



THE RELEVANCE OF ARTIFICIAL INTELLIGENCE IN FINE AND APPLIED ARTS EDUCATION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This paper focusses on the relevance of fine and applied art education through artificial intelligence (AI) for sustainable development in Nigeria. It discussed the subject areas in fine and applied art education that provides self-employment to individual and also gives the individual that went through it an opportunity to give others from different field employment that helps to reduced poverty and crime in the country. The paper also added that AI powers virtual assistant that can provide 24/7 support, answer frequently asked questions, helps with other placement and tracking as well, assists with product recommendations and offers personalized support. The paper identified challenges of funding of AI equipments tools in schools, the absence of constant and adequate power supply. The paper concluded that revamping fine applied art education through AI for sustainable development can create future where fine and applied art education is more accessible, equitable and impactful easily with AI. It was suggested amongst that proper accountability budgeting for fine and applied art education with AI inclusion for professionals, maintenance of infrastructures and crumbing corruption is highly needed and there should be training and retraining among lecturers and students for effective preparation on the use of artificial intelligence applications and tools in schools.

Keywords: *Fine and applied art education, Artificial intelligence, sustainable development.*

Introduction

Fine and Applied Arts education is one of those occupational subjects with different vocational opportunities which prepares individuals with abundant technological growth if well approached.

Such job opportunities are in painting, sculpture, textiles, ceramics, graphic designs and so on. Art as a creative expression is a human medium through which individuals express their feelings, ideas, and experiences to their audience. As a skill, arts usually result into practical and its mode of production varies depending on the artist and the medium of expression. Therefore, revamping fine and applied arts education through AI for sustainable development has emerged as a powerful catalyst for sustainability. AI techniques such as machine learning, deep learning and intelligent optimization are transforming how complex physical systems are applied in practical technologies. Chen, Chen and Pandlin (2020) stated that artificial intelligence powered automation and efficiency in entrepreneurship practice and can increase productivity, reduce cost, improve accuracy, foster scalability and enable competitive advantage for sustainable development. Fine and applied arts education as a self-employment profession has the capacity for empowering individuals when revamp through AI for sustainability.

Art Education

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Art education deals largely with the study of visual art as it applies to teaching and learning fine and applied arts, arts appreciation and criticism as well as art history so as to provide learners with artistic knowledge and skills to better the society (Opara & Wopara 2025) art education focuses on educating learners on the various areas in the study of art. These areas of art education and history of evolution of arts, it's present state and it's future, the practical and informal activities that are carried out using various medias and techniques, the theories that are taught and applied in practical learning. The practical aspect of arts education is the area that prepares individuals for labour market creativity that is needed for sustainable development. Therefore, art education generally is the study involving both practical and theoretical skill which helps the individuals to be able to set up their own business and also be in the position to employ others. A worthwhile education should aim to equip citizens who will not be completely dependent on white collar jobs, but citizens who will be self- employed and also employers of labour and competent entrepreneurs. It is in this regard that the emphasis on relevance of revamping fine and applied art education through artificial intelligence for sustainable development in Nigeria should be encouraged. Amadi (2011) supports the view by saying that economically art has been the frontier of the development of any nation. Artists are economic developers by being self- employed as in labour employment because art is a skill-oriented profession. Many who went through both formal and informal learning end up being self- employed as well as giving others employment and training in various categories of the specialization at the end of study or training.

Artificial Intelligence

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer system. AI applications includes expert systems natural language processing (NLP) which is for speech recognition and machine vision (Graig etel 2024). Guglielmo and Massimiliano (2022) adds that artificial intelligence powers chatbots and virtual assistants that can provide 24|7 customer support, answers frequently asked questions helps with other placement and tracking as well assists with product recommendations and offers personalized supports. This implies that AI can help both students and teachers to revamp fine and applied art education as it works within twentyfour hours in one week, meaning any time the teachers and students needs its assistant it is available to work with. AI as a set of technologies can enable computers perform different kinds of work associated with intelligent programs and being. Artificial intelligence as a machine can encompasses different technologies and methods order to perform tasks that typically require human intelligence (Adamopoulou and Moassiadess 2020). AI can be used to revamp fine and applied arts education and professional careers associated with art education for sustainable development.

Sustainable Development

Sustainable development is a development that meets the societal needs of its citizens. This implies that the majority goal of sustainable development is to maintain economic advancement and sustainability. Kelly (2015) states that sustainability deals with the fairness regarding the treatment of the present and future generation. Sustainability requires the current generation to be capable of acting otherwise and should manage the resource base on the quality of life. It can be ensured potentially by the future generations (Ashein 2014). Sustainable development as stated by Attah and Chiejile (2024) States that development that meets the needs of the present without compromising the ability of future generation

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to meet their own needs. This implies that sustainable development must sustain stable resource and avoid over exploitation of renewable resource system and depleting nonrenewable resources only to the extent that investment is made in adequate substitutes (Harris 2000 In Opie 2022). Therefore, Sustainable development conclusively is the development that meets the needs of the present without affecting the better quality of life for everyone in the society and their future generation to come. Olorode (2016) adds that sustainable development is an approach that combines the developmental needs and aspiration of the present without compromising the ability of the future of its citizens while also maintaining ecological integrity.

Relevant of Revamping Fine and Applied Art Education

Fine and applied art education and its relevance can be seen as education that invaluable in the quest for self-employment. In specific terms, fine and applied arts education can perform the roles of promoting self-employment, employment opportunities and career development to other people. Fine and applied art education is a professional career that can help in the development of creativity for self-employed individuals because the more they earn a living, the more new idea comes to their minds to create new products. Such an activity is goal directed in that it could be for the purpose of deriving pleasure or having a sense of achievement from what is produced, also creativity is a mental process involving a kind of thinking described as divergent thinking which seeks new and varied or alternative ways of solving problems. Therefore, revamping fine and applied arts education through AI for sustainable development in this country can increase productivity, and make learning easy, transform technology and impact in them sustainable developmental goals. Fine and applied arts education, provides job opportunities in different categories of labour areas like, the painter, printing, ceramics, sculpture, textiles design, interior decorations, playwriting, drama, music and dance, graphic designs and cloth making and so on (Opara and Ezulike 2016).

Fine and Applied Art Education in Nigerian

Fine and applied art education in Nigeria has not been given proper attention like any other school subjects. If a good consideration of fine and applied art education is made and improved guidelines on arts education are made in schools and colleges, it will go a long way to improve and redeem the negative impression suffered by arts in our society (Oloidi 2011). Art education in Nigeria has been faced with lots of challenges. The survival of this engine house which services the country should be our concern of how to move it to a better level that will help to improve our economic development and sustainability. The state of arts over the years has been a source of concern due to neglect. This neglect runs across primary, secondary and tertiary institutions in Nigeria (Enanribe 2013). It is also believed that if a better consideration for fine and applied arts education has been made in colleges and schools, great would have been achieved in revamping the subject from the neglect it has suffered for the past years (Opara and Ikponmwosa 2018). As a matter of fact, fine and applied arts education neglect, the Government is the one in right position to show case this skill empowerment career by funding, provide equipments good for particular teaching and learning and also make it a compulsory subject for trainers in schools and in skill acquisition centers where arts education courses can be taught and also empower its graduates for self-employment opportunities that can ease them from poverty and other crimes resulting from propaganda in their leadership also has damaging consequences on the citizens

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and the poverty in the society. Okoli, Omolayam, Ibrahim and Fesina (2016) Supports the above view by saying that Nigeria system of education has experienced retrogression and total neglects as a result of bad politics played in our system of education that the way the political class brought in personal interest and ethnic country. Fine and applied arts education sometimes relies on studio work and knowledge dissemination which deals with development of creativity in a learner, sophisticated, disciplinary and technical skill. These theoretical disseminations of knowledge are monotonous, neglect the real skill development, fail to include critical thinking and often lack real-world relevance. The attention given to most creative, performing and literary artists and self-employed are making entrepreneur skills critical for career sustainability. Art educators are often facing a dilemma in identifying and defining the skill sets required for entrepreneurial pedagogy (Bridgstock 2013).The older outdated frame work is hindered by faculty hesitance to accept fine and applied art education as a new frontier due to their narrow perception of entrepreneurial education as merely vocation which conflicts with the age- old romanticization of art as distinct from a source of revenue, lack of consensus by art school leaders on a curriculum that suit present needs by adopting successful business schools model is another issue(Beckman 2007).

Challenges of AI in Utilization for Sustainability Development in Nigeria

There are numerous challenges that can affect AI in utilization a sustainable development in Nigeria. Some of the Challenges are funding AI equipments tools in schools in order to maintain e-learning devices in the country. The absence of constant and adequate power supply is another serious challenge that can affect the effective implementation of AI in most schools. AI required electricity for effective usage and when this is not available or adequate, it becomes a problem. Challenges that involved the utilization and availability of data, the high volume and high quality digital data can be difficult to come by, meaning that the model developers may need to make do with data that are outdated, biased or drawn from a different context. In fact the rapidly evolving field like AI, is virtually impossible for regulatory protections to keep up with emergent risks (Ogunleye 2021). Banjere, Beleson and Clugiston (2015) Adds that poor funding of public education in Nigeria is hindrance to the consolidation of this new norm. Many teachers training institutions and schools lack needed infrastructure such as power net- work and educational technology specialist to coordinate the adoption of innovation in their educational process.

Conclusion

The world has responded to rapid use of artificial intelligence as a means of reshaping education system and its learners' capacities for working with data and other AI tools from personalized learning and immersive- simulations to global outreach through mobile platform. These tools hold important potential to strengthen art education professional competence and to balance the opportunity with responsibility. Revamping fine and applied arts education through AI for sustainable development can create future where arts education is more accessible , equitable and impactful easily with AI.

Suggestions

1. Creating all-inclusive curriculum in schools with boundaries to educational levels.
2. Proper accountability budgeting for art education with AI inclusion, for professionals.

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3. Maintenance of infrastructures by curbing corruption.
4. There should be training and retraining among lecturers and students for effective preparation on the use of artificial intelligence applications and tools in schools.

References

- Adekunle, R. (2021). Digital media literacy and contemporary visual culture. *African Journal of Media Studies*, vol. 7, no. 2. 89-103.
- Balogun, O. (2024). *Digital storytelling and visual literacy in the 21st century*. Port Harcourt: Silverline Books.
- Campbell, M., Murray, P., Hoane, T. B., Joseph, U. I., x. & Feng-Hsiung, S. (2002). *Artificial Intelligence*-vol. 134, issue 1-2 57-83
- Chukwu, L. (2023). *Multimedia Principles in digital era communication*. Abuja: Crest Wave Publishing.
- Encyclopaedia Britannica, (2023). 'Fine Art'. Encyclopaedia Britannica Editors. <https://www.britannica.com/art/fine-art>
- Encyclopaedia Britannica, (2023). 'Applied Art'. Encyclopaedia Britannica Editors. <https://www.britannica.com/applied/applied-art>
- Fiell, C. & Fiell, P. (2010). *The Whole Story*. Thames & Hudson.
- Gombrich, E. H. (1995). *The Story of Art*. Phaidon Press.
- Gropius, W. (1965). *The New Architecture and Bauhaus*. MIT Press.
- Hauser, A. (1951). *The Social History of Art*. Routledge & Kegan Paul.
- Olayinka, P. (2023). Professional practice in visual communication. *Journal of Creative Industries*, vol. 11, no. 2, 22-38.
- Russell, S., & Norvig, P. (2021). *Artificial Intelligence: A Modern Approach* (4th ed). Pearson.
- Ting, T. T., & Ling, L. (2022). *Artificial Intelligence Art: Attitudes and Perception towards Human versus Artificial Intelligence Artworks*. <https://www.researchgate.net/publications/357876127>
- Uzoagba, A I. (2008). *Understanding Art in General Education*. First-Africana Press.