ART EDUCATION AS A STRATEGY FOR ENVIRONMENTAL SUSTAINABILITY

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SUMMARY OF
A THESIS SUBMITTED TO THE POST-GRADUATE SCHOOL
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JUNE, 2009
DECLARATION

I hereby declare that this thesis has been written by me and it is a record of my own research work. It has not been accepted in any application for a higher degree. All quotations are distinguished by a quotation mark and the sources of information are specifically acknowledged.

Shirley Dinah Ityoban
June, 2009
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ABSTRACT

Art Education as a Strategy for Environmental Sustainability

This study is designed to investigate if Art Education can be used as a tool to achieve environmental sustainability in Nigeria. The issues examined in the study include: How an art teacher could make use of art processes as a means of conscientizing children towards improving the environment for sustainability. The extent to which art education could be used as a tool for promoting visual awareness that would enhance environmental sustainability; the level of educating the child in art so that he could effectively demonstrate his knowledge of making use of items within his environment to create works of art that could help sustain the environment; and how art processes could be made valuable to the child so that he or she recognizes its importance in the achievement of a sustainable environment. The study is divided into five chapters. Chapter one is the introduction to the problem of the study, the countries inability to achieve environmental sustainability after 48 years of independence and attain the feat of one of the 20 top economies of the world is highlighted as the major problem of the study; despite the countries abundant resources. The sight of many primary and secondary schools reveal a sterile or poor environment without even the basics. Art is not given the attention it deserves as such teachers are not enough and even those available are not doing much. Teaching methods are not explored to their maximum use and children are not given enough encouragement etc. In chapter two which is the review of literature, the study presents views of experts in the area of Art education both in Nigeria and outside. Particularly Britain and United States of America. The countries that have achieved environmental sustainability through art education. The review cover what experts believe should be done to achieve environmental sustainability; for example, the conceptual approach and the material approaches among other strategies such as the use of materials within the environment including disposables or waste turned into usables. The review highlights the value of art in the society and the nation as a whole. Chapter three presents the methodology and research design. The quasi experimental design is used in applying the hypothesis. Four hypotheses were formulate for the study and all of them tested art P<0.05 level of significance. The instruments used in the study known as the Rating Scale for art works achievement in environmental sustainability (RSAWAES) was designed by the researcher and validated by experts from fine and applied arts. The instrument was divided into four parts. These were: Manipulation of Materials (MO) (5 marks). Power of Imagination (PI) (5
marks), Display of Skills (DS) (5 marks), and Answer to Questions (AQ) (5 marks). In chapter four, data presented was analyzed based on the results of the hypothesis. Hypothesis one: The result revealed that there was no significant difference in the mean pretest scores on visual awareness and level of skills acquisition. The result thus assumes the equivalence of the two groups before treatment. Hypothesis two: The result shows that in the mean performance the children with multiple materials performed better than those with fewer materials. Hypothesis three shows the result of no difference in creativity and manipulation of materials. Hypothesis four which was a null hypothesis was accepted since there was no significant difference in the display of skills and power of imagination in both the control and experimental groups. In chapter five, the study concludes that environment plays a major role in determining the level of development of an individual and the nation as a whole. Creating a conducive environment and sustaining it is the responsibility of everybody in the society. Since Art education is perhaps the only subject on the school time table that makes its aim the development of human potentials in children. Art education programmes must place emphasis on aesthetics education through awareness creation, to enable the child develop positive attitudes towards his immediate environment. In this case, the school environment and the home are important. Appropriate teaching strategies including hard work and dedication on the part of the teachers in encouraging children in the use of a variety of materials and different approaches must be sustained. However government’s political will in encouraging teachers in different forms should be made possible, that is providing the basic equipments, materials and tools as well as the enabling environment that will encourage art production. This political will should be sustained to achieve meaningful results so that through art children may learn to turn raw materials into finish products, and waste into wealth. If this is sustain, the country will achieve the year 2020 target of environmental sustainability through art education.

Shirley Dinah Ityoban
June, 2009.
DEDICATION

I dedicate this work to the Living God, Father of all creation for his protection and abundant blessings.

Shirley Dinah Ityoban
June, 2009.
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1.0 INTRODUCTION

Following the United Nations Millennium Declaration adopted at the Millennium Summit held between 6th – 8th September, 2000 in New York, United States of America (USA), Nigeria has been committed to the realization of the Millennium Development Goals (MDGs) by 2015. These goals are targets for making measurable improvement in the life of the world’s poorest citizens. The 7th MDG is to ensure environmental sustainability.

Sustainable environmental protection is being threatened by a plethora of environmental problems which include land degradation, pollution, flood, erosion, defacing of artifacts, and deterioration of environment, these have imparted negatively on the aesthetic nature of the environment.

In order to find solutions to these environmental challenges, education, particularly aesthetic education must be in the forefront, to enhance the achievement and sustainability of the environment.

1.1 BACKGROUND OF THE STUDY

According to Independent Policy Group (2003) the invaluable role of education in the development of any society explains the importance
attached to it by government all over the world. Education is the torchbearer of civilization. It is the foundation on which the future is anchored, and the potentials and endowments of nature optimized for the advancement of humanity. For any country to achieve meaningful progress and sustainable development, the citizenry should be well informed so as to participate actively in the task of nation building.

Awareness of the essence of education has recorded a high increase over the years. This observation is based on the fact that the national goals and aspirations of any given nation can only be fully realized through its educational system. The experiences with the colonial educational policies in Nigeria can be used as a reference point to validate the contention in this context.

The educational policy in use in Nigeria during the pre-independence era was meant to serve the colonial interest by producing cheap manpower resources for the colonial government. The educational system was directed at the teaching of liberal arts. Its recipients were expected to serve as clerks, messengers, interpreters and to do other menial jobs (Baldeh, 1990; Shoja, 2005). Whereas subjects like visual arts that could create a visually literate society starting from the primary school level were completely neglected (Oloidi, 1985).
On the attainment of political independence, the post-independence socio-economic values and needs of the new nation required a change. This propelled Nigeria to formulate a new National Policy on Education. In this regard new curricula and programmes were designed with the aim of actualizing the potentials of Nigerian children to meet national goals.

The National Policy on Education which was first published in 1977 and revised in 1981, 1998 and 2004 has provided a list of school subjects to be taught at all the levels of Nigerian education. At the primary school level, cultural and creative arts (that is drawing, handcrafts, music and cultural activities) are among the subjects in the school curriculum (NPE 2004). At the junior secondary school level, fine art is to be taught as a pre-vocational elective subject while at the senior secondary level it is one of the vocational elective subjects. As stated above, it is most unfortunate that Art has been reduced to a level of an elective subject instead of making it a core course. For even within the field of Vocational Technical, visual arts stand out clearly as it is the basis of all other subjects.

This classification of Art among the pre-vocational and vocational elective subjects alone is a clear indication that the National Policy on Education has the desire to tap the hidden talents and potentials in Nigerian children including those who are handicapped and those who are
not born with the cognitive abilities to pursue hardcore academic programmes.

Art education is made up several areas; these include Ceramics, Sculpture, Designs, Painting, Graphics, Textiles, Art and Art history. It also includes the study of museums, Art societies, Art galleries and by extension the general environment.

Monumental art works that adorn cities and big towns in Nigeria today have continued to be of great aesthetic and cultural value even in the contemporary socio-cultural realities. This is in view of the fact that these images or art figures have dual functions and are of relevance. They do not only add to the beauty of the environment but also have a positive impact on healthy living because it is pleasing to the eye.

A practical example of the contribution of art education can be seen in Nigerian towns and cities, where there are artistic statues of social and historical significance. In Benue State for instance, there is a large basket filled with all sorts of agricultural products produced in the state.
Author’s Field Work: Food basket of the Nation

This is, no doubt, a symbolic representation of Benue State as the food basket of the nation. In this social context, art education has served a socio-cultural function as it helps to project the agricultural image of Benue State to the outside world.

In almost all the towns and cities, one sees some artistic products of socio-historical significance. Such historical and legendary figures like Oduduwa, Inikpi, Queen Amina and many others have their statues erected in many public places. Unfortunately however, the relatively lack of art education or awareness has reduced these status to mere decorations; which have downplayed its significance and role for environmental sustainability. Most of them have even been turned to “bill boards” or defaced by politicians and other interest groups who display their posters on them.
Apart from the primary function of contributing to the beautification of the environment, these artistic products also have other contributions in terms of serving as the historical records on the past heroes, heroines and legendary figures. Regrettably, it can also be observed that pleasing as the products of art may appear, one finds that the beauty as well as the relevance of art education to nature is gradually disappearing largely due to neglect and negligence.

Like many other school subjects, the teaching of art has some set objectives which are in line with the national objectives. At the post primary level, the National Policy on Education has the following objectives for the teaching of art:

(a) The training of the mind in the understanding of the world around;

(b) Through art, students acquire appropriate skills, abilities and competencies that help them in the development of their societies;

(c) Ensuring that the Nigerian culture is kept alive through art, music and other cultural studies in the national festivals of art;

(d) Inculcation of the right type of attitudes and values for the survival of the individual and the Nigerian society.
Looking at the above objectives, it becomes clear that art education has a significant contribution to make not only to the Nigerian society but also to the individual recipient. Knowledge of art is not only relevant in terms of the acquisition of vocational skills it enhances, but also the training of the mind in the understanding of the world around. This is a cardinal objective of art education which is not only useful in art but also in other school subjects at all levels of education. This implies that art should be the basis of the child’s education. It is imperative therefore, that having understood the context of art education and its processes, art education should be inculcated in children, in a manner that will make them to come to realize, understand and appreciate its values in order to further encourage them to work hard to help sustain the environment.

1.2 STATEMENT OF THE PROBLEM

Despite all the efforts by the Nigerian government, in promoting the arts. Art education is not given prominence in most of the primary and secondary schools.

A visit to most schools shows an environment without the basics in terms of infrastructural facilities such as art studios, art stores, exhibition rooms and art equipments. There is also a problem of infrastructural decay almost everywhere, as well as defacing of artifacts and disorder in many places. Thus making the environment less conducive for even art enthusiasts to create works of art.
Author’s Field Work: Defacing of Artifacts

It is on the basis of this that this researcher strongly believes that there must be change of attitude so that art education can come in to salvage the situation. Art education if properly handled can provide citizens with relevant knowledge, skills and aesthetics consciousness that would enable the recipients see things from artistic perspective. Recipients may now realize that it is possible to turn even materials like sticks, corn stalks, waste, as well as ordinary objects into productive use. In other ways, art education could also create the awareness in children that disposable materials could be made into useful items, important to environmental sustainability.

1.3 RESEARCH QUESTIONS

The following questions are raised to further sharpen the focus of this study:
How can an art teacher make use of art processes as a means of conscientising the children towards improving the environment for sustainable development?

To what extent can art education be used as a tool towards promoting visual awareness in improving environmental sustainability?

To what extent can art education and its processes be used as a means of educating the child toward demonstrating or realizing how disuseable materials, objects etc., can be recycled and used for environmental sustainability?

Will it be possible to make children to recognise the value of art educational processes as an aspect of achieving a sustainable environment.

1.4 THE OBJECTIVE OF THE STUDY

The objective of this study is to find answers to the research questions raised in 1.3 above.

1.5 PURPOSE OF THE STUDY

The purpose of the study is to:

(i) Examine how art learning can stimulate/inculcate aesthetic consciousness of primary/secondary school children.
(ii) Examine, critique aspects of the objectives, contents, methodologies of the junior secondary school art syllabus and tailor them towards the achievement of environmental sustainability.

(iii) Determine how artistic knowledge can be transferred and channeled towards environmental sustainability.

(iv) Formulate art lesson objectives that would be more suitable for environmental sustainability.

(v) Articulate contents of art lessons that can enhance environmental sustainability.

(vi) Suggest methods of art teaching most suitable for the enhancement of environmental sustainability.

(vii) Suggest further strategies in which art learning can enhance environmental sustainability.

1.6 **SIGNIFICANCE OF THE STUDY**

The significance of this study lies in the fact that Nigeria as a developing nation is faced with a lot of environmental challenges in terms of waste management, environmental pollution due to lack of aesthetic consciousness. These have made her to be counted among the most backward nations of the world.
As the population of the country continues to increase, these challenges are also on the increase, hence the need for aggressive steps towards providing relevant education for proper management of the environment and sustenance through art education. This will help in the practice of promoting the principles of sustainable development as the only option for meaningful development.

Children engage in art processes, through group projects, class work, play and so on; they use all sorts of materials including those that constitute a nuisance in the society like empty tins, polytene bags, containers and other disposables to create works of art. The knowledge of art education therefore is hoped will help throw light on communities and indeed the country through advertorials, billboards and jingles that can help bring about an art culture where children, parents, art teachers and the society may begin to see the significance of fostering an orientation and creating a sustainable environment using art processes.

1.7 SCOPE OF THE STUDY

This study is delimited to Katsina-Ala Local Government Area of Benue State. Only JSS I students offering Art are covered in this study. The schools are eight in number and two secondary schools out of the eight are selected. All within Katsina-Ala Local Government Area.
1.8 CONCEPTUAL DEFINITIONS

The position taken by this study is that lack of knowledge of art education and aesthetic value are obstacles to the achievement of environmental sustainability. For the purpose of a sound theoretical base, it will be pertinent to provide conceptual definitions of art, education, art education, aesthetics, aesthetic consciousness, environment and environmental sustainability.

1.8.1 Art

“Art” as used in this context refers to the use of the imagination to make things of aesthetic significance. It also refers to the techniques used in producing works of art. In this study “art” is also used as a means of self-expression of ones innermost feelings through the use of waste products by recycling. Works produced by creative artists, fine artists and either skilled workmen are all considered art. They must be produced for a purpose that is either for sale, to earn marks or just for appreciation and for a healthy and serene environment. The term ‘Art’ Creative Arts, Handiwork, Fine Art and Vocational Technical Education are treated in this study as being similar or belonging to one group.

1.8.2 Education

Education is a process of acquiring knowledge either by training or undergoing a course of study. It is a form of instruction which people
learn to develop their knowledge, and the use of mental, moral or physical power. During this process the person acquires relevant experience through both practice and theory which enables him or her to improve on knowledge already acquired or he may learn completely new things that may help shape his behaviour positively.

There are two form of education, traditional education and western form of education. Both involve the teaching or religion morals in its own way.

1.8.3 Art Education

“Art education” here refers to the process of acquiring formal education through art and being able to express oneself in a manner considered to be original and creative by those who are artistically capable of judging the work. It is education in the field of productive, historical and critical realms of art. It also includes education that promotes artistic and aesthetic development.

Art education requires not only the primary knowledge of making art, but also the processes of learning it. It has to take note of those who learn it and the forces which affect both the learner, the teacher and the environment.
1.8.4 The Artistic Environment

This refers to the opportunity the art teacher or parents can create to enable the child develop his or her skills in art. Experience in art is very crucial for a child. There are developmental stages in art product which children normally go through in the same sequence. It is however important that teachers or parents should not try to interfere with what children are doing simply because the children are going though an artistic developmental stage. They should realize that heredity undoubtedly plays a part in this but environmental influences are those that can be attested and enriched to accelerate this development or otherwise. The art teacher should provide the enabling environment so that creativity in children can be harnessed. A bare or empty environment has nothing for a child to learn from. An environment where materials are readily available and there is that encouragement on the part of either the teacher, parent or guardian for the child to experiment with materials can best be described as an artistic environment. Field trip or excursion can be undertaken by the school from time to time for the child to be exposed to the artistic environment. On the alternative, the teacher who brings to class works or scenes from other places, pictures, works produced by artists, art materials, etc., can provide a lot of excitement and encouragement to the children.
The recipients of art education are expected to be environmentally conscious.

1.8.5 Aesthetic Consciousness

In the context of this study the term aesthetics is to be understood as the science of beauty, or the appreciation of beauty perceived from natural or invented phenomena. It also implies the principles or canons governing the assessment of artistic products. On the basis of this premise, aesthetic consciousness can be explained as the natural or induced consciousness or awareness that is made in terms of appreciation of nature’s beauty as well as man-made aesthetic phenomena. Knowledge of art education and the development of aesthetic consciousness are closely tied. Their combined effect could equip the recipients and place them in a better position to fight against some of the environmental challenges facing our societies today.

1.8.6 Environmental Sustainability

The term environment connotes a variety of concepts and notions. It is however, pertinent to understand the term to mean a totality of man’s surroundings. It is grouped into the physical, social and cultural aspects among other sub-groups. The physical environment embraces all the geographical features or the physical features surrounding man in a given location. Man’s social environment comprises the home, school, the
church and work place among other social foras where man interacts with other human beings. Cultural environment on the other hand, refers to a cultural setting which has all its traditional or customary tenets completely unadulterated by any form of foreign influence.

On the above premise, it may be fair to explain the term environmental sustainability as a phenomenon where efforts are made to prevent man’s physical environment from becoming endangered as a result of negligence or neglect disorder, and lack of aesthetic consciousness which may influence aesthetic taste. Generally, environmental sustainability takes place only where there is order, calmness or aesthetic consciousness on permanent basis.

1.9 RESEARCH HYPOTHESES

The research hypotheses of this project are based on the following assumptions:

(i) Significant difference will not exist between the experimental and the control groups in their visual awareness and level of skills acquisition.

(ii) There will be no significant difference in the performance between the control and the experimental.

(iii) Significant difference will not exist between the control and the experimental groups in the creativity and manipulation of materials.
(iv) There is no significant difference between the control and the experimental groups in the display of skills and power of imagination.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

In order to establish a theoretical framework on “Art Education as a strategy for environmental sustainability”, the investigator selected literature from relevant sources based on the following sub headings:

(i) Definition of environment.
(ii) Effect of environment on human and non-human resource development.
(iii) The need for environmental education.
(iv) The purpose of Art Education.
(v) The effect of Art Education on environmental sustainability.
(vi) Impediments in the realisation of set objectives.
(vii) Empirical studies on environmental sustainability through art education/attitude change as a result of art experience and its influence on environment.
(viii) The way forward.
(ix) Summary.

2.1 ENVIRONMENT

Environment involves the totality of the surrounding. It includes physical, sociological, psychological and spiritual life of the people and their level of development or underdevelopment. Environment is their
conducive or not conducive. Environment can be described from different perspectives based on what it is all about.

2.1.1 Environment defined

The New Webster’s Dictionary of Current English (Revised 2004) describes environment as simply surroundings. It includes the materials and spiritual influence which affect growth, development and existence of a living being. It is therefore possible to refer to it as being friendly or hostile; comfortable or uncomfortable, noisy or quiet, good or bad. Environment is therefore responsible for the type of society one finds himself in. Oregbeyan and Adeoye (2001) describe environment as the total physical space and all human and other resources contained therein. To them, human activities inevitably and increasingly introduce materials and energy into the environment. When these materials and energy are liable to endangering people’s health, their well being or their resources directly or indirectly, the development is regarded as pollution which makes the environment uncomfortable. This means that desirable activities can produce undesirable side effects. This is how productive activities in every sphere of life, especially in the exploration of the natural resources for the purpose of industrialization works.

Denga (1999) on the other hand, defines the word environment as those external forces that influence man’s perception and his cognitive
processes which then culminate in his behaviours or responses. He divides the environment into two major components:

(i) The natural or physical environment; and,

(ii) Manmade or modified environment.

- The natural or physical environment comprises elements such as climate, soil, water, vegetation, relief or land-forms, animals and other processes of the earth that have existed quite independent of man.

- The man-made or modified environment comprises the physical structures erected by man over the years through technological development. This environment takes cognizance of man’s cultural, social and economic activities and is therefore invariably concerned with activities that may improve the environment but which may have some insidious and delicious effects on mankind and nature itself. He further points out that man is also part of the environment for it is man’s network of meritorious and deleterious interface and environment that elicits a tag of friends and foes.

This researcher is mainly concerned with the man made environment, since art works are mainly produced by man. These works are created based on the fact that man has special interest. This interest
may be as a result of man wanting to please himself, please other people or simply just to engage himself in a certain art activity to avoid boredom. Sometimes man activity may lead to disorders or discoveries within the environment. For instance indiscriminate dumping of refuse which may lead to environmental pollution and to the spread of communicable diseases. Use of poisonous chemicals for fishing which do not only contaminate the water but also pose health threat to man in terms of making the fish unfit for human consumption. Excavation which may lead to discoveries of old artistic objects, etc.

2.2 EFFECTS OF THE ENVIRONMENT ON HUMAN AND NON-HUMAN RESOURCE DEVELOPMENT

The effect of the environment on human activities has led to the longstanding discussion on environmental determinism. This tries to establish the influence of the environment on man’s activities and vice versa. Deng (1999) emphasizes that both the physical and social environments are found to have some influence on man’s activities. Such human activities like fishing, hunting, mining and many others are influenced by the physical environments. People living in the riverine areas in Nigeria for instance are mostly fishermen. The mode of transportation in the area is also likely to be basically by water. Those living in hilly or mountainous areas do not embark on the planting of deep-rooted crops those living in semi desert areas embark on irrigation
of cops, etc. This is an indication that the physical environment has an influence on man’s activities. On the other hand, man has been making efforts at modifying the physical environment to his advantage. It would be observed that the quest for the optimum utilization has led to land reclamation. This is a situation where what could have been abandoned as waste land is now put to productive use. This refers to the recent trend where it is possible to build a house in a marshy area. The creation of artificial dams, afforestation and irrigation are some of the ways that man has modified the environment for his productive use.

The need to harness the natural environment has led to specialised training. The availability of petroleum resources in Nigeria for instance, has led to the need to train personnel in petrochemical engineering among other vital areas of training necessary for tapping the natural resources. It is important to add that one should expect art works from these areas to reflect the culture of the people.

2.3 THE NEED FOR ENVIRONMENTAL EDUCATION

Denga (1999) stresses the need for environmental education when he stated that the natural environment with its store of food and other life sustaining ingredients supports human existence. According to him an unbridled and reckless destruction of this home and source of sustenance by man is suicidal. The wanton or careless exploitation of the natural
environment for instance, road construction has invaded large stretches of forests and arable land. The purity of the land, water and air has been polluted with toxic materials that are claiming to be integral part of our lives. The natural decorum in the forests has been raped by incessant burning and fire-wood collecting activities. The beautiful landscape with its security has been heavily taxed by the necessity of urban expansion and social activities which require the clearing of large expanses of land. The list continues. Deng (1999) has concluded by emphasizing that man and the physical environment need not be foes but friends.

A few examples of man’s attempt to become environmental friendly can be stated: There are many people out there who believe that the environment should be preserved and cared for. Vast amount of environmental education are being provided to communities on environmental conservation, improvement, sustainability and protection. Deng (1999) strongly believes that the sheer awareness of man that the natural environment should not be recklessly degraded will stem the expropriation of our richly endowed environment.

Environmental challenges have become common features in many societies though with different dimensions. In a Newswatch Magazine article entitled “Science by another name” Adelaye (2001) raised an alarm over the poor quality of drinking water in towns and cities thus:
The bulk of the water consumed by the majority of Nigerians and which is produced by water corporations or obtained from community boreholes, wells and other sources remain largely unregulated ... Unregulated pure water produced from unhygienic sources are now killing Nigerians slowly ... in most Nigerian cities the general mode of disposal of sewage is by the use of the less septic tanks and pit latrines.... Consequently, ground water is polluted to a high degree by seeping from the various sources

Similar cases of environmental challenges are also reported by Sokoya (1999) under the caption “peddling poison”. Conscious of the environmental hazard posed by indiscriminate selling of meat even in unhygienic environments she warns that “those who buy meat displayed openly in unhygienic environments may be courting disaster as the rate of illness from bacterial infection is on the rise”.

Idahosa (2001) stresses the need to include environmental education as a subject of its own at the primary and secondary school level. He has pointed out that since Nigeria is being threatened by environmental problems, the problems must be tackled in the best possible way, believing that incorporating environmental education as a subject in the primary and secondary schools curricular will help inculcate the habit of maintaining environmental rules which will have a multiplier effect on the quality of human beings in the country.

Other environmental challenges are poverty, over-population, congested habitat, unprotected water supply and so on. Another major
problem is lack of capital for industries. This is because when the capital is in short supply, it reduces per capital income which may lead to high propensity in consumption. Even when the capital is available, the establishment of industries still faces other problems such as sustainability of their locations, bearing in mind that industrial affluence causes incalculable harm on humanity. Cases of oil spillage in different parts of Nigeria which claim so many lives in 2006 and 2007 are still fresh among Nigerians. The situation is similar to the industrial gas leakage which claimed so many lives in India and Cameroon in 1980.

Denga (1995) emphasizes that sustainable development hinges on an effective and inextricable link between man his environment. He further asserts that a careful exploitation of natural resources tends to ventilate development projects for Governments, groups of non-governmental organizations and individuals. Environmental education helps people to minimize those pervasive environmental constraints that can stultify development. When you preserve the environment, you are at the same time encouraging growth.

Contributing to the fight in favour of environmental sustainability with reference to afforestation, Miller (1975) drew attention to the values of trees with a view to stressing the need to avoid their indiscriminate destruction. Trees are the great healers of nature. They act as watershed
to absorb, hold, release water, preserve the soil and life system for the entire regions, and help affect the climate by producing oxygen and absorbing heat. Miller (1975) further pointed out that;

In addition they are habitat for plants and animal life, help absorb some air pollutants, noises, serve as sources of beauty and aesthetic pleasure to reduce the monotony of man’s attempts to course into straight lines.

The above review has enumerated the social, economic, ecological and health values of trees beyond doubts. One is convinced that there is need for man to conserve the environment rather than destroy the trees in the environment. The trees in within the environment serve a variety of functions. They serve as good source for traditional/herbal medicine. Trees are used for economic purposes too example for furniture construction for use in offices, schools, hospitals and at home; roofing of houses etc. They provide shade, moisture, oxygen and absorb heat. The scenery around is also beautified by the trees in the environment. Thus the need to conserve the natural vegetation cannot be over emphasized.

Various control measures have been given to ensure the conservation of trees and forests. According to Iyortyer and Dechi (1999), the following measures can help to conserve the beauty of the environment. Among the measures are:

(i) Replacing the cut trees through forest conservation;
(ii) Control erosion and soil conservation to support vegetation;

(iii) Control of erosion through vegetation protection;

(iv) Establishing of forest resources and planting of certain species to where natural vegetation is absent; and,

(v) Protecting forest from bush and forest fires.

Although the forest resources provide some enticing benefits to the society, care must be taken to guard against deforestation as a serious environmental protection. The experience from Cuba as reported from the Solomon Islands (1992) shows that:

The forests are being cut down simply because there is money to be made from them. Commercial logging brings revenue to the national exchanger and contributes a large amount in export earnings. But if not properly controlled it despoils the landscape and threatens traditional livelihood. At the present rate of exploitation, it is estimated that all of the commercially viable forests will have been removed within eight to twenty years.

This trend is certainly not peculiar to Cuba. The exploitation of the forest resources without care about environmental degradation is a common experience in Nigerian communities. While the forest resources provide a good source of income, it must be noted that the negative effects will certainly overweigh the economic advantages.

Recent research undertakings have led to the realities of environmental challenges and how to combat them. The 1999-2006
College of Ecology at the Michigan State University for instance, had mounted a programme on the human environment and design. The main goal of the programme was to offer programmes designed to provide the students with an understanding of the socio-cultural and physical components of the near environment and their impacts on human life and the technical knowledge and skills. This is one of the practical measures to control the environmental deterioration.

Another research report has led to the slogan that a “poor environment creates wealth of problems” (2002). The report that a poor environment creates a wealth of problems is based on the fact that there are many diseases associated with environmental and chemical pollution. The report shows that this has affected American children thus requiring huge amounts of money in trying to eradicate the environmental hazards. Medical researches have been conducted on the impact of environmental pollution on the incidence, prevalence, death rate and economic costs associated with the environmental problems.

Another research has led to the health slogan that a “Poor environment means poor health.” In his research, Abdulhafidi-AL-Sulwi of Al-thewra International Department confirmed that the body and head lice could cause syphilis, a disease commonly associated with those living in unsatisfactory environments as they are subjected to attacks by insects.
and rodents residing in exposed sewers, spread throughout the neighbourhood. He also revealed that the environmental protection agency in Yemen for the year 2001 gave the data on the poor environment and its effects, saying that more than three million registered cases of death were recorded in 2000, due to water pollution-related diseases. It is also on record that many people die in Yemen annually due to water pollution-related diseases.

Recent research has also led to the emergence of environmental aesthetics as a new discipline which explores the meaning and influence of environmental perception and experience on human life (Arnold Berbeant). The concept of environment is not to be construed as a social setting for people alone. It embraces a fully integrated and continuous experience. This brings to focus the need to be not only conscious of men but also the whole gamut of his environment. In her review of outdoor control, Homier (2005) has enumerated the environmental control measures which she feels have to be observed for healthy living. According to her, a family needs to take environmental control measures in order to reduce exposure to all that are allergic to a child. She suggests various environmental control measures including the following to be adopted:

(i) Encase pillows and mattresses;
(ii) Washing sheets and blankets a child sleeps on once a week;

(iii) Ventilate bathrooms and basements;

(iv) Avoiding wall paper and carpets in bathrooms as mold can grow under them; and,

(v) Keep windows shut during pollen session.

Still as part of the environmental protection measures, Crow (2002) in his conception of the design for the environment, considers the following materials selection which could enable reuse avoiding the use of adhesives and avoiding filter materials in plastics. The presence of dirt will no doubt constitute serious environmental hazards. In the area of food technology too, there is the need to adopt certain control measures. As Jacob (1981) has maintained “good personal hygienic practices are a must and cannot be overemphasized for food service workers. They help keep the worker healthy. Secondly, they help prevent the spread of disease germs”.

The threat posed by environmental deterioration has led to the series of warning and calls for an action to be taken to conserve the environment. In his conception of environmental consciousness as a collective responsibility, Elderege (1998) has called for steps to be taken as he warns:

Humans are precipitating the current wave of mass estimation. Approximately, 27,000 species a year,
which boils down to three species an hour are lost forever. Short term thinking, over population, over-exploitation, habitat destruction, our failure to recognize connections between ecosystems brought about this staggering level of destruction. In order to move forward, conservation emphasizing the role of individuals in the community must be the first target of education. The development of environmental consciousness and social responsibility must become a priority.

Environmental conservation is a step towards environmental sustainability. In modern times, the natural environment is definitely facing some threats of extinction. These threats require environmental consciousness as a counterforce. By environmental consciousness, Jacob implies:

... developing a feel of the land and paying attention to overlooked aspects of plants, animals, the natural routine and human impact. Observing nature does not have to be spectacular, it could simply involve a sound farm or an appreciation of what is in your backyard.

This implies, the desire to understand the land relations of organisms to each other has to be established. It has been observed that in man’s relations to the environment man often abuse it as if land is a commodity. One will only begin to love, respect or care for ones surroundings when one perceives it as a community to which He/She belongs. The notion of love and respect for land or the environment are probably the tendency to be conscious of the numerous functions of the environment to ones life. The need to protect the environment for a
healthy living thus becomes apparent. The tendency to fight for its sustainability becomes too obvious. It is interesting to note that various government programmes have been directed at some of the environmental challenges. The Lagos State Government’s Environmental Task Fore which has its slogan as “Kick Against Indiscipline (KAI - 2006)” is a good strategy against environmental deterioration. The main responsibility of the task force is to ensure that illegal structures which now encroach the walk ways are demolished. It also focuses on areas that need beautification and those that are filthy, thus needing to be properly sanitized. The conversion of residential buildings into commercial centres as well as the construction of kiosks on walk ways is all seriously frowned at. These are clear manifestations of environmental consciousness and the quest to fight for the sustainability of the environment.

2.4 THE PURPOSE OF ART EDUCATION

A number of scholars and researchers have acknowledged the imperatives of art education to both the individual and the society. Art education could be seen as an indispensable venture. It is interesting to note that even in the contemporary era where there is so much emphasis on science and technology, society still finds that human beings cannot operate without the knowledge of art. This is because art has some
functional values across the disciplines. A practical example can be given of science students who often have to draw and label diagrams. Ahula (1999) has succinctly observed that “knowledge of art is indispensable even in science subjects, as a good drawing could earn more marks for a student in Biology, Chemistry, Physics, Geography and Mathematics”. Unfortunately, the indispensability of art even in areas as the schools orientation in Nigeria does not encourage children or students to see or think in the direction as to how mathematical symbols like triangles, squares or cycles are or can be used to enhance the beauty of an environment; even though they are confronted with such experiences daily.

There is an interrelationship between science and art. For, while science deals with nature, and analysis of phenomena, this is also the subject matter of art, since it deals with the production and attainment of ends. Another aspect of the interrelationship is that knowledge of stones and clay from the scientific perspective is necessary in ceramics as a major branch of Fine and Applied Arts. According to Uzoagba (2000) “art expresses the mentality of its own age and culture. For example if religious bigotry and the desire for conquest are active in a nation, her citizen may be sure to find artists expressing these characteristics in their works”. 
This implies that art is an expressive medium as such it tries to capture the tempo of the moment. As a cultural medium art reflects the values of the community to which it belongs. Uzoagba (2000) has further stated that “aesthetic values permeate all the social and practical aspects of life. Its principles must be applied to the planning of towns and buildings, to every item of furniture and utensils”. The question therefore is how can art principles be applied in the planning of towns and buildings? This can only be done if an art culture is established in the system through art awareness campaign or advertorials. When the culture is therefore properly entrenched, the architect, the building engineer and the visual artist will learn to come together so that the buildings do not only stand but its beauty can also be enhanced through art processes.

In the words of Brain (1980), “art touches every facet of our lives individually and collectively, introducing into society, changes that can affect peoples’ lives positively or negatively”. This contention is based on the fact that all aspects of man’s life are affected by art. The way and manner of doing or performing many activities are the products of art which affect man in one way or the other.

According to Ityoban (1991) the National Policy on Education is very clear about the role of art in education. It states that education should be
seen as a life long preparation. It must prepare the youths to become both useful members of the society as well as fulfilled human beings. Ityoban also using the words of Uzoagba (1982) enquires that if education is a preparation for life, then what role can art play in this preparation for life?

This means that art learning activities must be designed in a manner that the students would find personal fulfillment. Furthermore, the knowledge acquired from the learning of Art should be such that can serve the needs of the society. For example, children should be made or taught at the very early stage of their education how to examine their surroundings for “cues” that will help them generate a pool of possible solutions towards helping to sustain their environment.

Stressing the value of art education, Jegede (1983) maintains that:

If we educate Nigerians through art, they will be more sensitive and knowledgeable about their visual world. Artistic knowledge will equip us better against dealing with the future, since art education structures the way and means of problem solving.

Knowledge about the visual world is an important aspect of human need. Aesthetic taste needs to be satisfied to remove the monotony of every-day life.

Lovenfeld and Brittan (1975) rightly pointed out that:

“The process of drawing, painting or constructing is a complex one in which the child brings together diverse
elements of his experience to make a new and meaningful whole ... He has given us part of himself, how he thinks, how he feels and how he sees.”

Artistic creations and their processes need not to be seen as something without deeper meanings and values. According to Reid (1973), the picture or composition which an art work makes within the surrounding in which it is set, would not exist except in relation to the body and mind of the observer, the art work being the physical basis without which there would not be any aesthetic experience.

Talabi (1979) has stated that art reflects the past and contemporary life and foretells prospects for the future. Through art, the child’s thoughts are made clear, and the child finds expression through his artistic activities. He further states that art is an aid to technological advancements; because what the artist discovers through the sensitivity of intuition the scientist advances through research. In other words the artist indicates the possibilities and the scientist makes them possible. He gave an example of Leonard de Vinca’s design of the flying machine. Such novel and progressive ideas can also be achieved with the proper orientation and a proper learning environment, children learn better and faster in a conducive atmospheres. The need therefore for such technological breakthroughs have become compelling in this country today, because, almost every machinery needed for use is imported.
Whereas if artist or children are properly trained to perceive their environment better, probably more and major breakthroughs may have occurred and thereby reducing the rate of dependence on foreign technology.

In the same vein, Gordon (1973) has added that there is in man an innate and archetypal disposition to develop an aesthetic reaction to certain formal elements and compositions. According to him:

Art exists in response to two vital needs in man: the aesthetic need on the one hand, and the symbolic need on the other. The way the artist satisfies these two needs varies and depends on an innumerable number of factors ... the particular function his art work is to observe in his society and on what in general, his society thinks, desires or even prescribes that art should or should not do or achieve.

Ityoban (1991) quoting Talabi 1(979) also points out that art teaches morals and it discourages self destructive attitudes; because the child works with the spirit of creation. She continues by quoting Plato that:

Aesthetic education is the only education that brings grace to the body and mobility to the mind. Until man in his physical and conscious mode of being has been accustomed the laws of beauty he is not capable of spiritual liberty.

Ityoban further stresses that art experiences are necessary for the development of creativity in children. It is assumed that every child is
creative and that his or her creativity can be effectively developed by appropriate art teaching.

Considering the nature of art, Wanboje (1982) observes that it is both a process and a product. As a process, art involves the manipulation of materials to produce an end result which becomes the product. Art provides an opportunity for the artist to express his ideas, feelings and moods about people, places and things while at the same time creating new things. The Encyclopedia Britannica (1981), in recognition of the nature of art maintains that “art must be influenced by the social condition and taste of the time”. This perhaps explains why new art forms have been emerging “to meet the daily needs of man” (Newman, 1998).

Commenting on the importance of artistic products, Richard (1987) stresses their essence in the home. According to him “the design of homes and places of work greatly affects our physical and mental happiness”. This means that the location and ventilation state of the home could be pleasant to the physical and mental disposition of the occupants. By implication he has stressed the importance of a conducive environment. Art is believed to have possessed both some physical and psychological effects on man. Etukidem (1989) has stressed this fact, as he states thus:
A work of art is the crenel subject, suggestive statements of its creator. The artist stands back from his society in order that he may perceive it more clearly before he makes his personal statement in marble ... using any of the hundreds of other media at his disposal.

In the above context, Etukidem conceives art as the application of physical skills guided by principles. It is the expression of an impression through a medium. Art, according to him, is woven into the fabrics of life. This agrees with Gordon’s (1982) conception of clothing as a reflection of the inner person. According to him “clothing is more than an extension of the skin for protection against elements. It serves as a sign informing the world of one’s desires attitudes and intents”. It can also mean that clothing which is also an extension of art processes can not only revolutionize society, but help to enhance the work of art’s identity. For example the Fulanis of Nigeria have a way of dressing which is so particularly unique as it make them quite distinct and sets them apart from others inspite of cultural dynamism.

Based on the perception of the place of art in human life, the National Policy on Education (2004) has accordingly recognized its value in education. The classification of art as creative and cultural arts to be taught at the primary school level, as a pre-vocational elective at the junior secondary level and as a vocational elective subject at the senior
secondary school level is a clear indication of the key roles that art plays in human lives.

According to Talabi (1979), the life of man is expressed entirely in art. Art is the language of culture, and culture is the way of life of a people. In his own conception, Banjoko (2000) sees art as a very wide human activity that involves some skills. One uncontroversial thing about art is that it affects almost every aspect of man’s life. He has given the following as the main functions of art:

(i) It serves as a universal language;
(ii) It serves as a means of communication;
(iii) It is a means of identification (as in culture);
(iv) It serves as a means of beautification/-decoration of both the body and the environment;
(v) It is a means of livelihood – i.e. it provides vocation/employment opportunities, career, foreign exchange earnings, etc.; and,
(vi) It serves as a means of entertainment/aesthetic satisfaction.

This view is also shared by Meseda (1985) who states that Art activities provides teachers with access to children’s internal lives, their fears, hopes, concerns and ambitions. Art activities surround us from day
to day, the houses we live in, the clothes we wear and the utensils we cook with, all help the child to have direct contact with his environment. That is why Lowenfeld/Brittain (1975) earlier explained that the picture a youngster draws or paints is much more than markings on paper. Rather, drawing is a reflection of his feelings, intellectual capabilities, his physical development, perceptual awareness, the creative involvement, aesthetic taste and even the social development of the child.

It is important to note that, one of the major aims of education is to produce an individual who is a useful member of the society. Lowenfeld (1975) also emphasizes that:

As the child grows his art reflects his growing awareness of his social environment. As he develops a greater awareness of people and their influences on his life, these assume a large percentage of his subject matter content.

The above are a summation of the main values of art to man. It is on this basis that the National Policy on Education has stressed the importance of vocational and Technical education in Nigeria’s educational system. According to Daleong (2000):

Vocational and Technical Education aims at the preparation of young people and adults for useful semi-professional careers. It stresses instruction or skills that the learner must use on specific jobs. It provides technical background that increases the students’ understanding of a fieldwork.
The integration of art among the vocational subjects is in recognition of its educational values. In the words of Fafunwa (1971) “education has become a necessity for promoting good living, good citizenship, a sound health, agriculture, home-making, vocation and leisure”.

According to Mac Fee (1990) human beings make their greatest contribution to learning and discovery when they are most creative. Creative thinking is considered very effective in solving problems that are complex or non-logical. Art is the only subject on the school time table that makes its aim the development of human creative potentials in children. Art provides the child the opportunity for practical creative problem solving, art production and art appreciation.

Research investigations have variously proved that art has a significant role to play in terms of the development of vocational skills. According to Sackstein (1985) “vocational training should consist of some elements of preparation for employment by equipping the learner to meet the challenges of preparing for employment in appropriate and realistic ways”.

Bauman (1973) believes that the most important form of getting art across to the society is to develop conceptual approach to the teaching of art rather than the materials approach. He argues that in the material
approach, little if any, time, is spent on developing awareness of the
elements of art which are colour, line shape, space texture and value.
Children are flooded or inundated with all kinds of materials with little
emphasis on conceptual approach to the teaching of art. On the other
hand, conceptual approach without materials for experimentation is not
good experience. This researcher believes that both approaches are
important. This is based on the fact that as children experiment with
materials it becomes imperative for them to learn art concepts so as to
use them and apply them at the same time with materials available of
supplied to them.

It is important to use this approach because such a child is
encouraged to look at his surrounding and to interpret it visually. For
example, according to Bauman, (1973) the concept of “All lines are either
natural or man made” illustrates this perceptual involvement.

Children can be taken out on excursion for first hand observation of
line. They can be encouraged to observe and discuss the differences
between man-made and natural lines. Examples of questions that can be
asked are as follows. “Are man-made lines usually curved or straight?
How do man-made lines differ from natural line? and so on. Perceptual
involvement is important just as the material approach.
Eisner (1972) directed a conference in Stanford University where leaders presented papers in their fields. In this conference, Kaufman (1973) in a paper titled “Art of Curriculum making in the Arts” emphasized the importance of the artist in the school as the most qualified to teach art while another responded by criticizing such limitations and extended his own thinking into aesthetics education and learning about art. Three other teachers mentioned the same format. They however provided different approaches to art teaching, emphasizing experimentation, visual perception, art history, humanistic, student centred, individualized learning, interdisciplinary and creativity. It is sad to note that these approaches are not very much considered although few art works are displayed here and there.

In this study, art education is seen as the only subject in the school calendar that can effectively train children right from the kindergarten, primary school and junior secondary school level, who will be made to sustain the gospel even up to the university level throughout their lives. Teachers must assist children to become environmentally conscious.

2.5 EFFECT OF ART EDUCATION ON ENVIRONMENTAL SUSTAINABILITY

Art has been described as the celebration of life, as it involves the totality of human existence, be it in science, medicine, agriculture, social sciences, etc. (Dankaro 2007). Education is said to be a preparation for
life (Talabi 1979). If this statement is true then, art learning activities should be designed in a manner that students/learners find personal fulfillments; and knowledge acquire from the learning of art should be such that can serve the needs of that particular society from which the leaner come from (Talabi 1979), Ityoban 1991).

On environmental sustainability one can say that; environment simply means the surroundings; and environmental sustainability is about maintaining the environment, changing or transforming it for the good of humans and non-humans alike. And art education simply refers to the education which can be acquired in the process of studying or involving in art/artistic activities.

The Federal Government of Nigeria has in recent years shown a lot of concern about the quality of environment in her major cities. There is a conscious effort in enhancing the beauty of the Federal Capital Territory Abuja by the demolition of illegal structures and erecting new ones, creating awareness through advertorials, publishing government intentions of improving the skyline of the city. Many Nigerians may not see the need for such efforts, some may see it, but may not have seen the aesthetic implication, due to lack of knowledge in the arts or lack of aesthetic consciousness. This simply describes such art as attempt at
creating pleasing forms (Read 1956). Art forms have special experiences which are valuable in character (Dewey 1958).

The uniqueness of art forms can only be understood, expressed and appreciated when a person is properly schooled in the art processes at the early stage of his education. These processes which are also referred to as art education may involve several years of practical experiences in both the theory and the practical aspects which are generally known as Drawing, Painting, Sculpture, Ceramics, Graphic, Photographs, Textiles, Designs of all types, Art history, Art methodology, Art appreciation and other related fields. These areas are very vital for one's total experiences in further careers to be meaningful. This helps explain why Lovenfeild and Britain 1975 have clearly stated that:

The art products of children tell a great deal. The child for instance reveals himself directly and without fear. Art for the child is a meaningful communication with himself; it is the selection of those parts of his environment with which he identifies with. They also emphasises that art is important for the child’s thinking process, for his perceptual development, emotional development, increasing social awareness and the child’s creative development. The child art works reflect his growing ability to deal with a diverse range of possibilities in a constructive manner (Lovenfeild and Brittan 1975).

From the above statements one can rightly accept the fact that art experiences are very vital and meaningful for every child at the primary and secondary school levels. These experiences according to Ayangaor
(1980) should help in the development of creativity, (which is very basic in problem solving) in children and adults. Art experiences can assist children in other subject areas. For instance in the understanding and appreciation of works of art whether manmade or natural; provide a means of self expression of the persons innermost feelings through an art product. Anybody who is denied of this wonderful experience may definitely lack this understanding and sense of appreciation. It is therefore no wonder, that beautiful works of art mounted in strategic places at roundabouts and other locations are shamelessly covered with posters and bills without considering such works for their aesthetic purposes. This simply due to lack of environmental consciousness and lack of aesthetic awareness and love for beauty. There is every need to create such awareness to achieve environmental sustainability.

2.5.1 Art as a Visual Language

The composition of people or residents in cities and towns in Nigeria and indeed all over the world suggests that inhabitants have come from different backgrounds and different parts of the country and even the world, depicting a great deal of cultural, religious, social and linguistic diversities. Interestingly enough inspite of these diversities the visual language still hold sway, for it does not only act as a unifying factor for others, but also it is a powerful lingua/visual language of communication,
though silent it can be decorated and it also has a way of communicating to all. Art is also a powerful tool for information dissemination which can reach both literate and illiterates alike.

In the year 2004, the Federal Government of Nigeria launched the National Economic Empowerment Development Strategy (NEEDS); billboards were erected all over the country at strategic places. It is important to note here that the means of bringing about a sustainable development that would touch the lives of the ordinary Nigerian citizen was highlighted through this visual language. Equally through one of the advertorials, the evil of cultism was condemned and projected, just as the case of examination malpractices, drug abuse etc.

Artworks readily incite feelings in the perceiver. Feelings that create awareness of what is important. For example, the roundabout in Zaki-Biam market, a market famous for sale of yams in Benue State, has an imposing sculptural piece of a yam tuber which automatically informs the perceiver that he has arrived in the place where yams are in abundance. Similarly, there are these billboards in Makurdi town showing a group of men at work with their work implements and uniforms showing the state’s Environmental Sanitation Authority. This work no doubt makes a statement on the need for clean environment denoting as it is that “a healthy environment begets a healthy body”. While Katsina-
Ala is famous for her supply of fish and yams and is depicted as such. The importance of art from this perspective cannot be overemphasized hence Lansing (1971) notes that:

An art product can help us to expand the dimension of our mind so that we can think, feel and imagine in ways that may not have occurred to us before ... mental activities of this kind separates us from lower animals, insects and machines. The more we engage in it the more human we become.

Be that as it may, the public’s attitude, perception and reaction toward these art works does not in anyway show that people have come to appreciate and understand the relevance of these works or advertorials. It is sad to say that most of these art works are in dare need for either repairs or replacement as they are completely defaced. One can no longer make meaning out of what these pieces of work represent.

2.6 IMPEDIMENTS IN THE REALIZATION OF SET OBJECTIVES

Several researches have been undertaken by various groups or individuals in recent times few of these are listed here as reference points to this study.

Although the practical values of art education are obvious and its inclusion among the core/elective subjects at various levels are justified; there are some factors militating against the realisation of the set objectives.
One major problem of art education is that of poor perception. This is in terms of the society’s poor attitude to art and artists. As illustrated in 2.5 last paragraph above, some people find it difficult to be convinced that this is an academic discipline to be undertaken or taken seriously. The general impression is that only people who are not born with sound intellectual capabilities to pursue hard core academic programmes take Fine and Applied Arts as the last resort. Some art students also develop inferiority complex when it comes to interacting with students in languages and other disciplines. This poor perception of art sometimes start from the hierarchy of government even artists themselves especially when their art works are not recognized or not properly utilized.

In this context, it is important to emphasize that the poor perception of art on the part of the learners, the teachers and the community do affect its teaching and learning at the school level. Generally all vocational education courses suffer this neglect and poor recognition.

Considering the relevance of vocational and technical education in the life of both the individual and his society, there are suggestions that the factors which usually militate against its success in the previous programmes must be checked and controlled. Akpakpunam (1999) has commented on what he considers as the challenges facing vocational and
technical education in Nigeria. When he has specifically pointed out the shortage of trained manpower as a fundamental problem, maintaining that the present level of the expected manpower development is not adequate. Other challenges according to him are lack of qualified instructors, lack of appreciation by the public, the technicians and the artisans. He contended that the operators of the vocational and technical education programmes should change the negative attitude. Some of the other factors are inconsistency in government policies and inadequate training and funding.

Khasar (1999) has made similar observations on the problems facing the teaching of vocational and technical education. According to him, poor implementation of government policies, the general Nigerian public attitude and low students’ enrolment are among the main factors. He further maintained that:

The call by the former Nigerian Head of State late General Sani Abacha that Nigerians make a clean break from poor record, implementation, should be taken seriously. Nigerians must imbibe new ethics and ensure that the National policy on Vocational and Technical Education be fully implemented.

Okoh and Unogwu (1999) maintained that for any relevant and meaningful implementation of an educational system or programme, the
teacher as a major factor must be controlled. They stressed that the teachers must be well trained, equipped and motivated.

These are certainly some of the challenges facing the implementation of vocational and technical education in Nigerian schools.

On his part, Amaka (1993) has stressed the problem of inadequate number of qualified and motivated teachers. He maintains that well trained and motivated teachers are essential for a good and successful vocational education programme. He has also lamented the problem of the gradual decrease in the students’ enrolment (both male and female students). Like the general Nigerian Public, the students tend to have a negative attitude about vocational and technical education. They do not associate it with academics. This trend of environment, as he further observes, starts right from the technical colleges where various reasons such as poor financial condition, high cost of school fees, child-hood or early marriage and the quest for materialism in preference for schooling have been responsible.

The teacher as a major factor for the implementation of the vocational and technical education programme in schools has further been stressed by Olaitan (1993) who acknowledges that well-trained professional vocational and technical teachers are necessary not only for improving the teaching skills but also the quality of graduates, making
them functional and productive. He observes that many of the technical schools are understaffed and ill-equipped. This is linked to inadequate funding as a major factor hindering education programme. It is clear that no matter how well trained the teachers may be, they would not do their best where teaching facilities are lacking for both the teachers and the learners.

Commenting further on the importance of tools and equipment as central to the teaching of vocational and technical education, Oloidi (1989) contends that for a skilled teacher, it is not just enough to give verbal instructions and examples all the time. Practical demonstrations using relevant tools and equipment are more appropriate for skills training. To achieve this task the teacher and his students need the basic materials, tools and equipment. This implies that a well-equipped workshop is very essential for the success of a vocational and technical education programme.

Akaa (1999) has equally pointed out the relevance of infrastructural facilities in the teaching of Fine and Applied Arts. Commenting on the challenges in terms of lack of infrastructural facilities he identifies the high cost of funding projects, inconsistent government polices on vocational and technical education, lack of trained manpower to man the equipment or facilities where they are available, low capacity utilization or
underutilization as well as non-recognition and low esteem accorded to art and artisans/artists.

Fafunwa (1985) has further stressed the role of the teacher as the actual implementer of an educational programme. He observes that a good educational programme must seek to assist individual teacher to grow and develop as a person. He should be properly equipped with the necessary skills and professional abilities.

The teacher as a factor has further been considered by Okonkwo (1992) who maintains that “the key to the success of the programme will depend on how well teachers are equipped, utilized, motivated, compensated and stabilized within their job environments”.

The teacher as a major stakeholder in the education industry is no doubt a critical factor in the success or failure of an educational programme. Okon and Ibanga (1982) have contended that:

Teachers are the life-wire of a sound education system of any nation. If the quality of education is shaken, it is usually not uncommon to point accusing fingers at teachers. No school is better than the quality of its teachers who man it. The activities of good quality teachers produce the intended students’ outcomes.

Of course the commitment, the enthusiasm and love for the job forms the secret of this study.
2.7 EMPIRICAL STUDIES ON ENVIRONMENTAL SUSTAINABILITY

Increasing global concerns about the relationship between eco-efficiency of the society and the sustainability of the environment has increased the volume of research on environmental sustainability. This section presents few empirical studies on environmental sustainability.

In the agricultural sector, for example, there is documentary evidence of environmental deterioration. According to Alvarez (2004) and Corroborated by COMARNA (1991) modern agricultural practices contribute significantly to the problem of soil erosion in Cuba. COMARANA (1991, PP 11-12) reports that 7,711,500 hectares, or 70%, are affected by some degree of soil erosion.

A similar evidence has been provided by Diaz-Briquets & Perez-Lopez (2000) that Cuba’s most fertile and flat regions have been eroded by erosions. Other agriculturally related environmental problems are soil salinity and acidity which have affected 10% of Cuba’s total land surface (COMARNA, 1991; Espino, 1992). According to Vandermeer, et al (1992 p.5) as cited by Alvarez (2002), sustainable measures to tackle the above problem have been put in place and include;

- The implementation of an “alternative” agricultural model, including organic fertilizers; biological pest control; adjusting crops and their husbandry to local ecological conditions; animal traction and other forms of alternative energy; crop diversification and mixed cropping; more input by local labour and community
decision making; soil conservation; reclamation of graded lands and reforestation...

In a study on the relationship between economic growth and environmental sustainability, Hyun-Hoon Lee, Rae Kwon Chung, & Chung Mo Koo (2005) came to the conclusion that the relationship between economic growth and the environment is positive. The study further revealed that while income appears to have a beneficial effect on pollution measures, it has detrimental effect on most eco-efficiency measures of environmental sustainability. The study concludes that while government conventional policies focus more on pollution control, they need to be combined with policy options focusing on eco-efficiency aspects of environmental sustainability.

In the field of art too, there have been several experiments and explorations using assorted disposable or materials considered as wastes. For example, Riley (in 2003,) an experienced arts and community development practitioner carried out a project titled “Community Jigsaw” BCEN from August to October 2003. The project aimed to promote community networking across Birmingham constituencies. In this project local people were asked to contribute their own jigsaw pieces, and wrote about what they felt were the qualities that made their neighborhood home. These comments were put next to their photographs and placed into a giant puzzle for everyone to see. Everyone enjoyed taking apart,
both young and old. A selection of the pieces. A selection of these pieces are being displayed showing the similarities between how different people in very different areas feel about where they lived. These pieces selected were put on display on specially made jigsaw boards.

In 2000 UNESCO organised a biannual conference to find ways for promotion of art education and creativity at school. Six regional meetings were held. They reflected on the LINKS WITH EDUCATION IN ARTS (LEA – International) portal starting:

(a) Concentrate on promotion of living cultures particularly in Africa and the Pacific and on assistance to artists and their professional networks to be carried out in collaboration with NGOs operating in the field of continuing education, inter cultural exchanges and professionalisation of young artists.

(b) Discrimination of the results of qualitative studies on the need for art education for environmental sustainability is carried out by schools and other interests groups in other parts of the world. For instance, Tree Dressing, Cripple Park at Worcester in Britain has been on since December 2005 up to 2007 workshops was run at a local nursery, schools, and an elderly residential home and on actual event itself. These workshops created dressings out of mainly scrap materials.
Also Meridian’s International Touring Exhibits in USA believe in highlighting the commonalties in experience of shared humanity and fostering communication between people of diverse culture. According to them “As the world become mere interconnected, it is increasingly important for Americans to develop an understanding of global issues and an enhanced awareness of other cultures. It is believed that the arts can promote such insights”.

Economist (2002) states that of all the countries of the world “Finland and Norway have the most environmentally sustainability economies. The environmentally sustainability here is an assessment of dozens of variables that influences the environmental health of economies. According to them one of the strongest determinants, besides wealth seems to be good governance including a broad commitment to the rule of law”. (Economist 2002. The Environmental Sustainability Index 362 (8264).

2.8 THE WAY FORWARD

It has so far been established that art education has the potentials of contributing to the environmental challenges being faced in society today. The following strategies would help to push the way forward.

In view of the fact that vocational and technical knowledge is essential for individual and national development, all the major
stakeholders of the education industry are expected to be adequately prepared to play their roles. Teacher preparation is a major factor that needs to be adequately controlled. The Ashby Report on post-secondary and Higher Education in Nigeria (1961) pointed out the need for adequate training of teachers thus “a well-qualified staff is the first vital step in an attempt to train skilled manpower. And this should be given priority. One out of every two teachers should be a graduate”.

The report, no doubt, recognizes the importance of both the quality and quantity of teachers in a given educational system. Unfortunately, teacher preparation has remained a serious problem as training institutions tend to produce half-baked products in most cases. Part of the problem lies in lack of dedication on the part of well-trained teachers. Commenting on this aspect of the problem, Kureve and Audu (2000) have maintained that:

... many craft and handwork teachers in the primary schools do not teach the craft as indicated in the syllabus. They only demand for finished items like brooms, baskets etc. at the end of the term. Some teachers demand for money. Art education should be made to be more functional and its learning more concrete. The content should be in such a way that no learner would leave school or a particular level without the acquisition of the required skills and competencies.
Art education teachers should be more honest and serious. The present trend where parents give money in exchange for marks should be discouraged. Emphasis should be on the actual acquisition of the necessary skills.

Governments at all levels should intensify efforts on the fight against the environmental challenges. Thus environmental sanitation and other similar programmes should be made to be more functional.

More awareness needs to be created in terms of the need for a healthy environment. Environmental consciousness would help to check against abuses to our environments such as indiscriminate bush-burning, indiscriminate dumping of refuse, poor sanitary conditions, indiscriminate posting of bills, etc.

More efforts should be intensified in the area of the beautification of the environment aimed at not only giving us the aesthetic taste but also to create a healthy and attractive environment.

2.9 SUMMARY OF THE REVIEW

The foregoing review has revealed a number of issues relating to art education and aesthetic consciousness as essential for the attainment of environmental sustainability. It has looked at all the variables within the context of the main focus of the study. It has also looked at some of the factors militating against the implementation of vocational and
technical education programme which is the umbrella under which art education has been situated. The review has also thrown more light on the relevance of knowledge of art education and aesthetic taste in the achievement of environmental sustainability. This has thus provided a sound theoretical base for the justification of the call for knowledge of art education and aesthetic consciousness in environmental sustainability. The views of the various researchers and scholars have justified the contention that knowledge of art education can help in fighting the environmental challenges being faced by the present dispensation. The history of mankind shows that art is connected to human existence.

Gilbelt et al (1985) have acknowledged this fact saying that:

It will be impossible not to do art because art is inextricably connected to human existence. Art has been with us since the earliest cave dwellers made their first tentative steps towards civilization and will be with us as long as civilized life continues on our planet.

Art is generally concerned with the production and addition of beauty and quality to things that can be seen, admired and used by man. With these attributes, it becomes apparent that knowledge of art education could be of great value in the present struggle of environmental sustainability.
CHAPTER THREE
METHODOLOGY AND RESEARCH DESIGN

3.0 RESEARCH METHODOLOGY

In this chapter, information is provided on the following areas: the research design, area of study, population of study, sample and sampling techniques. Also discussed in this chapter are the instrument for data collection, validity of the instrument, description of the instrument, reliability of the instrument, method of data collection and data analysis.

3.1 RESEARCH DESIGN

The design used for this study is a quasi-experimental design, specifically; the non-randomised pre test-post test group design was used. This is a quasi-experimental study because subjects were not randomly assigned to groups, rather in tact classes were randomly assigned to experimental and control groups (Denga & Ali, 1988). Moreover, true experimental design was not possible because the study involves human beings.

This design is diagrammatically shown below:

Group I: \( 0_1 \times 0_2 \)

Group II: \( 0_1 - 0_2 \)

where \( 0_1 = \) Pre test
\[ 0_2 = \text{Pos test} \]

\[ X = \text{Experimental treatment} \]

\[ - = \text{Control (No treatment)} \]

### 3.2 AREA OF STUDY

This study was conducted in Katsina-Ala Local Government Area of Benue State.

Katsina-Ala Local Government Area derives its name from the River Katsina-Ala; which runs through the locality. The local government was created out of the Tiv Native Authority in the year 1976.

It is located to the North Eastern end of Benue State and is boarded to the East by Takum Local Government in Taraba State, to the West by Buruku Local Government Area; while to the South, the local government shares boundary with Kwande Local Government Area, Logo and Ukum Local Government Areas to the North respectively.

### 3.3 POPULATION OF THE STUDY

The population of this study is made up of all the junior secondary schools in Katsina-Ala Local Government Area. 174 randomly selected students of JSS 1 drawn from two (2) out of the eight (8) schools offering Creative Arts are used for this study.

### 3.4 SAMPLE AND SAMPLING TECHNIQUE

The sample for this study consists of 81 children randomly selected from the two schools mentioned in 3.3 above. 40 children out of the 81
were assigned to the experimental group and 41 were assigned to the controlled group through balloting. Paper were marked ‘A’ and ‘C’ for experimental group, ‘B’ and ‘C’ to controlled group. Children were allowed one at a time to pick from these groups no child was allowed to pick twice.

Table 1: Number of students sampled per school for the administration of the instrument in Katsina-Ala Local Government Area

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>JSS I CLASSES</th>
<th>NUMBER OF STUDENTS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt. Model College Katsina-Ala</td>
<td>A</td>
<td>40</td>
<td>81</td>
</tr>
<tr>
<td>College of Education Demonstration Sec. Sch. Katsina-Ala</td>
<td>C</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>81</td>
<td>81</td>
</tr>
</tbody>
</table>

Author’s fieldwork (2008)

3.5 INSTRUMENTATION

One assessment instrument the Rating Scale for Art work Achievement in Environmental Sustainability (RSAWAES) was used as seen in Table 2 overleaf. This instrument was designed to accommodate both the pre-test and the quasi-experiment which comprises the experimental group and the control group.

The pre-test was necessary because it involved the two groups that did the same topic in the quasi experiment but were exposed to different sets of materials. Thus the pre-test was to test their proficiency, visual awareness and their display of skills; hence the two groups were made to
use the same topic “The King and his people” for the pre-test using only pencils cardboard paper and eraser.

**Table 2: Rating Scale for art Work Achievement in Environmental Sustainability (RSAWAES)**

<table>
<thead>
<tr>
<th>S/NO.</th>
<th>QUALITIES OF ART WORK PRODUCED</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manipulation of Materials (MOM)</td>
<td>X5</td>
</tr>
<tr>
<td>2.</td>
<td>Power of Imagination (PI)</td>
<td>X5</td>
</tr>
<tr>
<td>3.</td>
<td>Display of Skills (DS)</td>
<td>X5</td>
</tr>
<tr>
<td>4.</td>
<td>Answer to Question (AQ)</td>
<td>X5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>X20</td>
</tr>
</tbody>
</table>

The rating scale shown above consists of the following basic areas:

(i) Manipulation of materials. Here consideration was given in terms of the child’s ability to manipulate the tools/materials available in this case, the materials include: pencils, crayons, water colour, empty tins, cartons, empty packets, old slippers, wires, glue, etc. to produce the desired effect.

(ii) Power of imagination/composition. The effective use of available materials and how they were creatively put together to tell the story was considered. Similarly the effective use of paper, space, colour and proportion were also taken into consideration.

(iii) Display of skills. Here the degree of competence attained (mastery) and the level of understanding, general arrangement and balance were taken into account.
(iv) Answer to the question. The concern here was on the display of knowledge in clear terms as the students provided answers to the questions, especially on whether the student has been able to communicate his or her ideas clearly.

3.6 VALIDATION OF THE INSTRUMENT

The instrument was validated by two experts in the Department of Fine and Applied Arts, College of Education Katsina-Ala. Copies of the lesson plans and a rating scale were submitted to and face-validated by 4 experts and subject specialists in the Department of Fine and Applied Arts, College of Education Katsina-Ala (see Appendices A, B, C, D, E, F, G and H). The validators were requested to check for the appropriateness of each of the lesson plans in relation to the topic it represents, as well as the rating scale. They were to check in terms of language used, suitability of the lesson plan as well as the rating scale to be used as the instrument for the study. They were also requested to ascertain the appropriateness of the level of objectives in the lesson plan and the basic areas the rating scale instrument was envisaged to cover in the study, as well as to make any correction(s) on areas they feel necessary either by removing or adding items they consider important but not reflected in the instrument. An item (or basic areas on the rating instrument) was included in the instrument when 2 or more of the validators agree on the
items. Based on the opinion of the experts, necessary modifications were made and the rating instrument after validation had four basic areas used for rating the students and 7 lesson plans. The validated instrument (rating scale) was then used. The marking was done separately. The two results for each student from the two groups were harmonized so as to find a common factor.

3.7 Method of Data Collection

Before the commencement of the experiment, a pre-test was administered on the 81 students from the two schools. The students were given some working materials which included cardboard papers, pencils and erasers. The topic was, draw “the king and his people”. This was to help determine their level of awareness, power of imagination, proficiency and their levels of skill acquisition. Also it was to help give the assessors a balanced picture of all the students’ performances.

Having administered the pre-test, a quasi experiment was now adopted with one group as the experimental group and the other, the controlled group. A total of 81 students were used for the experiment; where they were subjected to series of exercise drawn from their curriculum in fine art, for six weeks. The students from the two schools were given same topics. However, in order to determine the variables, they were exposed to; they were given different working materials and
tools. For example JSS I of Demonstration Secondary School Katsina-Ala which was used as the experimental group were exposed to all sorts of materials including disposables like empty tins, cartons, packets of matches, sugar, glue, beads, pieces of cloth, etc.; while the controlled group which was the JSS I from Government Model College Katsina-Ala were restricted to the use of specifics such as cardboard paper, pencils, crayons and water colour.

**Week One:**

**Topic:** Means of transportation

(Write a car/lorry)

**Group I – (Controlled):** Here students are given pencils, cardboard paper, crayons or water colour to draw and paint a car/lorry. They are expected to draw the car/lorry.

**Group II – (Experimental):** Students here are exposed to several materials which include, empty tins, cartons or empty packets of sugar, old slippers, polyethylene bags, wires and other array of disposables to choose from, and construct either a car or a lorry. The exercise is aimed at enabling children to manipulate disposable materials so as to create play toys especially as some of those imported ones are very expensive and not easily affordable by the low income earners.

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**Week Two:**

**Topic:** My Street (Perspective)

**Group I — (Controlled):** Drawing of a street scene showing perspective. Students draw a street scene from imagination; the buildings are drawn from experiences of either a village, a semi urban, a town or a city. They were made to colour the drawings with water colour.

**Group II — (Experimental):** These students were given an array of objects such as empty packets of matches, other containers, grass, empty cans as well as other materials which they were free to choose from such as buildings etc. Drawing, their inspirations from villages, semi urban, towns and the cities. This was aimed at assessing their ability to not only manipulate materials, but also to display their creative potentialities.

**Week Three:**

**Topic:** Domestic Animals

(Draw a goat, cow, dog, cat, etc.)

**Group I — (Controlled):** Students draw from imagination. Some drew goats while others drew cows. They used cardboard papers, pencils, crayons and water colours. The colouring was to provide beauty to the work.
**Group II – (Experimental):** This group was allowed to work with beads, straw, boards, pieces of cloth, buttons, glue, needles, thread and any other materials available. The aim was to see how these wastes from tailors’ shops etc., can be used and transformed to beautiful works of art.

**Week Four:**

**Topic:** Non Domesticated Animals including Fish, Birds, Lizards and other wild animals

**Group I – (Controlled):** These groups of students used crayons, pencils and cardboard paper to draw any non-domesticated animal of their choice. They were encouraged to draw from imagination.

**Group II – (Experimental):** Here students were given the option to use all sorts of materials which included pieces of cloth, glue, beads, buttons, etc., for the exercise. This exercise was aimed at determining not only their power of imagination but also the manipulative and creative abilities.

**Week Five:**

**Topic:** Make a design using slippers or calabash as motifs for room deseration.

**Group I – (Controlled):** As usual the students in this group were limited to the use of the following: cardboard paper, pencil, water colour or crayons only.
**Group II – (Experimental):** Students in this group were introduced to a variety of materials which include cardboard papers, glue, calabashes, cloth, paint, etc. The aim was to determine the extent of their creative abilities.

**Week Six:**

**Topic:** Fruits (Still Life)

**Group I – (Controlled):** Again, students in this group only made use of mostly pencil and cardboard paper. They drew a fruit in a container.

**Group II – (Experimental):** Here too, the students had the option of using all available materials at their disposal. These materials include pieces of cloth, glue, cardboards, beads, broken bottles and even seeds etc. This exercise was to principally determine their power of awareness and manipulation of materials.

### 3.8 METHOD OF DATA ANALYSIS

Four hypotheses were formulated for this study, and all of them were tested at p < 0.05 level of significance. All the hypotheses were tested using t-test of independent means.
CHAPTER FOUR
PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected is presented and analysed based on the hypotheses formulated. Thus the first part is the pre-test which was carried out to establish the equivalence between the two groups before introducing the treatment. A preliminary analysis was thus required for accepting or rejecting the hypotheses.

The second part was the quasi-experiment which involved two schools. One school was used as the experimental group, the other as the controlled. Presentations and findings requiring statistical analysis for accepting or rejecting the hypotheses of the research was used. Also t-test of difference of mean scores was used in order to determine the difference in the usage and manipulation of art materials.

4.1 RESULT FOR THE PRE-TEST OF THE EXPERIMENTAL AND THE CONTROLLED GROUPS

This preliminary analysis was done so as to establish the equivalence in the students’ performance between the controlled and the experimental groups. The following is the hypothesis and the statistical analysis of the pre-test, for detailed results (see Appendix “A2”.

4.1.1 Hypothesis one: Significant difference will not exist in the mean pre-test scores between the experimental and the controlled groups in their visual awareness and level of skills acquisition.
Table 3: t-test of difference in the mean pre-test scores between the experimental and the control group

<table>
<thead>
<tr>
<th>Variables</th>
<th>π</th>
<th>SD</th>
<th>No</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>10.676</td>
<td>1.559</td>
<td>40</td>
<td></td>
<td>1.41</td>
<td>1.664</td>
<td>Accept Ho</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
<td>10.146</td>
<td>1.824</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Author’s fieldwork (2008)

The summary of data analysis for hypothesis one in table 3 above revealed that, there was no significant difference in the mean pre-test scores on visual awareness and level of skill acquisition between the experimental and the control groups. This implied that, the subjects were at the same competing level with means 10.676 and SD 1.559 for the experimental group as against the means of 10.146 and SD 1.824 for the control group in the pre-test. This gave the t-ratio of t-cal 1.41 < 1.664 t-crit at 79 df and 0.05 level of significance. These results thus assume the equivalence of the two groups before treatment.

4.1.2 Hypothesis two: Significant difference will not exist in the mean performances between the experimental group with multiple choices of materials and the controlled groups taught with limited choice of materials.


**Table 4: t-test of difference in the mean performance between students taught with multiple choice of materials and those with limited materials**

<table>
<thead>
<tr>
<th>Test Variables</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>No</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple materials</td>
<td>66.55</td>
<td>12.69</td>
<td>40</td>
<td>79</td>
<td>3.565</td>
<td>1.664</td>
<td>Reject</td>
</tr>
<tr>
<td>Limited materials</td>
<td>57.78</td>
<td>9.07</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td>Ho</td>
</tr>
</tbody>
</table>

**Author’s fieldwork (2008)**

The results in table 4 above revealed that, there is a significant difference in the mean performance between students taught FAA with multiple choice of materials and those with limited materials. The table showed a value of \( t_{cal} = 3.565 > 1.664 \) t-crit at 79 df and 0.05 level of significance. Also, the higher mean of students taught using multiple materials (66.55 and SD 12.69) as against the lower mean of those students taught with limited materials (57.78 and SD 9.07), indicated that, students taught with multiple materials performed better than those taught with limited materials. Hypothesis two was therefore rejected. This implied that significant difference existed in the mean performance between the groups taught with multiple choices of materials and those restricted to limited materials.

**4.1.3 Hypothesis three:** Significant difference will not exist in the creative and manipulation of materials between students taught FAA with limited materials and those taught using different sort of materials.
Table 5: t-test of difference in the creative and manipulation of materials between students taught with limited and those with different sorts of materials

<table>
<thead>
<tr>
<th></th>
<th>Creativity/Manipulation of materials</th>
<th>( \pi )</th>
<th>SD</th>
<th>No</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different sorts of materials</td>
<td></td>
<td>7.38</td>
<td>2.180</td>
<td>40</td>
<td></td>
<td>79</td>
<td>4.534</td>
<td>1.664</td>
</tr>
<tr>
<td>Limited materials</td>
<td></td>
<td>5.63</td>
<td>1.113</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Author’s fieldwork (2008)

Table 5 revealed that there was a significant difference in the creativity and manipulation of materials between students taught with limited materials and those taught using different sorts of materials. The calculated \( t \)-value was 4.534 against a table or critical \( t \)-value of 1.664 for 79 df and at 0.05 level of significance. Therefore the hypothesis of no difference existing in the creativity and manipulation of materials between students taught with limited and those taught with assorted materials was rejected.

4.1.4 Hypothesis four: Significant difference does not exist in the display of skills and power of imagination between students taught FAA with limited materials and those taught, exposed to assorted materials.
Table 6: t-test of difference in Display of Skills and Power of Imagination between Students Exposed to Assorted Materials and those Exposed to Limited Materials.

<table>
<thead>
<tr>
<th>Display of skill/power of imagination</th>
<th>π</th>
<th>SD</th>
<th>No</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposed to assorted materials</td>
<td>7.63</td>
<td>1.931</td>
<td>40</td>
<td></td>
<td>79</td>
<td>3.039</td>
<td>1.664</td>
</tr>
<tr>
<td>Exposed to limited materials</td>
<td>6.46</td>
<td>1.501</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Author’s fieldwork (2008)**

Table 5 showed that significant difference do exist in the display of skills and power of imagination between students taught with limited materials and those exposed to assorted materials during teaching. The t-calculated value was 3.039 as against the table or critical value of 1.664 at 79 df, and at 0.05 level of significance. The null hypothesis of no significant difference existing in the display of skills and power of imagination between students taught with limited materials and those exposed to assorted materials during teaching was therefore rejected.

4.2 DISCUSSION OF RESULTS/FINDINGS

In the pre-test, sample of the works from the two groups were collected and discussed as presented in this report.
In fig. 1, the student is JSS I in Demonstration Secondary School Katsina-Ala. This class was the experimental group and the student is 12 years old. The topic used was “the chief and his people”. In the drawing the student has tried to present a detailed drawing of the chief seated on his high chair surrounded by three elders probably from the community and the chief with a fan in his hand. Notice the detailed embroideries on the chief’s attire with beads around his neck down to the chest signifying that he probably is a second class chief if he is from the Tiv speaking area of Benue State.

Though the school is situated in Benue State, the chief and his subjects depicted in this drawing does not depict the Tiv people’s culture as the costumes worn by these people does not represent the culture of...
the area. For example, the chief has a feather in his cap, and that worn by the chief’s aid is also not a reflection of what is worn by aids of chiefs known as “Dugeri” in Benue State. This therefore could be a representation of chiefs in the southern part of the country.

The probable explanation of this misrepresentation could be as a result of Nigerian film industry that has pervaded the country today and when asked to draw a chief, the immediate available picture that comes to mind is that of the chiefs they see in the Nigerian film.

Fig. 2 (Age: 12 years)  

*Author’s fieldwork (2008)*
The student’s drawing here in fig. 2 is also a drawing of the chief and his people. He is 12 years old and in JSS I and from Government Secondary School Katisna-Ala.

Notice that the drawing here has more bearing to the local environment because the chief here is seen dressed in a very simple attire. Though he is seated on his high seat to signify royalty. He has a cap but without a feather but has a very conspicuous horse tail in the hand used for probably driving away flies and equally visible is his beads which is just one, which shows that he is a one beaded chief.

The chief though seated further away from the viewer is depicted her to be bigger that his subjects who are seemingly closer to the viewer. The depiction could be intentional so as to draw attention to the chief who is the most important person in the drawing. Also could be to show position or his status in the community.

Further more, there is also the rendering of the people who look so regimented and so stereotype.
The drawing in fig. 3 is of a 13 years old in JSS I. Emphasis here too is on the chief who has to beads, meaning he is a two beaded chief. The cap with the feather also depicts the southern culture especially that of the Igbos. While on the other hand the beads which are black and while are the traditional colours or beads of the Tiv people of Benue State.

Notice the face of the lion carved on the royal chair which is very typical of the Tiv culture as the chiefs are referred to as “Zaki”, meaning “lion” which is a borrowed phrase from the Hausa language signifying power and authority. Important to note also is the fusion of cultures because there are some of the Tiv and Igbo cultures represented here. Also the attire by the chief’s aid is that of the Benin’s which also could be as the influence of Nigerian films.
The attires however worn by the people are very typical of people from Benue State. Note the arrangement of the people and the stereotype nature of the drawing.

Fig. 4 (Age: 11 years)  

In fig. 4 just as in other works, the subject matter is the chief and his people. The mode of dressing depicts a traditional ruler as can be noticed in the drawing. The drawing is an attempt of an eleven year old JSS I child of Government College Katsina-Ala. In this drawing he has tried to place emphasis on the wearing of beads, cap, gown with an attempt on portraying the fact that the chief is carrying a horse tail. Other drawings of the chief’s subjects however have not provided details of the clothes worn by the subjects. Notice the differences in the different types of caps worn by the subjects an even the chiefs. The chair in which the chief is seated is projected and emphasis is placed on the
use of lion to show that the chair is not an ordinary one. The work looks unfinished which show the level of competence in this student work. The beads worn by the chief show that he is “Tyoor” the two beaded chief. But the cap is that of “Ibos”. This again reveals the fact that children are cut between different cultures in most cases based on the films they watch and what they see at ceremonies in the town which play host to all tribes in Nigeria.

![Figure 5](image.png)

**Fig. 5 (Age: 12 years)**  
*Author’s fieldwork (2008)*

In fig. 5 is an attempt by a 12 year old student of the College Demonstration Secondary School Katsina-Ala. This student just as his classmates has drawn a traditional ruler, a one beaded chief wearing a gown. He has tried to provide details of the face and the cap. He has a feather on it which clearly shows that the chief is from the south, but the beads give the impression of a Tiv chief from Benue State. His subjects
are represented by a stereotype drawing. The chief’s aid is drawn standing with a hand fan (traditional), this also show that the chief resides in the village where there is no electricity. The stool or chair represents royalty. Notice the stereotype form of drawing of the chief’s subjects. It is not clear here whether the chief is addressing the subjects or he is just seated quietly. There are no details in this work as there are in the ones discussed before. One thing is however sure, the topic if the drawing or the subject matter is on a chief, Tor or Zaki as they are popular called by the Tiv people of Benue State.

Fig 6 (Age: 12 years)  

Author’s fieldwork (2008)

Fig 6 is a drawing of a 12 year old child. The drawing reflects the social development of this child as he is able to capture the mood. The drawing clearly reflects the degree of identification the child has with his
won experiences and the experiences of others. Lowenfeld and Brittain calls this social growth. The child is able to present the subject matter or royalty and majesty. As the chief is seated in a chair befitting his status and is addressing his subjects on a very serious issue. However the mode of dress is mixed. One cannot clearly say whether this chief is Tiv or Ibo. However, the use of these types of beads may suggest that he is a two beaded chief in Tiv land while the cap is similar to that worn by Ibos or other chiefs from the south. However one thing is sure, the subjects appear to be both men and women which suggest that this could be family members. This is presented or seen from the hair-do and mod of dress which appears to be of mix sexes. The chair is high up and the size symbolizes that the chief is a very important person. Again it can be noticed that although the subjects are nearer the viewer, they are represented here smaller than the chief who is seated further away. This is to say the perspective is not taken into consideration.
Fig. 7 is a drawing of a 13 year old child who has represented a chief seated in a royal chair with his aid standing behind him, followed by a stereotype drawing of his subjects, with just slight differences in few of the figures while the rest look alike. This child has a problem of drawing only the upper apart while nothing is done about the lower part. The drawing of the chief provides more details than the subjects. This can be explained as the child’s point of emphasis. As far as this child is concerned the chief is the most important person in this work. He is drawn bigger than his subjects. The detail in the dress, showing flowers, two beads and a horse tail in his hand seated in an exulted chair, portrays kingship or royalty. Other subjects are only indicated by their heads, wearing
caps, while others are drawn without any form of details. Note the mat placed under the feet of the chief who is seated staring at his subjects.

Fig. 8 (Age: 12 years)  

Fig. 8 is the work of a 12 year old child of the College Demonstration Secondary School Katsina-Ala. The subject matter is the same with others. “Chief with his subjects”. The chief here is seated on a high chair signifying majesty as he is holding a horse tail, wearing two beads, a well decorated attire, a cap with a feather on it. Notice the realistic presentation of the horse tail he is carrying as part of his dress code. He is starring at three of his subjects seated in front of him. Notice that there are no details in the drawing of the subjects or other details within the vicinity. This is to show that children of the same are do not necessary look at things in the same way. This applies to every human
being whether a child or an adult. It also has to do with the level of competence or just the fact that the concentration differs. Lowenfeld and Britain (1973) have stated that the art works or products of children tell a great deal. The child reveals himself directly and without fear. According to them, art is more than a pastime; it is a meaningful communication with the child himself because it is the selection of those parts of his environment with which he identifies and the organisation of these parts into a new meaningful whole.

Fig. 9 (Age: 12 year)  

**Author’s fieldwork (2008)**

Fig. 9 is the handwork of 12 year old child in JSS I. The subject matter is the same with others. The chief or Zaki as they are addressed. Here the child has drawn the chief seated in an exulted chair, starring at his subjects. At the same time two of his aids are drawn beside him both
by his right and his left. One of them is holding along knife the other is holding what appears to be a spear. Notice the stereotype nature of the drawing of the subjects who appear to be wearing gowns but at the same time their nipples and umbilical cords are conspicuously represented as if they are naked. Their looks and that of the chief are similar. There is no difference between where their pair of trousers stops and their legs. There is no sign that they are wearing shoes. There is however the difference between them and the chief whose pair of trousers stop somewhere close to his heal while there is no indication that even though he is a chief, he has his shoes on. There is however an indication that he has his feet firmly rested on a mat before him. Notice the stereotype nature of the drawing of the subjects who are seated backing the viewer, a sign that they are facing the chief who is probably addressing them. Notice also that this child has added something which is not part of other children’s drawing; that is a round hut. This perhaps is an indication that the chief is standing outside while addressing his subjects. The chief has one bead and is not wearing a feather along with his cap. This child’s work is a true reflection of the Tiv culture as can be noticed with the round hut, the bead as a symbol of a one beaded chief spear and knife which are common features among the Tiv people of Benue State.
Fig. 10 (Age: 12 years)  

Fig. 10 is also the handwork of a 12 year old child. The subject matter is “the chief” just as others. Notice the details in the dressing of the chief. The cap here is typical of the “Tiv” traditional cap. The chief is a one beaded chief. He is wearing a gown well decorated. May be “agbada” which is quite popular with the chiefs these days. He is also carrying a horse tail. He is simply seated on a special chair and is looking down at his subjects. Notice the lack of details in the drawing of the subject and the only aid holding what appears as a walking stick.
Fig. 11 (Age: 13 years)  

Author’s fieldwork (2008)

Fig. 11 is a drawing of a 13 year old child. The subject matter is the same as others. The chief is drawn seated on a high chair representing royal. The chief is wearing a cap with a small feather beside it the drawing is very faint. Notice the details on the dress and lack of details on others parts especially the lower parts. The chief is wearing two beads typical of a “Tiv” from Benue State. Notice the foreshortening of hands and lower part of the body. This child has taken time to present a detail drawing of the aids as they are carefully drawn with clothes properly shown on their bodies. Notice the shirt on one of the aids showing the collar and even the buttons and shoes. The aid is also holding a spear. The other aid is holding a fan. These are indication of the services the aids offer to the chief. That of protection against any form of aggression and that of providing comfort by fanning the chief.
since the weather is always hot. According to this drawing, the subjects are also around. Notice the differences in the faces drawn.

Fig. 12 (Age: 13 years)  

Fig. 12 is a drawing of a 13 year old child in JSS I. The subject matter is also the drawing of a chief or a traditional ruler. Notice drawing of lion at the top of the chair. This lion is a symbol of rulership among the Tiv people of Benue State. Unfortunately the cap won by this chief and even the bead fail to portray the identity of a Tiv chief. Just as in others one may say that the influence of the film industry which has come mostly from the southern part of the county has a serious effect on the Nigerian child since they tend to believe that all chiefs are the same. Notice the holding of the tail which is common with many of these traditional rulers. Also the chief’s aids with a fan in his hands. The
subjects appear to be very small in stature seated around the chief which is usually a common feature in the chief’s house. The figures appear not to be completed. This could be due to lack of time or simply the child is satisfied with what he has done so far.

Fig. 13 (Age: 13 years)  

Fig. 13 is the product of a JSS I 13 year old child. The subject matter is “the chief and his people”. In this drawing the child has tried to present the chief sitting on the throne, but what can be noticed is that only the back of the chair and half of the chief is drawn. From the chest down we cannot see those parts in the drawing. Just as with some of his classmates’ drawings, this child has also added a feather to the cap on the head the mouth, eyes and nose are drawn conspicuously. This chief is also holding a tail of a horse and he is a two beaded chief popularly
known as “Tyoor” by the Tiv people. His aid is also holding a spear, though not clearly drawn as with other children. The subjects are sitting very far away from the chief and the other subject. It is very clear in this drawing that the child’s intension is to draw a chief from Tiv land, since other things are depicting the Tiv traditional chief such as the presence of the spear, the two beads and a tail are there.

4.3 PRESENTATION OF THE REPORT ON THE QUASI-EXPERIMENTAL DESIGN

After the pre-test, a quasi-experiment involving two groups was conducted with one group as the experimental group and the other as the control group. The exercise carried out was to prove what two groups of children/students that are exposed to a variety of materials from their immediate environment are able to do. They used disposables to create art works that could promote a sustainable environment through art processes.

In presenting the weekly report on the performance of the two groups some few scanned photographs were selected as samples from the weekly exercise so as to make the presentation clearer. The request was based on the weekly performance of the children as follows:
Fig. 16 Canoe  

*Author’s fieldwork (2008)*

Fig. 17 A heavy construction compressor machine  

*Author’s fieldwork (2008)*
Fig. 18  An Aeroplane  Author's fieldwork (2008)

Fig. 19  A car  Author's fieldwork (2008)
**TOPIC: MEANS OF TRANSPORTATION**

In fig. 14, 15, 16, 17, 18, 19 and 20 which is the exercises for week one. The Art students here in fig. 14, 15, 16 and 17 are from the experimental group were exposed to a lot of materials for example in figs. 14 and 15, the students used glue, hardboard, tins, wood, paper, nails and slippers from car tires to construct aeroplane. This combination of various materials has been most fascinating. Similarly, in figs. 17 and 18, the students have used old slippers, sticks, wire and empty containers to construct a heavy construction compressor machine. Notice particularly in fig. 18 where the student probably based on the road repairs currently been embarked upon by the state government where trucks and very heavy machines are used encouraged this student to emulate them as can be noticed in the representation of such vehicles by one of hem here.

The vivid and almost detailed representation this child has exhibited reveals his strong power of imagination, and his ability to express himself better with local materials; as well as the ability to manipulate and transform these disposable materials into something meaningful.

Also, the exposure to multiple choices of materials has not only brought out the creativity in the students but has also helped to create
environmental consciousness in them thereby producing a sustainable environment through art process.

The exercise also witnessed a more ready and prepared group who were engaged in a lot of other experiments and explorations.

In fig. 19 and 20 respectively, students are exposed to very few materials namely, pencil, crayons, water colour and cardboard paper. Notice that though these students exhibit a lot of potentials in art, they were not able to express themselves maximally as those in the experimental group. The detailed results can be seen in appendix J and I.

**Week 2:**

![Fig. 23 Street Scene](Author's fieldwork (2008))
Fig. 24  Street Scene  

Author’s fieldwork (2008)

Fig. 21  

Author’s fieldwork (2008)
Students were adequately briefed on what a skyline and perspectives of a town look like. Storey or tall buildings, the bungalows, billboards etc., constitute all that makes a modern town.

The students in the experimental group have expressed themselves here in a rather strange phenomenon. See the composition in fig. 21 and 22 where students have used empty packets of sugar, match boxes and other containers to depict the impression of a modern town with its high rise buildings and bungalows. The interesting aspects is these have adequately made sue of thee containers successfully but have also been
able to reduce such building into triangular shapes and gluing these various sizes together to create an impression.

The students on the other hand in the control group in fig. 23 and 24 have not been able to adequately create the needed impression though they have been able to address the subject matter, their work lacked that expressiveness, and thus the creativity in them has not been properly depicted in the works. See appendix J and I for detailed results.

**Week 3:**

![Fig. 25 A Dog](image)

*Author’s fieldwork (2008)*
Fig. 26  A Cat  

*Author’s fieldwork (2008)*

Fig. 27  A Dog  

*Author’s fieldwork (2008)*
Students involved in this week’s exercise were engaged in the drawing of Domestic Animals that required the drawing of a goat, cat etc. Those in the controlled group as usual were given only a pencil, cardboard paper, crayons and water colour as seen in fig. 25 and 26. The students in the experimental group on the other hand were exposed to all sorts of materials including pieces of cloths collected from the tailor’s shop. These were carefully stucked on a hard cardboard to produce a design as seen in fig. 28
The results in fig. 27 and 28 has been most encouraging as the students were able to use these pieces of cloth to produce other very interesting art works in subsequent exercises. The results for the weekly report can be seen in the Appendices J and I.

**WEEK 4:**

![A lizard](image)

**Fig. 31** A lizard  
*Author’s fieldwork (2008)*
Fig. 32 A Fish  
*Author’s fieldwork (2008)*

Fig. 29 A Lion  
*Author’s fieldwork (2008)*
TOPIC : NON-DOMESTIC ANIMALS INCLUDING FISH, BIRDS, LIZARDS AND OTHER WILD ANIMALS

In this week’s exercise, the students were first made to understand the difference between domesticated animals and the non-domesticated animals to include fish, birds, lizards and other wild animals like lion etc. As usual, the students in the experimental group as seen in fig. 29 and 30, were given the option of using all available materials to create or make a representation of these animals. The students used pieces of cloth, beads, glue and buttons to form their work. On the other hand the woks in fig. 31 and 32 are some of the works from the controlled group, where the students only used pencils and cardboard papers.
There was a sharp contrast during these exercises as those in the controlled group did not enjoy the exercise; the whole process to them was dull and boring. Those in the experimental group on the other hand seem to employ not only the process of experimentation and exploration but every moment of the exercises as they express enthusiasm and readiness for discovering. This can be seen in the results in appendix J and I.

*Week 5*

![Fig. 33](image)

*Author’s fieldwork (2008)*
Fig. 34  

*Author’s fieldwork (2008)*

Fig. 35  

*Author’s fieldwork (2008)*
Fig. 36 Calabash Decoration  

Author’s fieldwork (2008)

Fig. 37  Calabash Decoration  

Author’s fieldwork (2008)
Fig. 38  A Slippers  

Author’s fieldwork (2008)

TOPIC: MAKE A DESIGN USING SLIPPERS OR CALABASH AS MOTIFS FOR ROOM DECORATION.

Student in week 5 in the control group produced some design using slippers or calabash motives for room designs, as seen in figure 33, 34 and 35. Those in the experimental group used calabash and made designs on them as seen in figure 36 and figure 37. Similarly some of them decided to make slippers using cardboard paper as seen in figure 38. The designs especially of calabashes in fig and were very interesting especially as colour and glue was introduced on some parts of the calabash.

Students in the experimental group exhibited more concentration and generally seemed more engrossed in these sessions than those in the controlled group who were found to be very noisy and had finished
quicker; that of course could be as result of the nature of materials they were working with. The result can be seen in Appendix J and I.

**Week 6:**

Fig. 39  
*Author's fieldwork (2008)*

Fig. 40  
Fruits  
*Author's fieldwork (2008)*
Fig. 41  Fruits  

*Author’s fieldwork (2008)*

Fig. 42  Fruits  

*Author’s fieldwork (2008)*
**TOPIC: FRUITS (STILL LIFE)**

This was a still life drawing exercise, students in the control group drew what was arranged for them to draw, and these were assorted fruits in different containers. They used only pencils, cardboard papers and erasers as their medium of expression as seen in fig.39 and fig.40. Those in the experimental group on the other hand were given the opportunity to express themselves using any media. They therefore used clothes, glue, and hardboards to depict the fruits in the container. The use of these other materials, made their work more exciting as seen in fig. 41 and 42 see appendices J and I for detailed results.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter, the summary of the findings are discussed, conclusions drawn and recommendations made on art education as a strategy for environmental sustainability. The study was undertaken to find out the effect of Art education as a strategy for environmental sustainability in Benue State of Nigeria. They study was limited to Katsina-Ala Local government Area, and only two schools out of the eight schools that offer creative arts of fine art were selected. The schools were Government Model College Katsina-Ala and College of Education Demonstration Secondary School also in Katsina-Ala. The instruments used in this study was a quasi-experimental design. The true experimental design was not possible because the study involved human beings not chemicals.

5.1 SUMMARY

The environment plays a major role in determining a kind of person an individual will be in future. Creating a conducive environment and sustaining it should be the responsibility of every government, society and individual in the society.

Art education is perhaps the only subject on the school time table that makes its aim the development of human creative potentials in children. For it provides the child the opportunity to practise creative
problem solving; art production and appreciation. Art education programmes must include aesthetic education to enable the child to develop a positive attitude toward his environment. A favourable school environment is a “sine qua non” to a successful teaching and learning of art education in the primary school, and its sustenance outside the school. It is therefore, important that he school environment be conducive and must provide space variety of materials and the atmosphere for learning, not only in the arts but other subjects as well.

In this study, it has been discovered based on research question one, that most of the schools lack adequate facilities for creative arts. This is not only popular with the primary schools, but it applies to junior secondary schools all over the state. Classrooms for creative art studies are not available in all the schools. The percentage available is 42% as against 58% at primary school level and 37.27% as against 62.73% at JSS level.

This study has found that the media/material and equipment used in the school are mostly drawing books, raffia and pencils. The result clearly shows that they perform better when children are exposed to a variety of media/materials to experiment with, youngster draws is not just markings on paper, but a reflection of his feelings by giving us part of himself, how he thinks, and how he feels.
Art activities according to Meseda (1985) provide teachers with access to children’s internal lives, their fears, hopes, concerns and ambitions. It is therefore, very important to provide the space, the equipment and the materials to enable these children to express their feelings.

Briefly, stated, the study examined how art learning can stimulate/inculcate aesthetic consciousness of the Junior secondary school children, examine aspects of the objectives, contents methodologies of the art syllabus and tailor it towards environmental sustainability. Art lessons were formulated to clearly show the objectives designed were suitable to achieve environmental sustainability (See appendices A to M). Contents of art lessons clearly point to the enhancement of environmental sustainability. Views of experts were sought through the review of related literature which has concluded that it would be impossible not to do art because art is inexorably connected to human existence. The production and addition of beauty and quality of things can be seen, admired and used by man that is why art generally connected to man and his activities. Several experts have stressed the need for art education as means of achieving environmental sustainability.
5.2 CONCLUSION

One of the indices for measuring the development of nations is looking at the quality of life of a people. The quality of life can be assessed viz-a-viz the food the people eat, the adequacy and quality of water they drink, the type of houses they dwell in and above all the physical environment. Man’s health can be endangered if his environment has poor sanitary conditions and there is ecological disorder. Unfortunately, in Benue State, the area under study, the environment is threatened by high incidence of poor drainage, soil erosion, indiscriminate disposal of solid wastes, poor planning of buildings, bush burning and other related problems. Both urban and rural settlements are largely affected by the factors enumerated above. The concern of the study is to show how education through art can be an appropriate medium for developing in the Benue citizens the right knowledge, skills and attitudes necessary to maintain a healthy and decent environment, but to also appreciate their problems better and find lasting solutions to them. The study apart from drawing the relationship between the role of art education and environmental sustainability also highlights areas of art teaching by exposing students to a variety of materials. It also stresses the need to increase environmental consciousness as part of our social
and educational responsibility by involving the young ones in the experimentation of different types of materials.

The results of the study provides sufficient evidence of ineffective teaching methods of art education both in the primary and junior secondary schools. The results show that teachers of art make extensive use of individualized and discussion methods. This practice is at variance with the recommendation of the National Policy on Education (1998, p. 14) that the teaching of art at this level “shall be by practical, exploratory and experimental methods”. It can be recalled that one of the goals of primary education as contained in the above policy (1998, p.13) is to give the child the opportunity for developing manipulative skills that will enable him to function effectively in the society within the limit of his capacity. Faulty choice of instructional methods will cut short this dream. It can be stressed however, that education if properly allowed to function can contribute significantly to the attainment of sustainable environment. If properly tapped, it can create the needed consciousness that can lead to healthy conditions of living and the protection of the environment. It can lead to the development in the individual of the right attitudes towards the protection of the environment, right habits towards refuse disposal, pasting of bills etc. So a research on this matter is a worthwhile venture indeed.
Generally speaking many Head Teachers in the state do not provide for the teaching of creative arts or art in their schools, not even at the primary and junior secondary schools levels. Some regard it as handicrafts which can be bought from the market for children to submit at the end of the term to earn marks. In some worse cases money is collected and marks awarded. Such children are not given the opportunity to experiment with the materials, neither are they exposed to the aesthetics knowledge art works provide.

In this study however, it is discovered and proved that exposure to a rich environment, ie. is environment that provides multiple choice of materials for children to experiment with, is better than a poor or sterile environment. That is why the study made use of a quasi-experimental design with t-test, while the Rating Scale for Art Work Achievement in Environmental Sustainability (RSAWAES) were used to work out the hypothesis.

The result of the pre-test of the experimental and the control groups reveal that all the subjects were at the same competing level. The result of t-ratio of t-cal 1.41<1.664 t-crit at 79 df and 0.05 level of significance, which means all the subjects were equal before the treatment however those who were exposed to a variety of materials performed better than those exposed to few materials. More discoveries
are made with variety of materials than with few. It is therefore reasonable to conclude that art or creative arts should become a compulsory subjects at all levels of primary education level. This is because art education will assist the learner to make use of materials ordinarily considered as waste to meaningful and self sustaining materials and as such help sustain the environment most especially if every child at the primary school and secondary school level is exposed to art activities and is properly taught at these levels. Lowenfeld and Brittain (1975) stress the fact that art activities help the child to bring together diverse elements of his experience to make a new and meaningful whole “In the process of selecting interpreting and reforming the elements” what the child presents in a form of a picture is not just that but the way he thinks, feels and how he feels. A lot of emphasis on actual information has really discouraged teachers and students alike to put emphasis on art activities.

5.3 RECOMMENDATIONS

Having identified the major problems of this study and having gone through the experiences of other major players in the field of art education as well as art teachers, students and the public, it is important to make the following recommendations:

(i) Environmental consciousness is necessary in all communities. A healthy environment produces healthy people and brings about
development. For this reason the State Ministry of Education should take the lead in the creation of an environment that can be sustained by ensuring that art teachers are well equipped with appropriate strategies of teaching creative arts as well as exposing children to a variety of materials for use in such a way that they can achieve environmental consciousness. The said ministry can realize this by organizing series of workshops on environmental sustainability education for the teachers.

(ii) Healthy competition can be encouraged by giving rewards to schools, classrooms, district or local government areas with the neatest and most beautiful environment to encourage others to keep their environments clean.

(iii) Art departments should encourage students to produce works of art that would create environmental consciousness in the schools and the general public.

(iv) Government, NGOs and financial institutions as well as private individuals should be called upon to help provide basic equipment for art as well as art materials and facilities.

(v) Every school should have a separate room specially set aside for art or creative art activities where adequate storage facilities and water
supply are available. There should be enough space to accommodate materials and all the students.

(vi) The inspectorate section of the Ministry of Education should have experts in the field of art who should from time to time visit the schools to ensure that art teachers (just as their in counterparts in other subject areas) carry out their assignment with all seriousness. They should insist on environmental education by art teachers.

(vii) Students or pupils should from time to time be taken out on excursions to watch traditional artists art work, as well as to some art workshops or studios of contemporary artists.

(viii) Qualities of originality, flexibility, sensitivity, novelty and fluency which characterize works of art should be encouraged in all children’s works.

(ix) Technical qualities in works of art should form the basis for evaluation.

(x) Art teachers should provide sufficient time for students to go out to appreciate natural art forms and serene environment.

(xi) The State Ministry of Education should ensure that copies of the art syllabus in use are relevant to the children’s socio-cultural background as well as the economic demands of the time.

(xii) The Ministry should make sure that appropriate teaching strategies that would encourage creativity on the part of children are
encouraged. These would lead to achievement of a sustainable environment.

(xiii) Art teachers should make sure that their pupils/students continue to encourage their parents at home to maintain a neat and sustained environment.

(xiv) Students should be encouraged to preserve their art works for aesthetic purposes.

(xv) Government should continue with her campaign of environmental education for people outside the school system, by creating awareness and encouraging non governmental organizations to show interest in environmental education and encourage its sustenance.

(xvi) Government should ensure that public places are cleared of environmental hazards while she should provide drainages, public toilets and maintain a clean environment.

(xvii) Green areas should be provided in all important towns and villages and illegal felling of trees and bush burning should be discouraged and sustained.

(xviii) Pasting of posters on public buildings, round abuts and signboards should be discouraged and offenders punished.

(xix) Art teachers/or head teachers should discourage the practice of students substituting handicraft with money. Students should be given the opportunity to practically participate in art and they should be
made to observe how crafts are constructed so that they constitute an integral part of the school programme.

(xx) There should be youth development and empowerment programme on environmental education areas such as tree planting, flowers (beautification of environment) forest development and preservation, to encourage environmental sustainability in youth outside the school.

(xxii) Art galleries should be built at state/local government area for collection and storage of artifacts for the purpose of preservation. This will encourage people to find value in art products and encourage sustainable art culture.

(xxii) Voluntary organizations can be encouraged to develop programme that would promote environmental sustainability, just as what Riley did, known as “The community Jigsaw” in Birmingham constituencies in Britain mentioned in chapter two under empirical studies overleaf but the voluntary organizations may do it in their own way, based on the culture of the people.

5.4 AREAS FOR FURTHER RESEARCH

The study is not exhaustive and cannot pretend to be. It has been the need to recommend that other people should carry further research in the following areas:

(i) Classroom interaction, ethics and sustainable environmental development.

(ii) Environmental ethics as a means of achieving artistic/aesthetics development.
REFERENCES


The Michigan State University College of Ecology’s 1999-2006 project.


APPENDIX I:
LETTER OF INTRODUCTION

COLLEGE OF EDUCATION, KASINA-ALA
P.M.B. 2008, KATSINA-ALA, BENUE STATE
Department of Fine and Applied Arts

Ref: 23rd February, 2008.

______________________________
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Dear Sir/Madam,

PERMISSION TO CONDUCT RESEARCH ON THE TOPIC: “ART EDUCATION AS A STRATEGY FOR ENVIRONMENTAL SUSTAINABILITY”.

I am a postgraduate student of the University of Nigeria Nsukka. Currently, I am carrying out a research in Art Education under the topic: “ART EDUCATION AS A STRATEGY FOR ENVIRONMENTAL SUSTAINABILITY”.

Your school/organization/local government has been selected as one of the sampled areas for the study. I shall therefore be very grateful if you would allow me free access to the school, organization or local government to enable me conduct the research.

Thank you very much for your anticipated cooperation.

Yours faithfully,

S.D. Ityoban (Mrs.)
Researcher
APPENDIX “A”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: The King and his subjects.
DURATION: 80 Minutes
BEHAVIOURAL OBJECTIVE: Students should be able to:
(i) Explain what a king is
(ii) Differentiate between a king and his subjects and;
(iii) Draw an imaginative composition of a king and his subjects using the materials provided by the teacher.

INSTRUCTIONAL MATERIALS: Cardboard papers, pencils, crayon and erasers.

ENTRY BEHAVIOUR: It is assumed that students are familiar with the traditional rulers of their localities ranging from Clan Heads Village Heads and Kings

INTRODUCTION: The teacher asks students the following questions.
(i) Who of you has ever seen a King?
(ii) What is the title of the king of your locality?
(iii) Where does a king live?
(iv) What does his subject do whenever they see him?

PRESENTATION: Step I Teacher guides students to know some of the important functions of a king which include custody of the people’s culture, settling of disputes and ensuring of peace in his domain. Teacher cites the Tor-Tiv in Tivland who is the overall traditional ruler of all Tiv people.
Step II Teacher guides students to describe the adornment of a king sitting and his royal seat.
EVALUATION: The teacher now asks the students to imagine and draw and colour a king sitting on his royal throne, flanked on both sides by his loyal subjects, using the materials provided.

CONCLUSION: The teacher goes round the class to see the students at work after which he collects the finished work for marking and grading.
# APENDIX “B”

**RESULT FOR THE PRE-TEST**

**TOPIC: KING AND HIS SUBJECTS**

**EXPERIMENTAL GROUP**

**SCHOOL: DEMONSTRATION SECONDARY SCHOOL, KATSINA-ALA**

**CLSAA: JSS I**

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APENDIX “C”
RESULT FOR THE PRE-TEST
TOPIC: KING AND HIS SUBJECTS EXPERIMENTAL GROUP
SCHOOL: GOVERNMENT MODEL COLLEGE. KATSINA-ALA
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SCHOOL: GOVERNMENT MODEL COLLEGE KATSINA-ALA
(CONTROLLED GROUP)

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# APENDIX “J”

RESULT FOR THE QUASI EXPERIMENT FOR THE WEEKLY ASSIGNMENT

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**SCHOOL:** DEMONSTRATION SECONDARY SCHOOL. KATSINA-ALA

**CLSAA:** JSS I(Experimental Group)

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APPENDIX “K”
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SCHOOL: DEMONSTRATION SECONDARY SCHOOL. KATSINA-ALA
CLSAA: JSS I(EXPERIMENTAL GROUP)

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**APENDIX “L”**

**RESULT FOR THE QUASI-EXPERIMENT FOR THE WEEKLY ASSIGNMENT (MANIPULATION OF MATERIALS AND DISPLAY OF SKILLS)**

**SCHOOL: GOVERNMENT MODEL COLLEGE, KATSINA-ALA**

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APPENDIX “D”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Means of Transportation
DURATION: 80 Minutes

BEHAVIOURAL OBJECTIVE: By the end of the lesson, it is expected that:

(i) Students of the controlled group should be able to draw and label the means of transportation found in their locality.

(ii) Students of the experimental group should be able to use disposable materials found in the locality to create toys like the means of transportation found in their locality.

INSTRUCTIONAL MATERIALS: (i) The controlled group is to be provided with only cardboard paper cut to sizes, a pencil, a set of colours, water colours and eraser.

(ii) Those in the experimental group will be exposed to a lot of materials such as disposable tins, slippers, empty cartons, nails, old tyres, wises and broken pieces of wood.

ENTRY BEHAVIOUR: It is assumed that students in both groups are familiar with the different means of transportation e.g. motor cars, lorries, bicycle, motor-cycle, trains, ships and aero planes.

INTRODUCTION: The teacher asks students of both groups to name the types of transportation they know.

PRESENTATION: Step I Teacher guides students in both groups to identify different types of transportation in the world today which include Road, Rail, water and Air transportation.
Step II  Teacher guides students to name the types of transportation found in their locality and the means of such transportation.

EVALUATION:  (1) The teacher gives out materials to the controlled group and ask it to draw and colour a car, motor-cycle and a bicycle. (2) The teacher asks the experimental group to improvise materials themselves and either draw any means of transportation or construct toys like any of the means of transportation of their choice.

CONCLUSION:  Teacher collects, marks and grades student’s work.
APPENDIX “E”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Street Scene-Perspective
DURATION: 80 Minutes
BEHAVIOURAL OBJECTIVE: At the end of the lesson, the students should be able to:
(i) Define the term, perspective
(ii) Students of the controlled group should be able to draw/sketch a street scene by imagination.
(iii) In the experimental group, the students should be able to depict any street scene around the school or in their various houses regarding the point of their standing and the far distance as they can view.

INSTRUCTIONAL MATERIALS:A street scene done on the cardboard paper/photograph with different scenes showing perspective, card papers, pencils, crayon, metre rule, colour etc.

ENTRY BEHAVIOUR: It is assumed that students in both experimental and controlled groups have seen and being to the market streets and have observed how distance makes the two sides of the road to seeming to converge at a far distance. On the other side, they have seen or watch the electric poles close to them as they move on the street turning to be taller than the ones in the distance though of the same height.

INTRODUCTION: The teacher tells the students to see the trees outside while he/she ask them a question that; the trees close to them and the ones in a far distance, which of them is taller? This question will make them see the relationship between close and the far objects.
PRESENTATION: Step I
The teacher aids the pupils/students to define PERSPECTIVE as the art by which artist create depth and distance on a two dimensional flat surface.

Step II
The teacher provides the controlled group quarter cardboard papers, eraser, metre rule and pencil to each student.

EVALUATION:
Imagine and draw/sketch a street (i.e. students in the Controlled). Students in the experimental group should be allowed to sit on any of the roads around the school premises and draw beginning from where he/she sits or stands to where their eyes can see.

CONCLUSION:
The teacher/instructor collects and assesses the pupils/students individually by marking and grading their practical efforts.
APPENDIX “F”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Domesticated Animals
DURATION: 80 Minutes
BEHAVIOURAL OBJECTIVE: By the end of the lesson, it is expected that:
   (i) Students of the controlled group should be able to draw and colour or paint at least three domestic animals using the instructional materials provided by the teacher.
   (ii) Students in the experimental group should be able to either draw and colour/paint or mould/construct any domestic animal of their choice, using their own improvised materials.

INSTRUCTIONAL MATERIALS: (i) The controlled group is to be provided with only three pieces of cardboard paper cut to size, pencil, a set of colour, eraser and water colours.
   (ii) Those in the experimental group are exposed to lots of materials such as mud/clay, pieces of plank/wood, cartons, nails and wires etc.

ENTRY BEHAVIOUR: Students are very familiar with all the domestic animals found in their locality.

INTRODUCTION: Teacher asks students to name all the domestic animals they know.

PRESENTATION: Step I: Teacher guides the students to recognize the following domestic animals: dog, cat,
goat, horse, donkey, cow, sheep and camel etc

Step II: Students are allowed by the teacher to describe orally each of the domestic animals named in step 1 above.

EVALUATION:

(i) The teacher asks the controlled group to draw and colour/paint a goat, a cow, and a horse, using the materials provided.

(ii) The teacher asks the experimental group to draw and colour/paint or mould/construct any of the domestic animals of their choice using any materials of their choice found in the locality/environment.

CONCLUSION: teacher collects marks and grades students’ work.
APPENDIX “G”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Non-Domesticated Animals
DURATION: 80 Minutes
BEHAVIOURAL OBJECTIVE: (i) Students should be able to differentiate between domestic and non-domestic animals.

(ii) In the controlled group students should be able to draw and color/paint any named non-domestic or wild animal looking at the teacher’s sketches on the chalk board or cardboard paper using the materials brought to the class for the purpose.

(iii) Students in the experimental group should be able to draw and color paint or mould/construct any non-domestic or wild animal of their choice using any materials of their choice.

INSTRUCTIONAL MATERIALS: (i) The controlled group is to be provided with cardboard cut to size, pencil, crayon, water color, eraser and picture of animals.

(ii) The experimental group is to be allowed to use any material of their choice such as empty cartons old jerry cans, wires, clay and nails etc.

ENTRY BEHAVIOUR: It is assumed that students learnt about domestic and non-domestic animals in Social Studies in Senior Primary School and what is more, a good number of them have had the opportunity of seeing some non-domestic animals such as monkey, baboons and squirrels.
INTRODUCTION: Teacher asks students of both groups the following questions:
(1) Were you taught about domestic and non-domestic animals while in Primary School?
(2) What is difference between the two groups of animals?
(3) Can you name two domestic and two non-domestic animals you know?

PRESENTATION:
Step I: Teacher refreshes students’ minds as he defines domestic animals as those animals that live with us at home and are not afraid of human beings. He also defines non-domestic animals as those animals that live wildly in the bush and are afraid of man.
Step II: Teacher guides students of both groups to name as many domestic and non domestic animals they know.
Step III: Teacher guides the students to attempt a description of the physical appearance of any of the names domestic or non-domestic animals.

EVALUATION: The teacher asks:
(i) The students to differentiate between a domestic and non-domestic animal.
(ii) Students of the controlled group to use the materials provided to draw any animal of their choice from the large photograph of the animal kingdom displayed on the chalkboard by the teacher.
(iii) Students of the experimental group to use their imagination and draw/mould/construct any non-domestic animal of their own choice using any materials of their choice.

CONCLUSION: The teacher collects students’ work for marking and grading.
APPENDIX “H”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Designs and Motif
DURATION: 80 Minutes

BEHAVIOURAL OBJECTIVE: At the end of the lesson,
(i) The controlled group should be able to make assorted designs that could be used in decorating a calabash on a cardboard paper.
Define the term, perspective
(ii) The experimental group of pupils should be allowed to make such designs on any found materials they may lay hands upon. This will help them to explore with the materials around in their environments. They may even use a calabash itself.

INSTRUCTIONAL MATERIALS: (i) The controlled group is to be provided with calabashes (dried ones) pencils, nails, colours (water colour of crayon) erasers etc.
(ii) The experimental group will be allowed as the name implies to experiment on any materials of their choice they can find.

ENTRY BEHAVIOUR: It is assumed that calabash decoration is not a hidden and indigenous craft around us. This is because the Fulani milk “NONO” sellers are always around us especially during dry seasons. Their milk containers is a calabash well designed to add taste to their hawking business.

INTRODUCTION: The teacher introduces the lesson by telling a story about a Fulani milk sellers so that the story though fiction, could channel the students’ minds towards the lesson.

PRESENTATION: Step I The teacher provides cardboard papers, pencils, erasers etc. and directs them on
making designs that could suit calabash decoration (i.e. the pupils in controlled group).

**Step II**  
Experimental group will be allowed to use any material found around their environment to introduce designs that could be used on the body of dried calabash. The materials could be calabashes, plates, broken piece of calabash, metal dishes, native pots etc.

**EVALUATION:**  
(i) The controlled group will be directed to make designs on the papers provided by the teachers/instructor using materials like pencil, colours, eraser etc.  
(ii) the teacher allows them to work on their own so that he/she makes correction when necessary.

**CONCLUSION:**  
The teacher assesses the pupils/students efforts by correcting, marking and grading.
APPENDIX “M”

CLASS: J.S ONE
GROUPS: Two – controlled and Experimental
AVERAGE AGE: 12yrs
SUBJECT: Creative Arts
TOPIC: Still Life Drawing
DURATION: 80 Minutes
BEHAVIOURAL OBJECTIVE: At the end of the lesson, the students should be able to:
(i) Define Still life drawing
(ii) The students of the controlled group should be able to draw a composition of fruits arranged in a basket and as directed by the teacher/instructor
(iii) The students in the experimental group should be able to sketch any composition of gathered fruits of assorted species of their choice such as Mango, pawpaw, pineapple, oranges, apples, pear, guava etc.

INSTRUCTIONAL MATERIALS:
(i) The controlled group is to be provided with a basket full of fruits as arranged by the teacher to draw using cardboard paper, pencils, erasers etc.
(ii) In the experimental group, students will be allowed to make an imaginary composition of fruits and draw.

ENTRY BEHAVIOUR: It is assumed that good number students in both experimental and controlled groups have seen drawing on the wall in the market place and on road sides etc. But many of them don’t know the different between life and still life drawings. Stones, slippers, metals, tables, pots etc. are all under still life objects.

INTRODUCTION: In order to capture the minds of the students, the teacher draws a native pot on the board for pupils to see and identify whether living or non-living object
PRESENTATION I:
The teacher defines still life drawing as the type of drawing that deals with lifeless objects such as table spoons, pots, other cooking utensils, stones, blocks, iron, leaves etc.

EVALUATION:
To test the knowledge of the students better, the teacher saddles the two groups with their respective activities thus:
(i) the two groups at once define still life drawing.
(ii) The controlled group will be asked to draw the composition arranged in front of them using the materials provided such as cut (quarter size) cardboard paper, pencils, eraser etc.
(iii) The students in the experimental group are allowed to draw any arrangement of fruits of any kind as their still life drawing without looking at it (by imagination).

CONCLUSION:
The teacher collects, corrects, marks and grade their works based on their individual performances.