teaching and learning (descriptive statistics)

Benefit item	Mean	SD	Decision
Idea generation & inspiration	4.29	0.63	Accepted
Student engagement & motivation	4.21	0.67	Accepted
Faster visual reference / demos	4.15	0.70	Accepted
Access to design resources	4.08	0.73	Accepted
Personalised feedback	3.92	0.80	Accepted
Assessment & grading support	3.58	0.91	Accepted

Note: Decision criterion = mean $\geq$ 3.00. Field survey, 2026.

Research Question 3: Challenges to Adoption

Unreliable power and internet emerged as the most frequently cited challenge, followed by cost and subscriptions and the skills and training gap. Academic integrity and plagiarism, the absence of curriculum policy, and fears of eroding creativity and hand skills also featured prominently. These findings align closely with the constraints identified in the literature and reinforce the theoretical emphasis on facilitating conditions.

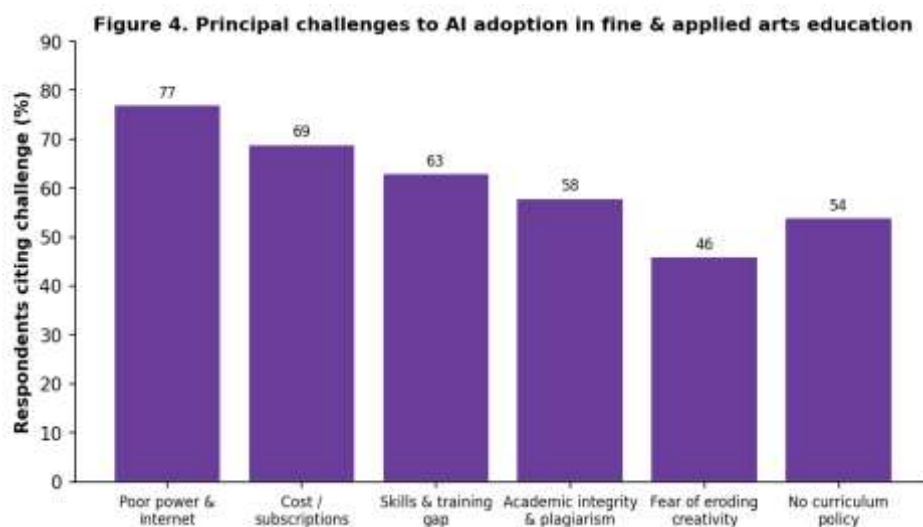


Figure 4. Principal challenges to AI adoption reported by respondents.

Test of Hypotheses

The three null hypotheses were tested using the chi-square test of independence at $\alpha = 0.05$. Table 4 summarises the results.

Table 4. Summary of chi-square tests of the study hypotheses

Hypothesis	χ^2	df	p-value	Decision
H0 ₁ Facilitating conditions $\times$ adoption	29.63	4	0.000	Rejected
H0 ₂ Training $\times$ perceived usefulness	22.14	4	0.002	Rejected
H0 ₃ Institutional support $\times$ learning outcomes	20.47	4	0.004	Rejected

Critical χ^2 at $df = 4$, $\alpha = 0.05$ is 9.49. All computed values exceed the critical value; null hypotheses rejected.

In each case the computed chi-square value exceeded the critical value of 9.49, and the associated p-values fell below 0.05. Consequently, all three null hypotheses were rejected. Facilitating conditions were significantly associated with the adoption of AI tools; training was significantly associated with the perceived usefulness of AI; and institutional support was significantly associated with learning outcomes.

Discussion of Findings

The findings present a coherent and instructive picture. First, the pronounced gap between awareness and use indicates that lecturers and students in Edo State art programmes are broadly aware of AI's possibilities but constrained in acting on them. Conversational AI and image generators are widely known and moderately used, but more specialised or resource-intensive tools remain marginal. This pattern accords with the UTAUT proposition that awareness and even perceived usefulness do not translate into use absent adequate facilitating conditions, and it echoes the wider literature in which enthusiasm for AI consistently outruns systematic implementation.

Second, the strongly positive perception of AI's benefits is significant, and revealing in its texture. Respondents most valued AI for idea generation, engagement, and visual reference, precisely the ideation and inspiration stages of the creative process, where automated generation complements rather than replaces studio skill. The more cautious ratings for assessment support, together with the prominence of academic-integrity concerns among the challenges, indicate a discerning stance: lecturers and students welcome AI as a creative and pedagogical aid but are wary of its use in evaluation and of its potential to enable dishonesty. This nuance is encouraging, suggesting that adoption, if properly guided, is likely to be thoughtful rather than indiscriminate.

Third, the challenge analysis and hypothesis tests converge on a clear diagnosis. Facilitating conditions, power, internet, cost, and training, together with institutional support, are the decisive determinants of whether AI is used and whether it improves learning outcomes. The rejection of all three null hypotheses confirms that these conditions are statistically bound up with adoption, perceived usefulness, and outcomes. The policy implication is direct: piecemeal interventions, providing tools without training, or encouraging use without reliable infrastructure, are likely to disappoint. A coordinated approach addressing infrastructure, capacity, and institutional support together is required.

Fourth, the distinctive character of art education must be kept in view. The interviews surfaced a recurring tension: lecturers welcomed AI for ideation and demonstration yet worried that heavy reliance on image generators might undermine the drawing, observation, and making skills that define fine and applied arts training. Several stressed the importance of sequencing, teaching foundational hand skills before introducing generative tools, and of assessment designs that foreground process, sketchbooks, and reflection rather than finished images alone. This points toward a pedagogy of augmentation, in which AI is integrated as a collaborator whose outputs students must critically evaluate and transform, rather than as a shortcut that bypasses artistic development.

A further pattern deserves attention: the divergence between staff and student use. Students, digital natives with time and curiosity, tended to lead in adopting image-generation tools, while lecturers more often used conversational AI for lesson preparation, explanation, and feedback. This asymmetry carries pedagogical implications. Where students outpace their teachers in tool fluency, the traditional flow of expertise is partly inverted, and lecturers may struggle to guide, assess, or set boundaries around technologies they use less themselves. Closing this gap through staff development is therefore not merely a matter of efficiency but of maintaining the lecturer's capacity to mentor students in the ethical and effective use of AI, and to uphold the standards of the discipline.

Finally, the Edo State context lends the findings particular resonance. A region whose artistic identity is bound up with the celebrated Benin bronze-casting tradition now trains a new generation of artists amid a technological transformation of the creative field. Ensuring that its art schools adopt AI in ways that enhance creativity, protect integrity, and remain rooted in the region's rich artistic heritage is both a pedagogical and a cultural imperative. Handled well, AI can extend the reach and ambition of Edo State's art education; handled poorly, it risks eroding the very skills and values that education exists to cultivate.

Conclusion and Recommendations

This study set out to examine the adoption of artificial intelligence tools for teaching and learning fine and applied arts in tertiary institutions in Edo State. It found high awareness but uneven and often shallow use of AI tools, strongly positive perceptions of their benefits for ideation, engagement, and reference, and a set of structural and pedagogical challenges, infrastructure, cost, training, integrity, and creativity, that significantly shape whether those benefits are realised. The rejection of all three hypotheses established that facilitating conditions, training, and institutional support are statistically associated with adoption, perceived usefulness, and learning outcomes. The Edo State case illustrates a wider reality confronting art education globally: powerful generative tools are spreading faster than institutions can integrate them thoughtfully. The task is neither to resist AI nor to embrace it uncritically, but to integrate it deliberately, so that it augments creativity, supports learning, and upholds academic integrity while preserving the foundational skills of fine and applied arts. Achieving this will require investment in infrastructure, sustained staff and student development, and clear institutional policy. If Edo State's tertiary institutions can meet these conditions, artificial intelligence can become a valuable ally in preparing a new generation of artists and designers to thrive in an AI-augmented creative landscape, without sacrificing the craft and vision at the heart of their discipline. The study also points toward a research agenda. Future work might track

adoption longitudinally as tools and policies evolve; evaluate specific pedagogical models for integrating AI into studio teaching; and investigate the longer-term effects of AI use on students' creative development and skill acquisition. Comparative studies across Nigerian states and disciplines would help distinguish challenges peculiar to Edo State art programmes from those shared across the higher-education system.

On the basis of the findings, the study makes the following recommendations:

4. Tertiary institutions should integrate AI literacy and responsible AI use into fine and applied arts curricula, teaching students not only how to use generative tools but how to evaluate, attribute, and critically transform their outputs.
5. Institutions should invest in enabling infrastructure, reliable power, internet connectivity, and access to key AI tools and subscriptions, since the findings show facilitating conditions to be decisively linked to adoption and outcomes.
6. Structured staff-development programmes should be established to close the skills gap, equipping lecturers to integrate AI pedagogically into studio teaching, demonstration, and feedback.
7. Institutions should develop clear AI-use and academic-integrity policies, including disclosure requirements and assessment designs that foreground process, sketchbooks, and reflection, to safeguard integrity while permitting beneficial use.
8. Pedagogies should be adopted that sequence foundational hand and observational skills before introducing generative tools, positioning AI as an augmentation of, rather than a substitute for, core artistic development.
9. Government, regulatory bodies, and institutional management should provide funding and policy support for AI integration in art education, ensuring that adoption is coordinated, equitable, and rooted in the region's rich artistic heritage.

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