
PAINTING EDUCATION IN NIGERIA SCHOOLS: NAVIGATING CHALLENGES AND EXPLORING FRESH REALITIES

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Abstract

This study explores the complex challenges and emerging opportunities in painting as a specialized skill in education in Nigeria. In the face of economic instability, the quality of education, particularly in painting, is affected. This impacts graduates' employability and their embedded potential influence on national development. The study employs a descriptive survey research design, focusing on painting students at the Federal College of Education (Technical) Akoka. A simple random sampling technique was employed to select thirty respondents as a representative sample. To guide the study, three (3) research questions were analyzed by the author in line with the stated objectives of the study. A primary and secondary source of data were utilized. The data used employed the mean and simple percentage. It identifies key obstacles to painting as a cause of study and career as inadequate infrastructure, insufficient studio equipment, a lack of scholarship opportunities, and limited integration of digital technologies. Using the Resources and Appropriation Theory (RAT) model by van Dijk, the research highlights the potential of technological literacy and ICT integration to transform art education by fostering creativity, innovation, and critical thinking. The findings stress the need to address infrastructural shortcomings and advocate for comprehensive support from stakeholders. The study also emphasizes the importance of adapting to new realities by incorporating artificial intelligence, digital tools, and pedagogical digitalization to create a more resilient and forward-looking art education system. The research concludes with specific recommendations to improve the educational landscape. This includes upgrading studio facilities, increasing government support, providing better access to scholarships, and promoting technological literacy among students and educators.

Keywords: Navigating, Painting Education, exploration, Impending Challenges, Fresh Realities.

Introduction

In the ever-evolving realm of painting education, navigating impending challenges and exploring new realities has become imperative for educators, practitioners, and learners alike. The landscape of artistic

pedagogy continually shifts, and it is influenced by technological advancements, societal changes, and the evolving needs of students. As we approach a new era, it is crucial to critically examine the challenges that lie ahead and embrace the opportunities

presented by emerging realities. Painting courses in Nigerian universities and art schools typically cover art history, drawing, color theory, composition, and various painting techniques. They also emphasize studio practice and critique sessions. Prominent institutions offering painting courses include the University of Lagos, Obafemi Awolowo University, Ahmadu Bello University, University of Benin, Auchi Polytechnic and Yaba College of Technology. Bachelor's degree programme usually span four years, while diploma and certificate programme may take one to three years. Painting as a course in Nigeria provides a comprehensive education in the visual arts, preparing students for various career paths such as Professional Artist, Art Educator, Art Therapist, Commercial Artist, Illustrator and Cultural Institution. While the field offers significant opportunities, it also requires dedication and adaptability to succeed in a competitive market. Throughout history, painting education has been fascinating and diverse due to its intricate link to how art has evolved and how people have been taught to create it. Although people learned to paint in informal ways long ago, structured painting education that we are familiar with in contemporary society emanated during the Renaissance period in Europe.

Interestingly, painting education keeps changing to keep up with how our culture, technology, and society evolve. Despite the engagement with traditional painting techniques, innovative approaches that are in line with digital emergence are finding their

way into the painting profession. This led to diverse ways of thinking about art and the adaptation of ideas from other fields. Smith (2018) posits that incorporating digital tools and new media into painting education poses challenges for traditional teaching methods and curriculum design. Limited funding and resources for art programs therefore can hinder access to quality Painting education, particularly in the developing world (Johnson, 2019). Addressing issues of diversity and inclusivity within the Painting education curriculum and pedagogy is nonetheless part of an essential ingredient to creating equitable learning environments (Garcia, 2020). Providing students with adequate preparation for diverse career paths in the arts industry therefore presents a challenge for painting education programs (Brown, 2021). Also, adopting teaching methods and pedagogical approaches to meet the needs of a diverse student population and evolving artistic practices tends to be an ongoing challenge (Lee, 2017).

It is imperative that all stakeholders, including academics, focus on overcoming these hurdles and be responsible for navigating the upcoming problems. To rebrand painting education which is a vital unit in visual art that emphasizes creativity, innovation, and critical thinking in Nigeria, looming challenges need consideration, and novel realities deserve to be investigated. Therefore, this article attempts to investigate measures to navigate imminent challenges and suggest ways of exploring new realities in painting education. The study further examines artificial intelligence (AI), ICT

integration, and pedagogical digitalization in order to encourage new art approaches.

Objectives of the study

The objectives of this study are to:

1. identify impending challenges of painting education.
2. examine considerations towards the challenges of painting education in Nigeria.
3. identify adoptable and suggestive realities for the teaching and learning of painting education in Nigeria.

Research Questions

The study answered the following research questions:

1. What are the impending challenges facing painting education in Nigeria?
2. How do we navigate impending challenges facing painting practice in Nigeria?
3. What are the new realities of teaching painting in Nigeria?

Methodology

This study hinges on a descriptive survey research design. The population comprises of painting students at the Federal College of Education (Technical) Akoka. A simple random sampling technique was adopted in

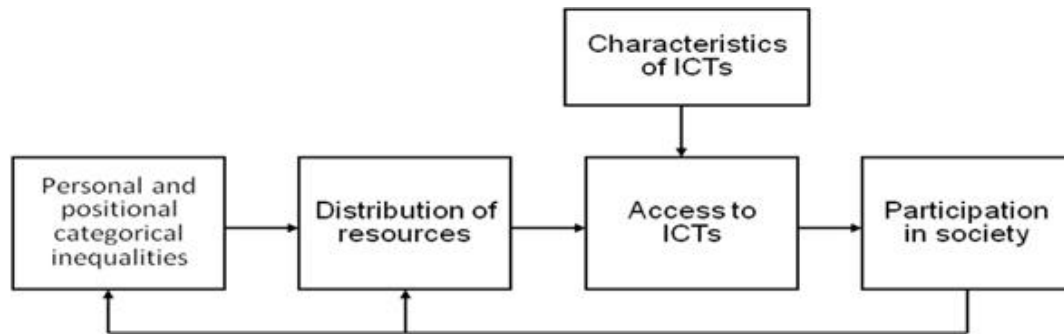
selecting 30 respondents as a representative sample for the selected institution. Primary and secondary sources of data were adopted. A structured questionnaire divided into three (3) parts of thirty (30) items was used to obtain data from respondents for the study. The instrument used for the study was submitted to experts with ph.D qualifications in the fields of visual arts and measurement and evaluation for reliability and validation. The questionnaire for this study was designed using a four-point Likert rating scale classified as “Strongly agree”, “Agree”, “Strongly disagree” and “Disagree”. Mean and simple percentile were used to analyze the data collected.

Theoretical Framework

This study hinges on the RAT Model by van Dijk, 2005.

The RAT model identifies three educational uses of ICT, namely, replacement, amplification, or transformation, and shows the connections between four social elements: categorical inequalities, resource distribution, access to ICT, and participation in society (Van, 2005), as indicated in Figure 1 below. It is a theory useful for examining the use of digital tools amidst lack of resources in a country like Nigeria.

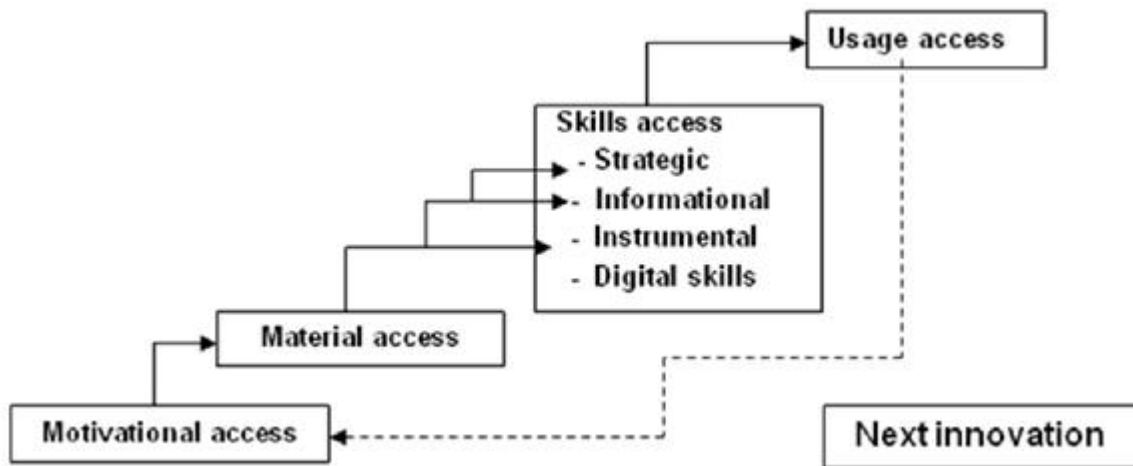
Figure 1: A causal model of resources and appropriation theory (Van, 2005)



Van (2005) through his model suggested that societal inequalities lead to unequal distribution of resources, resulting in unequal access to ICT resources. He identified four types of independent access: motivational, physical, skills, and usage access. Usage

access refers to people's use of, or interaction with, digital tools (involving hardware, software, or content) that support or oppose access (Tuslime et al., 2019), as shown in Figure 2 below.

Figure 2: Successful access to digital technology (van Dijk, 2005, p. 22)



Van (2005) affirmed that usage access can be described in terms of actual use, time usage or frequency, usage diversity, broadband use, and creative use. This study explored usage access in higher education for the FAA

lecturers, focusing on physical access, time usage, usage diversity, broadband use, and creative engagement. Physical access includes hardware, software, and the internet, whereas time usage relates to the frequency

of use of digital tools. Usage diversity relates to how visual arts lecturers use digital tools; broadband use can support new applications and online activities. Creative engagement relates to users creating digital content and ideas to enhance the learning experience. Understanding the specific ways and processes in which visual arts lecturers use

Literature Review

Painting Education and Technological Literacy

Technological literacy is all about information and application in today's digital world. It means not just knowing how to use gadgets and apps, but also understanding how they work and thinking critically about them. Being technologically literate indicates that the individual is comfortable in navigating the digital landscape. "Technological literacy" refers to the ability to effectively utilize, manage, understand, and assess technology, particularly digital tools. "It involves critical thinking about technological matters, understanding the essence of technology, and engaging with devices or objects in a practical manner" (Luckay, 2022).

The reality of approaches now is that software apps, modern tools, and tech gadgets are helpful for teaching and learning in new ways. They are great because they make teaching methods stronger, simplify

digital technology artistically is crucial for understanding creative use and the dynamic interplay of knowledge in teaching and learning visual arts. The rationale for the selection of this theory is to sensitize visual arts academics on the need to navigate impediments and leverage new realities in painting education.

what we learn, help share information better, improve how teachers and students interact, make it easier to evaluate, and assess learning, and help store and find information when we need it. To enhance students' abilities, the learning environment must support the cultivation of technological literacy (Latorre-Cosculluela et al., 2021). Tools like computers, projectors, and software are the result of technological advancements, and being technologically literate can range from using ICT simply without fully understanding its complexities to engaging with it in a more sophisticated manner (Collier-Reed, 2006). This level of comprehension allows instructors, such as those in Fine and Applied Arts (FAA) programs in higher education, to discern and choose appropriate digital tools for teaching and learning.

There is often confusion between technological literacy and computer literacy (Ajayi, 2018; Kola & Azeez, 2023; Okuntade, 2020), but technological literacy

encompasses more than just computer skills (Luckay, 2022). According to Collier-Reed (2006), technological literacy involves the ability to use, manage, understand, and evaluate technology, encompassing how individuals think and interact with technological artifacts. This level of understanding implies that educators and learners should be able to select suitable digital resources (such as computers, cameras, projectors, smartphones, and software like Adobe Photoshop Sketch, Illustrator, and Portrait Gridding Apps) for educational, especially painting processes and purposes. The reality of skills and knowledge now is to maximize student/learner's competencies. The learning environment should foster the development of technological literacy (Latoore-Coscolluela et al., 2021). Artists who actively engage with emerging digital technologies often exhibit an elevated level of technological literacy (Luckay, 2022), leading to artistic innovations such as the manipulation of media content or the creation of entirely new forms of art. While these technologies have expanded artistic possibilities, they have also led to challenges such as the dilution of artistic originality due to widespread access to reproductions and material manipulations via the internet and other modern gadgets.

By incorporating technology into the teaching process, the development of skills and competencies in this area can better prepare students in Nigeria for future careers. This is because using technology in art classes means not only becoming proficient with computers but also becoming digitally literate in media handling by creating contemporary paintings and digital arts. According to the guidelines from the International Society for Technology in Education (ISTE, 2016), "effective teaching of digital literacy includes 'hands-on' exploration of digital tools, collaborative problem-solving tasks, and thoughtful analysis of digital media." Contemporary painting education and exploration therefore require technological strategies to embed the requisite skills and desired outcome in Nigeria's landscape. In a nutshell, digital literacy is vital in navigating the complexities of painting education and skills in the present era in Nigeria. The current reality is that by exposing and providing individuals/learners with the ability to engage critically with digital technologies, educators dispense fresh opportunities for learners' knowledge, and responsibilities, and empower digital citizens in our evolving nation.

Artificial Intelligence (AI): A new reality in painting education and career

Integrating artificial intelligence (AI) into painting education has marked a significant change in art pedagogy, embracing fresh perspectives and opportunities. AI technologies for example introduced inventive tools and methodologies that complement conventional teaching techniques, fostering creativity and broadening avenues for artistic expression. Below are suggestive ways AI could be adopted in painting education in Nigeria.

- **Generative Art:** AI algorithms can produce original artwork based on predefined parameters or training data, a practice known as generative art. This enables artists to explore fresh aesthetic avenues and expand their creative range. For example, Google's "Deep Dream" algorithm generates surreal and dream-like images through neural network processing (Mordvintsev et al., 2015).
- **Artistic Style Transfer:** Through techniques like neural style transfer, AI empowers artists to apply the visual style of one artwork to another. This encourages students to experiment with various artistic styles and techniques, fostering creativity and exploration in painting education. Research conducted by Gatys et al. (2016) illustrates the effectiveness of

neural style transfer in producing captivating artistic outcomes.

- **AI-Powered Critique and Feedback:** AI systems can analyze artworks and offer constructive feedback to artists based on criteria such as composition, color theory, and brushwork. This AI-driven critique aids students in identifying areas for improvement and honing their artistic abilities. For instance, a study by Cornish et al. (2020) delves into the utilization of AI for providing feedback on digital paintings.
- **Virtual Reality (VR) Painting Studios:** VR technologies integrated with AI-driven tools provide immersive painting experiences that replicate real-world environments, enabling artists to create in three-dimensional space. Platforms like Google's Tilt Brush offer VR painting tools, allowing artists to sculpt and paint in a virtual setting.

Impending Challenges Facing Painting Art Education

Technological Integration: Incorporating digital tools and new media into painting education poses challenges for traditional teaching methods and curriculum design (Smith, 2018). The challenge comes from the necessity to adjust traditional teaching

methods to fit the special features and advantages of digital technology while keeping the essence of traditional artistry intact. In traditional painting, there's a focus on the hands-on experience of using materials like brushes on canvas and blending pigments. This tactile sensation can sometimes be missing in digital painting. Teachers need to figure out how to keep that feeling of painting by hand while also using digital tools to boost creativity.

Moreover, the availability and cost of digital tools can be tough for students from different economic backgrounds. Unlike traditional painting supplies, which are usually easy to get and affordable, digital tools like graphic tablets, software licenses, and computers can be expensive to buy. With these obstacles, bringing digital tools into painting classes opens up chances for new ideas, teamwork, and exploring different subjects in Nigeria. By carefully facing these challenges head-on, teachers can tap into the exciting possibilities of digital technology to make learning better for budding artists in today's digital world.

Funding and Resources: Limited funding and resources for art programs can hinder access to quality painting education, particularly in underserved communities (Johnson, 2019). Limited funding and resources for art programs pose significant challenges, especially in developing

communities. This can lead to a lack of essential materials, equipment, and specialized instruction needed for quality painting education. Consequently, students may have limited opportunities to explore their creativity and develop artistic skills. These issues are particularly pronounced in underserved areas, where socio-economic disparities may already hinder access to educational resources. Without adequate support for art education, students miss out on valuable learning experiences that foster critical thinking, creativity, and self-expression. This perpetuates inequities in the art world, as students from underserved communities lack the training and resources to pursue careers in the arts, exacerbating existing disparities in representation and access. To address these challenges, policymakers, educators, and community stakeholders must advocate for increased funding and support for art programs in Nigeria to ensure all students have equal opportunities to develop their artistic talents and contribute to their immediate society and cultural landscape.

Diversity and Inclusivity: Addressing issues of diversity and inclusivity within painting education curriculum and pedagogy is essential for creating equitable learning environments (Garcia, 2020). Making sure that painting education includes everyone, no matter their background, is important for

making fair learning spaces. It's about creating a curriculum and teaching methods that welcome and support people from all walks of life. This helps ensure that everyone has a chance to learn and thrive in painting classes.

Changing Pedagogical Approaches:

Adapting teaching methods and pedagogical approaches to meet the needs of a diverse student population and evolving artistic practices is an ongoing challenge (Lee, 2017). Continuous adaption of teaching methods and approaches to suit a diverse student body and evolving artistic trends is an ongoing hurdle in painting education (Smith, 2018). As demographics shift and art trends

change, instructors must consistently review their teaching strategies to ensure they meet the needs of every student while remaining relevant in the art world. This means embracing inclusive teaching methods that cater to different learning styles, cultural backgrounds, and skill levels (Garcia, 2020). Moreover, educators need to stay abreast of new artistic methods, technologies, and teaching theories to effectively equip students for the ever-changing contemporary art scene (Johnson, 2019). Striking a balance between tradition and innovation, accessibility and rigor, inclusivity and excellence remains a key challenge for painting educators committed to delivering high-quality education to all students.

Data Analysis

Table 1: Demographic data of respondents

Age Range		Gender		NCE II	NCE III
16-20	14(46.7%)	17(56.7%)	13(43.3%)	22(73.3%)	8(26.7%)
21-24	13(43.3%)				
25-30	2(6.7%)				
31-35	0(0.0%)				
36-40	0(0.0%)				
41-45	1(3.3%)				

The majority of participants are in the younger age brackets (16-20 and 21-24 years), with a significant drop-off in older age groups. This might indicate a trend where Art Education participation is more common

among younger individuals. The absence of participants in the 31-40 age range could be indicative of either a lack of interest or barriers faced by individuals in this age group in accessing Art education at these levels.

The gender distribution shows a higher number of males in the 16-20 age range for NCE II, but the female participation rate increases significantly for NCE III in the same age range. For NCE II, the highest concentration of participants is in the 16-20 age range, with a much lower representation in older age ranges. For NCE III, the data shows a higher concentration of younger participants (16-24 years) and a small number of older participants (41-45 years). Based on the demographic of the respondents, institutions might consider targeted outreach and support programs for older potential students (above 30 years) to encourage higher participation in Art

education. There is a need for initiatives to ensure gender parity, especially in age groups where there is a significant gender imbalance. Programs aimed at encouraging more female participation in NCE II could be beneficial. Ensuring that data collection is comprehensive and includes all necessary demographic details such as gender across all age groups can help in better understanding and addressing educational disparities. Further research could investigate the reasons behind the low participation rates among older age groups and the gender disparities observed. Understanding the underlying causes can help in designing effective interventions.

Table 2: Impending Challenges Facing Painting Education

S/N	Items	SA	A	D	SD	Mean	Std. Dev.
1	Availability of Painting studio.	8(26.7%)	14(46.7%)	6(20.0%)	2(6.7%)	2.93	0.88
2	Lack of well-equipped workable painting studio.	8(26.7%)	9(30.0%)	11(36.7%)	2(6.7%)	2.77	0.94
3	Accessibility of scholarship for students.	8(26.7%)	7(23.3%)	9(30.0%)	6(20.0%)	2.52	1.08
4	Inadequate time allocated to learning of painting.	6(20.0%)	12(40.0%)	7(23.3%)	5(16.7%)	2.63	0.95
5	Inappropriate teaching methodology.	3(10.0%)	8(26.7%)	16(53.3%)	3(10.0%)	2.31	0.79

6	Poor learning attitudes by students.	9(30.0%)	7(23.3%)	10(33.3%)	4(13.3%)	2.7	0.97
7	Availability of workshop program between the professionals and students	9(30.0%)	10(33.3%)	8(26.7%)	3(19.9%)	2.87	0.89
8	High cost of painting tools and materials.	19(63.3%)	9(30.0%)	2(6.7%)	0(0.0%)	3.57	0.61
9	Adequate time allocated to painting practical works.	9(30.0%)	15(50.0%)	6(20.0%)	0(0.0%)	3.1	0.75
10	Regular field trips to exhibitions, galleries museums, etc.	8(26.7%)	11(36.7%)	7(23.3%)	4(13.3%)	2.77	0.99

A significant portion of respondents (73.4%) agree that the availability of a painting studio is a challenge, indicated by a mean score of 2.93 and a standard deviation of 0.88. There is a concern about the lack of well-equipped studios, with 56.7% agreeing, reflected by a mean score of 2.77 and a standard deviation of 0.94. Access to scholarships is moderately challenging, with a mean score of 2.52 and a standard deviation of 1.08, showing mixed responses. Inadequate time for learning painting is noted, with a mean score of 2.63 and a standard deviation of 0.95, indicating that 60% of respondents see it as an issue. A substantial majority (63.3%) find the teaching methodology inappropriate, as seen in the mean score of 2.31 and a standard deviation of 0.79. Poor learning attitudes by students are recognized, with a mean score of

2.7 and a standard deviation of 0.97, suggesting varied opinions. The availability of workshop programs is a concern, with a mean score of 2.87 and a standard deviation of 0.89. Cost of Painting Tools and Materials is identified as a major challenge, with a high mean score of 3.57 and a standard deviation of 0.61, showing strong agreement among respondents. Adequate time for practical work is relatively well-regarded, with a mean score of 3.1 and a standard deviation of 0.75. Regular field trips are seen as beneficial but not sufficiently implemented, indicated by a mean score of 2.77 and a standard deviation of 0.99.

Addressing the availability and quality of painting studios and tools. This could involve investment in better facilities and subsidizing materials to alleviate the financial burden on

students. There is a need to revise the teaching methodology to make it more effective and engaging, potentially through professional development for instructors. Enhance access to scholarships and financial aid to support students in their artistic endeavors.

Reevaluate the time allocated for practical work and ensure students have ample opportunities to develop their skills. Increase the frequency and quality of workshop programs and field trips to provide more hands-on learning experiences.

Table 3: Navigating impending challenges facing painting education

S/ N	Items	SA	A	D	SD	Mean	Std. Dev
1	Availability of conducive studio will aid effective teaching and learning of painting.	10(33.3%)	14(46.7%)	4(13.3%)	2(6.7%)	3.07	0.85
2	Availability of support from government.	6(20.0%)	3(10.0%)	11(36.7%)	10(33.3%)	2.17	1.1
3	Accessibility of scholarship for students.	5(16.7%)	6(20.0%)	13(43.3%)	6(20.0%)	2.33	0.98
4	Quality time allocation for painting practical.	11(36.7%)	12(40.0%)	5(16.7%)	2(6.7%)	3.07	0.89
5	Availability of separated and well-equipped classroom for painting theory.	8(26.7%)	11(36.7%)	7(23.3%)	4(13.3%)	2.77	0.99
6	Technological gadgets such as projector and screen etc. should be use in teaching painting practical.	10(33.3%)	15(50.0%)	5(16.7%)	0(0.0%)	3.17	0.69
7	Availability of workshop program to	9(30.0%)	11(36.7%)	10(33.3%)	0(0.0%)	2.97	0.8

	fill the gap between theory and practice						
8	Exposure of students to the business aspect of painting for sustainability.	7(23.3%)	16(53.3%)	6(20.0%)	1(3.3%)	2.97	0.75
9	Encouragement of research, exploration, and experimentation.	8(26.7%)	20(66.7%)	2(6.7%)	0(0.0%)	3.2	0.54
10	The report should be written by students on every field trip.	10z(33.3%)	17(56.7%)	3(10.0%)	0(0.0%)	3.23	0.62

A conducive studio environment is seen as crucial, with a mean score of 3.07 and a standard deviation of 0.85, indicating 80% agreement. There is a lack of government support, with a mean score of 2.17 and a standard deviation of 1.1, showing low agreement. The accessibility of scholarships remains moderately challenging, with a mean score of 2.33 and a standard deviation of 0.98. Quality time for practical work is valued, with a mean score of 3.07 and a standard deviation of 0.89. The availability of well-equipped classrooms for theory is moderately supported, with a mean score of 2.77 and a standard deviation of 0.99.

Using technological gadgets in teaching is highly agreed upon, with a mean score of 3.17 and a standard deviation of 0.69. Workshops are important, with a mean score of 2.97 and a standard deviation of 0.8, showing moderate agreement. Exposure to the business aspect is moderately supported,

with a mean score of 2.97 and a standard deviation of 0.75. Encouragement for research and experimentation is strongly agreed upon, with a mean score of 3.2 and a standard deviation of 0.54. Writing reports on field trips is highly supported, with a mean score of 3.23 and a standard deviation of 0.62.

The high mean score and strong agreement indicate a general consensus on the importance of a conducive studio environment. This highlights the recognition among participants that such an environment is critical for effective learning and practical work. The standard deviation, though not very high, suggests there is some variability in responses. This could imply differences in the quality or characteristics of studio environments experienced by participants. The results clearly identify a perceived lack of government support, which can be a critical insight for policy advocacy and

institutional improvement. The low mean score and high standard deviation reflect significant disagreement and dissatisfaction among participants. This highlights a critical area that needs attention and improvement. The moderate score indicates that while scholarships are available, they are not easily accessible to all students. This is an important area for institutions to address to ensure equity in education. The variability in responses suggests that accessibility to scholarships may be inconsistent, with some students finding it more challenging than others. The high mean score indicates that student's value and possibly receive adequate time for practical work, which is essential for hands-on learning. The standard deviation suggests there might be variability in how this quality time is distributed or perceived among different students.

The mean score shows moderate support for the availability of well-equipped classrooms, indicating a general satisfaction with the theoretical learning environment. The standard deviation suggests variability, indicating that while some students may have access to well-equipped classrooms, others may not. The high mean score and relatively low standard deviation indicate a strong agreement and uniformity in the perception of the importance of technology in teaching. There are minimal weaknesses here, though

Table 4: New realities in painting education

continuous updates and training on new technologies could enhance this further.

The mean score indicates that workshops are considered important, which is crucial for skill development and practical exposure. The moderate standard deviation shows some variability in the perceived importance or quality of workshops, suggesting a need for consistent quality and relevance. This score indicates that students recognize the importance of understanding the business side of their field, which is essential for career readiness. Similar to workshops, the variability in responses points to differences in the extent or quality of business exposure provided.

The high mean score and low standard deviation indicate strong and uniform agreement on the importance of research and experimentation. Few weaknesses are evident, though continued support and resources for research activities are essential to maintain this positive perception.

The high mean score suggests strong support for the practice of writing reports on field trips, emphasizing the value of reflective and experiential learning. The relatively low standard deviation shows consistency in responses, but ongoing assessment and feedback on these reports could further enhance learning outcomes.

S/N	Items	SA	A	D	SD	Mean	Std. Dev.
1	Students were taught with technological gadgets.	7(23.3%)	5(16.7%)	11(36.7%)	7(23.3%)	2.4	1.08
2	Students can operate the projector.	8(26.7%)	11(36.7%)	7(23.3%)	4(13.3%)	2.77	0.99
3	Lecturer use projector and computer in teaching of painting.	6(20.0%)	4(13.3%)	8(26.7%)	12(40.0%)	2.13	1.15
4	Students regularly print on canvas to executes their practical works.	8(26.7%)	13(43.3%)	7(23.3%)	2(6.7%)	2.9	0.87
5	Students have electronic devices (computer, and mobile phone) that could access and manipulates.	11(36.7%)	9(30.0%)	3(10.0%)	7(23.3%)	2.8	1.17
6	Lecturer explore Ai software to teach students on how to generates ideas for their painting.	4(13.3%)	11(36.7%)	10(33.3%)	5(16.7%)	2.47	0.92
7	Students are familiar with printing on canvas.	7(23.3%)	12(40.0%)	5(16.7%)	6(20.0%)	2.67	1.04
8	Students can use digital painting software such as krita, adobe illustration, clip studio paint, corel painter and sketchbook e.t.c.	7(23.3%)	13(43.3%)	8(26.7%)	2(6.7%)	2.83	0.86
9	Unavailability of power supply affect the exploration of the digital software.	14(46.7%)	8(26.7%)	5(16.7%)	3(10.0%)	3.1	1.01
10	High cost of purchase hinders the students from been acquitted with the gadgets.	12(40.0%)	4(13.3%)	9(30.0%)	5(16.7%)	2.77	1.15

The use of technological gadgets is not widespread, with mixed responses and a mean score of 2.4 and a standard deviation of 1.08. Students have moderate proficiency with projectors, with a mean score of 2.77 and a standard deviation of 0.99. Lecturer use of projectors and computers is limited, with a mean score of 2.13 and a standard deviation of 1.15. Students regularly printing on canvas is moderately supported, with a mean score of 2.9 and a standard deviation of 0.87. Access to electronic devices is mixed, with a mean score of 2.8 and a standard deviation of 1.17.

The use of AI software in teaching is limited, with a mean score of 2.47 and a standard deviation of 0.92, indicating varied opinions. Students' familiarity with printing on canvas shows moderate agreement, with a mean score of 2.67 and a standard deviation of 1.04. Proficiency with digital painting software is moderately supported, with a mean score of 2.83 and a standard deviation of 0.86. The unavailability of a consistent power supply significantly affects the use of digital software, with a mean score of 3.1 and a standard deviation of 1.01. The high cost of purchasing gadgets hinders student familiarity, with a mean score of 2.77 and a standard deviation of 1.15.

The mean score of 2.4 (SD=1.08) indicates a generally low to moderate usage of technological gadgets among students. The high standard deviation suggests significant variability in responses. Students exhibit

moderate proficiency with projectors, with a mean score of 2.77 (SD=0.99). The scores suggest that while some students are comfortable using projectors, others may not be as proficient.

Lecturers' use of projectors and computers is limited, with a mean score of 2.13 (SD=1.15). This low mean score, coupled with a high standard deviation, indicates that while some lecturers may frequently use these tools, others rarely do so. Students' regular printing on canvas is moderately supported, with a mean score of 2.9 (SD=0.87). This suggests that printing on canvas is a fairly common activity, though not universally practiced. Access to electronic devices is mixed, with a mean score of 2.8 (SD=1.17). The variability in the responses highlights differing levels of access among students.

The use of AI software in teaching is limited, with a mean score of 2.47 (SD=0.92). This score reflects varied opinions about the integration of AI in the educational process. Students show moderate familiarity with printing on canvas, indicated by a mean score of 2.67 (SD=1.04). The moderate mean and high standard deviation suggest that while some students are familiar with the process, others are not. Proficiency with digital painting software is moderately supported, with a mean score of 2.83 (SD=0.86), indicating a reasonable level of comfort among students with using such software. The unavailability of a consistent power supply significantly affects the use of digital

software, with a mean score of 3.1 (SD=1.01). This high mean score suggests that power issues are a major barrier to the effective use of digital tools. The high cost of purchasing gadgets hinders student familiarity, with a mean score of 2.77 (SD=1.15). This reflects that financial constraints are a significant obstacle to the adoption and use of technology.

The study highlights significant variability in the adoption and use of various technological tools among students and lecturers. This could be due to differences in individual access, training, and institutional support. Key barriers identified include inconsistent power supply and the high cost of gadgets. These factors need to be addressed to improve the integration of technology in educational settings. Across various tools, students and lecturers exhibit moderate proficiency and usage, indicating potential areas for improvement through targeted training and better resource allocation.

Based on this study, there is a need to address power supply issues to ensure consistent access to digital tools. Explore ways to subsidize the cost of technological gadgets to enhance student familiarity and usage. Implement comprehensive training programs for both students and lecturers to improve proficiency in using technological tools.

Recommendations

Infrastructure and Resources

Enhancement

Promote the use of AI software in teaching through workshops and pilot programs to familiarize educators and students with its benefits.

Conclusion

This study analyses the various challenges and emerging opportunities within painting education at the Federal College of Education (Technical) Akoka in Lagos, Nigeria. The main obstacles identified are inadequate infrastructure, insufficient studio equipment, limited access to scholarships, and the lack of integration of digital technologies. These challenges greatly affected the quality of education and, in turn, impacted the practice and employability of graduates and their contribution to national development in Nigeria.

Using van Dijk's Resources and Appropriation Theory (RAT) model, the research highlights the transformative potential of technological literacy and the integration of ICT in art education. By fostering creativity, innovation, and critical thinking, these digital tools can significantly improve the learning experience and better prepare students for a variety of career paths in the art industries and practice after graduation.

- **Upgrade Studio Facilities:** Invest in creating and maintaining well-equipped painting studios. This includes providing high-quality

materials, tools, and equipment necessary for both traditional and digital painting practices.

- **Subsidize Costs:** Implement measures to reduce the financial burden on students for purchasing painting tools and materials. Subsidies or partnerships with art supply companies can help make essential materials more affordable.

Government and Institutional Support

- **Increase Funding:** Advocate for increased government and institutional funding specifically allocated to the arts. This financial support is crucial for improving the overall quality of painting education and ensuring access to necessary resources.
- **Provide Scholarships:** Establish and promote scholarship opportunities for students pursuing painting education. This will help alleviate financial constraints and encourage more students to enroll and excel in art programs.

Technological Integration

- **Promote Technological Literacy:** Incorporate digital tools and software in the curriculum to enhance technological literacy among students. Providing training in

software like Adobe Photoshop, Sketch, Illustrator, and other digital painting tools will prepare students for the evolving art landscape.

- **Utilize AI and Digital Tools:** Integrate artificial intelligence (AI) and other digital technologies into the teaching process. AI can assist in generating art, providing feedback, and enhancing creative exploration. Virtual reality (VR) painting studios can offer immersive experiences that traditional methods cannot.

Pedagogical Approaches

- **Adapt Teaching Methods:** Continuously update and adapt teaching methods to cater to a diverse student population. This includes using inclusive pedagogical approaches that consider various learning styles and cultural backgrounds.
- **Workshops and Field Trips:** Increase the frequency and quality of workshops, field trips, and exhibitions. These hands-on experiences are crucial for bridging the gap between theory and practice and exposing students to real-world artistic environments.

Support for Research and Innovation

- **Encourage Research:** Foster a culture of research and experimentation in

painting education. Support students and faculty in exploring new techniques, mediums, and artistic concepts.

- Business and Career Preparation: Provide students with education on the business aspects of art. This includes understanding the art market, marketing their work, and managing an art career effectively.

Addressing Diversity and Inclusivity

- Inclusive Curriculum: Develop and implement a curriculum that addresses issues of diversity and inclusivity. Ensure that the content is representative of various cultural perspectives and that all students feel valued and supported.
- Targeted Outreach: Create outreach programs aimed at increasing

participation from underrepresented groups. This includes targeted support for older students and initiatives to achieve gender parity in art education.

Overcoming Technological Barriers

- Ensure Consistent Power Supply: Address infrastructure issues such as inconsistent power supply that hinder the effective use of digital tools. This may involve advocating for better facilities and backup power solutions.
- Affordable Gadgets: Explore ways to provide students and practitioners with affordable access to necessary technological gadgets. This can be achieved through bulk purchasing agreements, leasing programs, or institutional support.

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