

REENGINEERING FINE AND APPLIED ARTS EDUCATION FOR SUSTAINABLE KNOWLEDGE ECONOMY IN A DIGITALIZED WORLD

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Abstract

For a sustainable knowledge, art must be involved because, art has a way of communicating to the society in the simplest language. This study attempts at unveiling the vital roles of Art in the re-engineering Nigerian Education for Sustainability in the knowledge economy of this digitalized era. This paper also sought to re-package and reposition Fine and Applied Arts Education, laying emphasis in the vital and unique roles played by arts especially in the visual arts aspects. Fine and Applied Arts is a problem-solving discipline, this entails that the attributes of art like creative skills, imageries conceptualization, aesthetics are seen as the bedrock of inventions and innovations. In the school system Art is used to teach other subjects, since the dawn of human development, people have strived to improve on the level of their knowledge. This paper is directed at re-emphasizing the crucial and important roles which Fine and Applied Arts can play through formal and informal educational system as means of impacting and inculcating important knowledge. Art should be our basic educational system, both formal and informal education and made compulsory so that people can understand art from the basic and cradle. Artist should be made available in all disciplines of life due to the vital roles of art.

Introduction

Fine and Applied Arts Education covers a range of human activities and the products of those activities. This focuses primarily on the Visual Arts which includes the creation of images or objects in fields including; painting, sculpture, printmaking, textiles, and other visual media. Fine and Applied Arts has been characterized in terms of expression, communication of emotion or other values. The nature of visual art and related concepts such as creativity and interpretation are seen in a branch of philosophy known as aesthetic. The word visual art can refer to several things, a study of creative skills, a process of using the creative skill, a product of the creative skill or the audience experience with a creative skill.

Art can be utilized through visuals. Visual arts are associated with those arts addressed and directly to the sense of vision. They are seen than imagined. Visual arts are meant to expose and to teach-(Enendu, 2010) Visuals arts can be shown through drawings, paintings, sculpture, among others: Visual Art plays important roles in national development and its sustainability of knowledge cannot be over emphasized. The fields of human endeavors have witnessed transformation of different kind in the area of introducing machines or technologies to aide work and production. Since industrial revolution till date, human begins have continued to advance in technology and the use of it to enhance human activities. Andrews (2011:2) asserts that "beginning in the mid-to late 18th century, there was a shift from manual and animal labour to machine-based manufacturing that revolutionized virtually every aspect of daily life in some way". Industrial revolution is responsible for the application of technology to human labour. This advancement is being witnessed in the field of art with the development in digital humanities.

The ability to use digital technology to improve sustainability is known as sustainable digitization. This involves using digital tools, and processes to make sustainability, improvements, such as reducing environmental impact or increasing resources efficiency.

Re-engineering Fine and Applied Art for knowledge Development

This is to view what it entails; many may not be aware of what it entails or means perhaps this is the first step. Many may have associated Arts with Appreciation and cultural roles only, which is only an aspect of roles of Art. Fine and Applied Arts Education touches every aspect of human life. Many qualities are developed through art which includes, the ability of quality sight (pure seeing), the ability of imagination, the aesthetic appreciation and the knowledge of research for new creative skills. The re-engineering of Fine and Applied Arts Education for a sustainable knowledge economy in a digitized era should be of great importance for achieving valuable goals in the society. Fine and Applied Art Education is a pre-requisite for a sustainable development, it co-ordinates every other field of learning as a tool and core of other subjects. It contributes to the development of human potentials and technically applied to reflect human achievements, needs and feelings as well as those parts of character that deals with natural urge to create, innovate, discover, develop and organize things. Arts, especially the visual part of it, serves as a mirror and a symbol of communication. It is an aid to technological advancement and teaches innovations, explorations, values and morals.

Visual Art Education among other subjects share in the main objectives of general education. It is a means through which an individual acquires skills in order to live an independent life and be self-reliant. It is an individual problem-solving endeavor, a means to an end to one's potential growth.

Objectives of Arts are as follows

- To foster creative expression and response
- To train perceptual, manipulative and organizational skills for life-long vocation leading to self-reliance.
- To foster appreciation for cultural heritage
- To train artists to fill the manpower needs in an era of technological development
- To train and equip students with knowledge leading to better their understanding of other subjects.

Qualities Developed Through Fine and Applied Arts Education

The ability of quality sight-observation is almost entirely an acquired skill. It is true that certain individuals are born with an aptitude for concentrated attention and for the eye and-hand co-ordination involved in the act of recording what is observed. Though, in most cases, the eye and other organs of sensation have to be trained both in observation (direct perception) and innovation.

It is seeing, the form of qualities consciously related to one another that creates the essential differences between the artist and those who are artistically untrained in their method of observing things. Our eyes respond to assemblages of lines, colours, shapes, spaces and masses.

- **The ability of imagination:** Art is certainly an imaginative expression and every work of invention of men is originally born of imagination. Every man-made form has originated from a process of image making, even mechanical inventions of purely

utilitarian value. Nothing that is man-made is not born of imagination. Therefore, one may express this power in its highest form.

- **Aesthetic appreciation:** Through the teaching of Fine and Applied Arts we acquire the ability of aesthetic appreciation. There is no other means of developing this ability than by the appreciation of good poetry, music, and Visual Art. The appreciation of arts is comparably the most objective and practical, and infinitely the most valuable of these means. Art encourages a much wider use of aesthetic appreciation which we exercise normally in life.
- **The knowledge of Research:** It is understood that art and learning of art should provide self-expression. Often it does not stop there, for there are several other possibilities elevating from self-expression. When an artist tries to find a new mode of expression to his concept, there is the possibility that what arises as a spontaneous activity may become a specialized ability or creative technical skill.

Art and Nigerian Education System

Nigeria Educational system has never in reality accommodated Visual Arts. It has been a recreational subject and this situation informs why it is treated with levity in schools. It is seen as a subject for the indolent because of its association with craft. For these reasons, subjects like English language, mathematics and other subjects are considered more important than Art. In most schools, English Language and mathematics are given the most serious attention. They are studied throughout senior secondary schools and WASC and GCE examination. This choice is frequently determined by such grouping or option system that a school operates. A large number of children, particularly the more intelligent ones, give up Art on the basis of its lack of social and economic relevance.

A recent survey shows that the ratio of Art Teacher to other teachers in secondary schools in Nigeria was about 1:30. This means that one could find a whole school without an Art tutor because the staff population in many schools are less than thirty. There have been situations where Art teachers are not given the opportunities to go for in-service training and refresher courses. This causes serious setbacks to the teachers and the subject alike. It also brings regret to the teachers who in most cases, think they chose a wrong discipline. The Yaba Technical Institute later known as Yaba College of Technology, was the first college, or institution of higher learning in Nigeria. As should be expected, Art was not made part of the college curricula. Also, when in the late 1940s, the university college now university of Ibadan, was opened to be an extension of the university of London, colonial apathy or even antipathy for visual arts totally eclipsed the discipline (Oloidi 2011).

The same situation would have been the portion of the Art programme of the University of Nigeria Nsukka had Dr. Nnamdi Azikiwe the founder of the University not suggested that the Art department be made part of the programmes in the University in 1961. Having studied in the United States of America he was well aware of the importance of Art in the development of any Nation. In the Nigerian society, there is also a great apathy against Art. Many parents and guardian have succeeded in discouraging their wards from studying art in the higher institutions for fear that it does not have societal acceptability, more so, it lacks the ingredient and what it takes to put food on one's table. In Tertiary level, the government and education stakeholders do not see much good in Art. Every attention goes to science subjects which are considered appropriate and indispensable to national economic and technological development.

The stigmatization in Art implies that Fine and Applied Art with all the resources it has for development has been stifled and not given the opportunity to play its role in our educational system, industry, society, science and technology. This situation can still be traced to the colonial master's lack of attitude to Nigeria's Traditional Art which in turn has

seriously affected the image of Modern Art in Nigeria. The first step in re-engineering Fine and Applied Arts is to showcase what it entails; most people do not know what it entails or means. Some may associate Fine and Applied Arts with appreciation and cultural roles only. This is only a part of the manifold roles of Art, by enumerating the manifold roles of Art, clarity, novelty and prominence would have been given to a discipline which had been in obscurity due to the society's lack of knowledge and understanding of what Art is all about and what Art contributes.

The Educational Role of Art

Amadi (2010) posited that Art is the only subject that finds practical use in all subject areas. An ability to create and draw diagrams or illustrations accurately describes points more than words can do. In America, the 1850's and 1860's justification for art as a subject to be taught in schools was that it was necessary for the development and prosperity of American industries. (Amadi, 2010). Nwoko (2006) stressed that "the importance of Art education to the realization of the physical growth and development of scientific and technological knowledge must have been fully recognized by the Western world who had to make Art the base of their learning process". Apart from the types of mind and personality development it gives the students, artistic illustration forms the visual language of education. It therefore became imperative that the language of graphic art should be mastered during normal education process. Accordingly, a child's formal learning started with drawing, painting and modeling at an early age of three.

This should therefore inform why Art should be strongly rooted in both primary and secondary schools' curricula as it helps in a child's developmental process. Art has found an invaluable instrument in teaching school subjects like biology, physics, chemistry, architecture, medicine among many others, it is necessary that this virtual resourceful discipline be understood and comprehended for knowledge sustainability.

The Technological Role of Art

Again Amadi (2006) opines that the ideals and resources in Art like aesthetics imagery, conceptualization and skill etc are stimulants to inventions and discoveries. The imagination of the artist visualized the first flying machine as in the drawings of Leonardo Da Vinci (1452 – 1519) and other visualizers who predicted the space rocket to the scientific fiction artists who designed the first space suits and conditioned protective costumes (Nwoko 2006). Mbahi (1997) made a supportive statement when he asserted; the artist indicates the possibilities of a new invention by his creative powers, the scientists create the knowledge through the systematic study of natural phenomena or abstract ideas and the engineer or technician deals with the systematic use of organized knowledge to solve the problem.

Therefore, science could be the knowing, Arts is the creative act involved in giving an objects a form and technologies is the doing. Art evolves, science involves and technology produces. Thus, it can be formal to admit that the technological roles of Art are profound and consummate. Again Arts, Science and Technology are woven together. The huge resources in Art that blends with science and technology are what bring about sustainability in knowledge, technology advancement and reforms in the systems.

The Role of Art in Education

The visual arts have a vital role to play in the society. Through Visual Arts, individuals explore ways of doing things uniquely. The visual arts play a vital role in the development of the country's economy. The practice of visual arts stimulates innovation and competitive advantage in other areas of the creative industries with which it has important links, as in; craft, design, commercial arts. The subject of Visual Arts offers the individuals a way to

meaningfully engage with and respond to their world. It provides opportunities to stimulate and develop people's intellect, engaging their creative imagination through visual and tactile experiences and the innovative use of materials and technology in the realization of their ideas. The citizens will acquire the capacity to make practical and aesthetic decisions in the development of a logical body of work and become actively involved in shaping physical, social and cultural environments. The study of Visual Art will enable one as follows;

- Identify and solve a variety of problems and make responsible and informed decisions, using critical and creative thinking processes.
- Explore materials, processes and techniques in an efficient, economical, safe and responsible manner.
- Observe, assess and analyse art forms, processes and products
- Communicate effectively using visual, oral and written language skills.

Education is a discipline that is concerned, in this context, mainly with methods of teaching and learning in schools or school-like environments as opposed to various non-formal and informal means of socialization (Education 2013). In as much as it is sufficient to state that the essence of education is well appreciated in Nigeria today, it is expedient to note that its functionality is not yet fully embraced in the real sense of it. Obasanjo (2012) articulates this notion, stressing on Fafunwa's point that schools of higher institutions must change their focus from training employment seekers to employment creators as it will enhance employability. Fine and Applied Arts Education is beneficial to child's self-esteem because art classes offer children the opportunity to find ways to express their emotions and personality. The involvement in the arts can motivate students who are otherwise unwilling to learn. Art plays an essential role in education:

- It helps in providing an effective way to build skills, develop content comprehension and empower students with the skills that they need to succeed in our visually complex world. (Lori 2010).
- Students learn fast by using pictures, charts or other visual forms of organizing information.
- Students who are visual spatial learners thrive when they can use art to access their strength.
- Art also provides the visual literacy skills that students will need to be able to critically engage within this fast paced media saturated world.
- Art therefore can be integrated into all areas of curriculum to allow all students to gain the skills that a visually competent creative professional will need in order to succeed.

The Role of Fine and Applied Arts in Health Services

In human, it is the general condition of a person's mind and body that usually makes him to be free from illness, injury or pain. Healthcare research suggests that the incorporation of the arts into the healthcare environment. This can increase a patient's satisfaction, reduce length of stay and can actually reduce the time it takes a person to recover from illness. Rice (2012), states that Art can be used to raise awareness of specific illnesses and help people think about medical issues, they might otherwise choose not to engage in. although information may be offered through leaflets or health related website, radio, and television, but people may not choose to read this information or may be unaware of it if they have little contact with the information. Visuals like posters hardly escape our sight in connection with health hazards and conditions like

smoking, HIV/AIDS and immunization etc. can be communicated to the public easily through visuals. Art works like wood or stone sculpture, ceramic bowls, oil paintings and glass works can be used to communicate to the public on health issues. Therefore, the arts can offer the world of health far more than just decorative images on walls. Emotions such as love and fear are familiar to everyone but cannot be seen, therefore art makes these experiences visible through visuals like painting or sculptural piece. The National Health Service (NHS) in their research demonstrate how arts can help users to express, contain and transform distress and disturbance, and how the arts help to create a less stressful clinical environment thus;

- The arts in this context have been proven to increase the understanding between clinicians and the people for whom they care.
- Art helps to aid better public health awareness
- Arts helps to develop and deliver more patient focused services.
- Art helps to improve the healthcare experiences for all.

The Role of Fine and Applied Arts in Politics

Politics is the art or science of influencing people on a civic or individual level when there are more than two people involved. The history of politics is by and large the history of monument and of artworks compatible with capitulation. Every political regime uses the arts for propaganda purposes, consciously displays the arts and tries to shape the consciousness of their population (Cripin 2008). The attributes of art and artists according to Shane (2012) are;

- Artists create not a vacuum but as integral members of a society, their work therefore often expresses viewpoints about society including its politics and government.
- Many artists express political and social views through their work, that is making statement or highlighting certain issues through artworks.
- The growing outspokenness of the arts sometimes provokes political backlash.
- Politicians use artworks especially posters and banners in their campaign.
- Awareness is created through artworks on political issues in the nation for better development.

The Role of Fine and Applied Arts in Agriculture

Agriculture can be seen as the art, the science and the business of cultivating soil, producing crops and raising of livestock. Fine and Applied Arts have a role to play in response to issues in farming and to address certain challenges of social exclusion and cultural under investment in rural communities. Fine and Applied Arts deals with agricultural project, exhibitions, and publication. It also deals with issues in agriculture such as farming families, animal health welfare, food and safety and industrial farming practices. Art exposes the challenges of farming and suggest proper solutions to farming issues. Art helps to generate new images concerning agriculture and creates awareness about farming life among communities. Therefore, through Visual Art farming traditions and values can be made known to the public.

The Role of Art in Religion

Religion is an organized collection of beliefs, systems both cultural systems and world view that relate humanity to spirituality and sometimes to moral values. Most religions have narrative, symbols, traditions and sacred histories that are intended to give meaning to life. The practice of a religion may include rituals, deity, gods, or goddess,

festivals, music, dance, and all these have something to do with art. Religious awareness on violence and possible solution can be created through art works. Sometimes religion cannot operate in the absence of Art. This is because painting, drawing, sculpture and other art forms are used to depict the faith or belief of a particular religion. Examples are seen where paintings and sculptures of the Apostles are used to depict Christian religion. Sculptures of images, deities and gods are used to depict traditional religion. Arabic drawing and symbols are used to depict Islamic religious practices, while Figures and paintings are used to depict Hindu religion. Art works therefore are used to depict one religion or another and they play important role of faith and belief on the people involved.

The Role of Art on Commerce and Industry

Commerce is a branch of business that is concerned with the exchange of goods and services. It includes all those activities which directly or indirectly facilitate that exchange while industry is the organized action of making goods and services for sale. Industry has to do with business, product, manufacturing, trade, trading commerce and commercial enterprise and in order to market these products, art therefore should be incorporated. According to Ofoba (2008), the role of Art in the development of commerce and industries includes;

- Manufacturing of goods which are advertised and marketed through Visual Arts, especially through posters.
- Fast communication to the public especially people in the rural setting.
- Creation of wealth, jobs and alleviates poverty. Through awareness.

Areas of Sustainable Knowledge Economy in Fine and Applied Arts Education

Fine and Applied Arts generate knowledge especially in this digitalized era. Fine and Applied Arts therefore avails one the opportunities of knowledge in the following areas;

- **Textile Production:** Textiles are seen as one of the branches of Visual Arts which deals with fabrics. Ndubisi (2010) sees textile as a word from Latin world “Texere” (to weave) which is originally applied to woven fabrics. It is a universal term for fabrics, yarns, and other materials that can be made into fabrics. Fabrics are produced by interlacing or other construction methods. There is the need to use fabrics for protecting one’s body. Therefore, man has the desires to constantly beautify himself. Individuals go for well-made clothes often times than the poorly made fabrics. Textile production therefore, avails one of the opportunities of gaining knowledge in the following areas;
 - a. **Clothes Production/Textile Design:** Cloths can be produced in various styles and ways using different techniques and patterns. It can be done through the combination of one or more techniques as in designing of fabrics through tie-dye technique, baiting, serigraphy, stenciling or the combination of two techniques or more.
 - b. **Weaving:** The art of weaving in textile art is among the most ancient of man’s technology which is mostly done for utilitarian purposes. In this, one can embark on cloth weaving for body decoration and protection, tapestry weaving for decorations of places, macramé for beautification of homes, private and public places.
 - c. **Needle work:** This can be done through the use of needle and various colour of yarn to create design, make patterns on various fabrics. It can be done in various sizes, it is mostly used for furnishing and decoration. The common needle works available are quilting and stitches of different types, which includes; head rest cover, curtains, arm rest cover; bed rest cover. Tailoring and sewing are not left out, this is because for textile materials to obtain its end it must undergo sewing and tailoring. Crocheting is a form of needle work by which fabrics are created from yarn or thread using crochet hook. It is similar to knitting; the difference is that only loop is active

at a time in crocheting and a crochet hook is used in place of needle. It begins by placing a slip-knot loop on the hook to create a chain of suitable length and its materials are hook, yarn or thread.

- d. **Embroidery:** Is an art of decorating fabrics with needles, yarn or thread which is done mostly on textile surface. The two types of embroidery are handicraft which is made manually and the machine embroidery.
- e. **Textile Management:** is an area of textile technology which has spread widely. It comprises of textile arts and designs, fashion designing, costume and make-up artist, stage managers, stage designers etc. this aspect of textile requires experience in textile design.

Graphics: Graphics is a process or technique of working with words and pictures to create solution to problems in visual communication. In graphics art, there are various ways of generating impacting knowledge as in the making of vest, illustration of book covers, production of bill boards, production of posters, hand bills, logos, stamps, road signs and calendars. An interesting area of graphics is photography and it is good in yielding profits. This is due to the quest of taking pictures within the society especially during events like wedding ceremonies, traditional events, outdoor functions, political rallies and religious events.

Ceramics is a solid material comprising an inorganic compound of metal, non-metal or metalloid atoms primarily held in ionic and covalent bonds, common examples are earthenware, porcelain, and brick. The crystallinity of ceramics materials ranges from highly oriented to semi crystalline, vitrified, and often completely amorphous; an example is glasses. Often fired ceramics are either vitrified or semi-vitrified as in the case with earthenware, stoneware and porcelain. Varying crystallinity and electron composition in the ionic and covalent bonds cause most ceramic material to be good thermal and electrical insulators (extensively researched in ceramic engineering) with such a large range of possible options for the composition/structure of a ceramic example in nearly all of the elements, all types of bonding, and all levels of crystallinity, the breadth of the subject is vast, and identifiable attributes are hardness, toughness, electrical and conductivity. The earliest ceramics made by humans were pottery objects, that is pots and vessels, figures were made from clay either by itself or mixed with other materials like silica, hardened and sintered in fire. Later ceramics were fired and glazed to create smooth coloured surfaces, decreasing porosity through the use of glassy amorphous coatings on top of the crystalline ceramic substances. Ceramics now include domestic, industrial and building products, as well as a wide range of ceramic art. In the 20th century new ceramic materials were developed for use in advanced ceramic engineering.

The Way Forward

It is important that art be made a core and regular subject in the time table of all schools, colleges and tertiary institutions in the country. It should be made one of the compulsory subjects to be offered in the Senior School Certificate Examination. Through a fresh approach to art people will learn to appreciate and value art, thereby improving their knowledge and understanding of Arts. Artists should be employed in all disciplines of life. Parents should not discourage their children who are interested in studying art in school. Government and individuals should also help to sponsor artists.

Conclusion

Fine and Applied Arts have played vital roles in the education system, especially in the era of digitization. Through Fine and Applied Arts people can explore ways of doing things differently. Art also plays an important role in the economy. The knowledge of Fine

and Applied Arts stimulate innovation and competitive advantage in other areas of life. It has important connections with craft, knowledge, innovations, inventions and creative skills. This offers the people a way to meaningfully engage with and respond to their world. It provides good opportunities to stimulate and develop knowledge, intellect, engaging their creative imagination through visual and tactile experiences and the innovative use of materials and technology in the realization of their ideas. Through effective re-engineering of Fine and Applied Arts Education, people will acquire the capacity to make practical and aesthetic decisions in the development of a logical body of knowledge and become actively involved in shaping their physical, social and cultural environments.

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