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Technology and digital media have become important in contemporary arts education, reshaping how teaching and learning are carried out in Nigeria. This paper argues that the integration of digital tools such as projectors, laptops, smartphones, and multimedia platforms has improved the delivery of arts education by making learning more interactive, practical, and engaging. It also highlights that these tools expand creative expression, increase access to global artistic resources, and enable students to showcase their work beyond local boundaries. From a constructivist perspective, learning is enhanced when students actively engage with knowledge, and digital technologies support this process by encouraging collaboration and hands-on participation in creative activities. However, despite these benefits, challenges such as poor infrastructure, high cost of digital devices, weak internet connectivity, and limited digital literacy continue to hinder effective adoption, particularly in under-resourced schools. The paper concludes that while technology has positively transformed arts education, its impact remains uneven due to existing structural limitations. It therefore recommends improved investment in digital infrastructure, continuous training for educators, and targeted support for disadvantaged institutions to ensure equitable access to digital learning opportunities.

Keywords: Technology, Digital Media, Arts Education, Creativity, Nigeria, Digital Divide

Introduction

Technology and digital media have become powerful drivers of transformation in education, with their impact clearly visible in arts education. The integration of digital tools into teaching and learning has changed the way artistic skills are taught, practiced, and experienced. Unlike traditional art education, which relied heavily on face-to-face studio practice, manual drawing, and physical exhibitions, digital media now offers opportunities for virtual classrooms, online galleries, interactive platforms, and multimedia creativity. In countries like the United States, South Korea, China, and Nigeria, technology has enabled new forms of artistic engagement through e-learning platforms, digital design tools, and social media communities that connect students and teachers beyond geographical boundaries. This evolution in technology has shown that digital media is not only an innovation for education but also a significant force in reshaping creativity, collaboration, and cultural identity in the arts (Miller, 2021).

According to Wang and Lim (2022), technology in arts education works through platforms and applications that process text, images, sound, and video to support both teaching and artistic production. Unlike traditional methods where access to art education was limited to physical classrooms, digital media tools now allow students to learn visual arts, music, dance, and theatre

online. For example, an online learning platform can deliver art history lectures via video streaming while simultaneously allowing students to showcase their digital paintings or performances on social media platforms. This creates inclusivity, global exposure, and increased participation in the creative process. In Nigeria, where art education has often been underfunded and sidelined, technology provides opportunities for students to access online resources, develop creative skills, and engage with global art practices. This has made digital media both a global innovation and a local solution to widening participation in arts education (Okafor and Johnson, 2023).

Lee (2020) explains that one major advantage of technology in arts education is efficiency and access. Digital tools make teaching, assessment, and artistic production faster and more interactive compared to traditional systems. Intelligent software applications such as graphic design tools, animation programmes, and music editing software allow students to create, edit, and share artistic works with ease. Virtual reality and augmented reality also provide immersive experiences where learners can engage in virtual museums, stage designs, or even 3D painting. These innovations make arts education more engaging while also helping students to develop skills relevant to the 21st century creative industries. At the same time, scholars caution that technology in arts education is not without risks. Ajayi and Bello (2022) argue that over-reliance on digital tools may weaken traditional artistic skills, such as freehand drawing or live performance. Other concerns include unequal access to digital resources, the risk of cultural homogenisation, and the possibility of students prioritising digital trends over authentic cultural expression. Globally, debates have also emerged on the digital divide, over-commercialisation of creative content, and the loss of originality in digitally produced art (Smith, 2021).

In Nigeria, these challenges are worsened by poor digital infrastructure, limited access to the internet in rural areas, and lack of government investment in digital arts education. If not carefully addressed, these gaps could widen inequalities in access to art education and limit the potential benefits of digital media. There is no doubt that technology and digital media bring both opportunities and risks to the survival and growth of arts education. However, the central question remains how arts educators can harness the potentials of technology and digital media while maintaining cultural authenticity, inclusivity, and creative integrity. This study therefore explores the Role of Technology in Arts Education for National Development

Influence of technology and digital media on the teaching and learning processes in arts education.

Bassey and Akpan (2021) point out that technology and digital media have brought great changes to the way arts are taught and learnt in Nigeria. In Colleges of Education, the use of electronic technology instructional models has improved students' performance in Fine and Applied Arts. Instead of relying only on traditional methods of teaching, lecturers now make use of digital platforms, projectors, and multimedia tools that make learning more interactive. This helps students to understand abstract concepts better and also to gain skills that match the demands of today's digital society. In public schools, digital-multimedia tools are also proving useful for learners. Olabisi Sheyin and Olubela (2021) note that laptops, tablets, and smartphones allow students to work together on art projects, explore new ideas, and share creative works in ways that were not possible before. The use of these tools encourages group learning, creativity, and innovation. For instance, a teacher can now use video demonstrations or digital drawing software to guide learners in practical art lessons, which makes learning more engaging and less stressful.

Nwosu et al. (2023) explain that in addition to the classroom, digital platforms are creating new opportunities for the visual arts. Digitised visual arts can preserve culture and identity while also promoting educational improvement. Nigerian students are able to interact with art in fresh and exciting ways by turning artworks and cultural materials into digital formats. This approach saves traditional forms of art from being forgotten and also allows learners to connect their heritage with modern methods of expression. It shows how technology supports both preservation and innovation in arts education. Aondowase and Adoka (2023) argue that theatre and performance arts have also been strongly influenced by digital technologies. New media tools have changed how plays are produced, presented, and shared with the public. Today, theatre students and practitioners use digital stage designs, online rehearsals, and streaming platforms to reach audiences beyond the physical

theatre space. This digital shift helps students to learn performance in a more practical way, preparing them to thrive in a fast-changing creative industry.

The implication of this is that technology and digital media are transforming arts education in Nigeria by making it more interactive, collaborative, and globally relevant. The studies reviewed show that students are now exposed to new ways of learning that combine traditional knowledge with digital innovation. As a result, learners in Fine Arts, Visual Arts, and even Theatre are improving academically and also developing creative and digital skills that can help them compete in both local and international spaces. These changes show there is a need for continued investment in digital tools and training for both teachers and students to fully unlock the potential of arts education in the digital age.

Opportunities created by technology and digital media for enhancing creativity, access, and global participation in arts education.

Technology and digital media have opened up many opportunities for creativity in arts education. With tools like graphic design software, animation programmes, and virtual reality, students can try new ways of expressing themselves and exploring different artistic styles. Adejumo and Adeoye (2022) explain that these digital tools help learners go beyond the limits of traditional art materials, as they can now mix painting, photography, sound, and movement in exciting ways. This does not only encourage new ideas but also helps students gain practical skills that are very useful in today's creative industries. Nwachukwu (2021) notes that another important opportunity is better access to learning materials. Online platforms, virtual classrooms, and digital libraries allow students in Nigeria to connect with top-quality lectures, tutorials, and exhibitions from anywhere. These online resources break down distance and cost barriers, giving students from rural and less privileged areas a chance to study art at a higher level. Platforms such as YouTube, Coursera, and locally made apps give learners the chance to explore different art traditions and methods, helping them gain wider knowledge and deeper skills.

Olaniran and Adebisi (2020) point out that technology also makes it easier for students, teachers, and artists to work together and share knowledge. Through social media and online communities, art students can display their work, get feedback, and even collaborate on projects with people in other places. As noted by the author, these digital spaces allow students to exchange cultural ideas, making classroom learning richer and more diverse. Working together in this way helps to spark creativity and prepares young artists to take part in the global creative economy, where cross-cultural projects are becoming more common. Another big opportunity is global participation and visibility. Thanks to online galleries, virtual exhibitions, and live-streamed performances, Nigerian students and institutions can now share their art with audiences around the world. Omotayo (2022) explains that digital platforms give young artists the chance to present their work to an international audience, connect with mentors abroad, and gain recognition beyond Nigeria. This kind of exposure creates career opportunities, encourages cultural exchange, and helps to promote Nigerian art as part of the world's creative heritage.

Challenges risks associated with the integration of technology and digital media in arts education in Nigeria.

Eze & Ogbomo (2022) holds that one of the key challenges of integrating technology and digital media into arts education in Nigeria is the problem of poor digital infrastructure. Many schools across the country still lack reliable access to electricity, stable internet connectivity, and modern ICT facilities. This makes it difficult for teachers and students to fully utilise digital learning platforms or multimedia resources in art classrooms. For example, when electricity is irregular or internet connections are weak, activities such as virtual art demonstrations, online collaborations, or digital design projects are interrupted, reducing their effectiveness. The absence of well-maintained ICT laboratories and up-to-date equipment further limits the ability of students to acquire relevant digital art skills.

Udo and Inyang (2021) observe that another major barrier is the high cost of acquiring and maintaining digital devices and software. Computers, tablets, projectors, and design applications require financial investment that many schools, most especially in rural and public settings cannot afford. As noted by the authors, some institutions resort to outdated or pirated versions of software,

which usually limits functionality and prevents students from engaging with the latest tools used in the creative industry. Similarly, internet subscription costs in Nigeria remain high and this restricts access for both teachers and students. This financial strain creates inequality, as learners from well-resourced urban schools are better positioned to benefit from digital innovation than their peers in less privileged communities.

A further challenge is the limited digital literacy among teachers and students. Many art educators were trained in traditional teaching approaches and may not have had formal exposure to digital media tools. As a result, even when technology is available, it is often underused or applied in ways that do not fully harness its potential for interactive learning. A report by the Universal Basic Education Commission revealed that over 60% of public school teachers lack basic digital skills, which makes the integration of ICT into the curriculum difficult. Without ongoing training and professional development, teachers are unable to guide students effectively, leaving a gap between the skills acquired in schools and those required in the global digital economy, (Guardian, 2023).

Isert, Okeke and Musa (2023) further explain that the digital divide between urban and rural areas also poses as major risk. Students in cities are more likely to have access to personal devices, fast internet, and modern media tools, while those in rural communities often struggle with poor infrastructure and limited resources. This imbalance results in unequal opportunities for creative learning and skill development. According to Isert et al. (2023), disparities in access to digital technologies widen educational gaps and disadvantage students from under-resourced areas. In arts education, this divide means that some students are able to explore digital painting, virtual theatre production, or online art exhibitions, while others remain limited to traditional classroom methods.

Main Arguments on the Role of Technology in Arts Education for National Development

The integration of technology and digital media has transformed the teaching and learning of arts education in Nigeria. Digital tools such as projectors, laptops, smartphones, and multimedia platforms have made classroom instruction more interactive, practical, and collaborative. These tools help students better understand complex artistic concepts while also developing skills relevant to the modern creative industry. In addition, electronic instructional methods have been shown to improve students' performance in Fine and Applied Arts, as noted in studies on digital learning approaches in education. Digital media also supports creative exploration and makes learning more engaging, while helping to preserve cultural identity through digitised visual art practices. In all, technology has modernised teaching methods and improved students' learning experiences in arts education.

Furthermore, technology and digital media play a major role in expanding creativity, access, and global participation in arts education. Through online platforms such as virtual classrooms, digital galleries, design software, and social media, students are able to explore new forms of artistic expression and access global learning resources. This exposure allows learners to combine different artistic styles and develop more innovative work beyond traditional studio limitations. Digital learning platforms also reduce barriers related to location and cost, enabling students from less privileged areas to access quality educational materials. As a result, technology promotes creativity, widens access to learning opportunities, and increases the global visibility of students' artistic work.

However, despite these advantages, the use of technology and digital media in arts education in Nigeria is limited by several challenges. Poor infrastructure, unstable electricity supply, high cost of digital tools, and limited digital skills among teachers continue to affect effective implementation. Many schools are unable to fully adopt digital learning systems due to inadequate funding and lack of access to modern equipment. In addition, weak internet connectivity further restricts the use of online platforms in classrooms. These challenges create inequality in access to digital learning and reduce the potential impact of technology in arts education. Therefore, without improved infrastructure, proper funding, and adequate training for teachers, the benefits of digital media in education may not be fully realised.

Conclusion

This study concludes that technology and digital media have greatly improved arts education in Nigeria by making teaching and learning more interactive, engaging, and relevant to the needs of the modern creative industry. Tools such as projectors, laptops, multimedia platforms, and smartphones have helped students understand abstract concepts, collaborate on projects, and build skills for the

global digital economy. However, the study also highlights key challenges. Poor infrastructure, high costs of devices, weak internet services, and limited digital literacy among teachers and students continue to hinder effective integration. These challenges deepen inequalities and limit the potential of technology in transforming arts education.

Suggestions

Based on the issues discussed in this study, it is important to propose practical measures that can improve the effective use of technology and digital media in arts education in Nigeria. These suggestions are drawn from the identified challenges and are aimed at enhancing teaching and learning outcomes in the discipline. They are:

1. Government and private stakeholders should prioritise steady electricity and reliable internet to enable the effective use of technology in schools.
2. Subsidies, grants, and partnerships should be introduced to make laptops, projectors, and other digital devices more affordable for schools and students.
3. Regular workshops and training programmes should be organised to improve teachers' digital literacy, ensuring they can effectively integrate technology into arts education.
4. Special attention should be given to rural and underserved schools by providing targeted investments and policies that bridge the digital divide.

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