

SOURCING AND USE OF CLAY AMONG SELECTED
JUNIOR SECONDARY SCHOOL
STUDENTS IN ZARIA

BY

AMAO -AWOGBADE OLUREMI
N.C.E; B.A. (HONS) INDUSTRIAL DESIGN

A THESIS SUBMITTED TO THE POSTGRADUATE
SCHOOL, AHMADU BELLO UNIVERSITY IN
PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE AWARD OF MASTER OF ARTS IN ART EDUCATION

DEPARTMENT OF FINE ARTS
FACULTY OF ENVIRONMENT DESIGN
AHMADU BELLO UNIVERSITY, ZARIA

SEPTEMBER, 1997

(ii)

DECLARATION

I hereby declare that the whole of this thesis has been written by me as the result of my investigation, (except where references are made to published literature and where assistances are acknowledged) and has not been presented for any other degree.

Amao-Awogbade OLUREMI

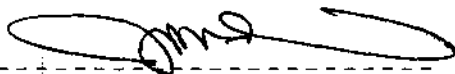
DATE

CERTIFICATION

This project report entitled: The use of clay among selected Junior Secondary School Students in Zaria, by Amao-Awogbade Oluremi meets the regulations governing the award of the degree of Master of Art Education of Ahmadu Bello University, Zaria, and is approved for it's contribution to knowledge and literary presentation.

Prof. R. B. Fatuyi
Chairman, Supervisory Committee

Date:-----



Prof. J. B. AKOLO
Member, Supervisory Committee

Date: 5/3/98-----

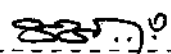
External Examiner

Date:-----



Head of Department

Date: 17th August, 1998-----



Dean of Post-Graduate School

Date: 26/05/99-----

DEDICATION

To my Children:

Adewoyin, Ademiju and Oladunni.

ACKNOWLEDGEMENT

I am first of all thankful to God for the grace granted me throughout the period of this study.

I wish to express my sincere and profound gratitude to my major supervisor Professor R.B. Fatuyi. I appreciate his understanding, patience and guidance throughout the course of the study, and in the organisation of the write-up.

I am highly indebted to my second supervisor, Professor Adetoro for his co-operation and assistance to me especially by his careful reading of the manuscripts and useful suggestions. Also, I am deeply grateful to Professor J.B. Akolo, for his directions and pieces of advice given to me at the on-set of the project.

I am patricularly grateful to all the art teachers in Day Secondary School Bomo, Comprehensive College Zaria, Federal Government College Zaria and Demonstration Secondary School, ABU Zaria for their cooperation during the collection of data.

My sincere thanks go to Mr. R.A. Adegoke and Mr. Emmanuel Inedu who patiently typed both the initial drafts and the final draft of this thesis.

Finally, my deep appreciation goes to my husband Moses for his understanding, love and encouragement.

God bless you all.

OLUREMI

ABSTRACT

Clay is used in Nigeria for different purposes. Among these are the making of utilitarian objects such as pots, moulding of animal figures in front of houses in Yoruba land, and mixing with mud to build houses with elaborate decoration, in **the** north. It has been observed that some secondary school students do **not use** clay as a creative art material. The study was therefore designed to ascertain the ' position of the use of clay in the junior secondary schools.

Methods and procedures. A total of 300 students and four art teachers in Zaria post-primary schools were involved in the study. The instruments included two sets of questionnaires: one for the art teachers and the other for sampled form three students.

The art teachers and students were also observed during some clay-work activities, although the observational study was not absolutely acceptable due to possible observer effect. Discussion was also held with the principals of the schools to ascertain the authenticity of the information provided by the teachers. Major findings were: Majority of the students demonstrated a moderately-positive attitude towards clay-work; some of the art teachers were not; qualified professionally to teach art, and there was acute
i
shortage of art teachers; students and art teachers **lacked** important physical facilities for art education and clay-work in particular. Lastly, time allocated for art on the time-table is short that clay activities had little or no time at all.

Conclusion: There is some indication of students' strength positive attitude towards clay-work, and so the research work suggests ways to enhance and strengthen the status of clay-work aspect of three dimensional art programme in our schools in these years of indigenous technological development.

(viii)

viii

CHAPTER I: INTRODUCTION

1

CHAPTER II: REVIEW OF LITERATURE

9

(ix)

2

CHAPTER III: RESEARCH DESIGN

3

CHAPTER IV: ANALYSIS OF DATA

4:

LIST OF TABLES

Tables	Title	Page
3.1	Method of Stratification for Selection of four schools	35
3.2	Example of Summary Statistics	41
3.3	Student Population Offering Art at the Junior Secondary School Level	42
3.4	Number of Art Teachers per school	43
3.5	Periods allocated for Art lessons in Junior Secondary School	43
3.6	Illustration of Time-Table	45
4.1	Moulding with clay	49
4.2	Supply of Clay inb Schools	50
4.3	Availability of facilities for preparing Clay ...	51
4.4	Availability of Place for storing Clay in School ...	51
4.5	Enjoyment of present Art Teacher's lesson	52
4.6	Readiness to continue studying Art	52
4.7	Enjoyment of moulding with Clay	53
4.8	Lack of clay in the class	53
4.9	Availability of Art Rooms	54
4.10	Availability of Art Teachers	54
4.11	Adequacy of Time Given During Art Lessons	55
4.12	Absence of Teachers During Lessons	55
4.13	Information on whehther clay-work was Boring	56
4.14	A Comparison of the number of Art Teachers' to Students Population in the Junior Secondary School	57

CHAPTER V

5.1	Summary	63
5.2	Major-Findings	64
5.3	Conclusion	68
5.4	Recommendation	68
5.5	Suggestions for further Research	70
	BIBLIOGRAPHY	72
	APPENDICES	75

CHAPTER ONE

INTRODUCTION1.1 Background of the Study:

Traditional clay has been used in Nigeria for centuries dating from about 750 B.C. when NOK figurines were produced. The Nok culture produced terra-cotta works to a highly astonishing level. These works show great diversity in techniques, imagination, and representing what their lives stood for. Also, the Ife culture followed up in the use of traditional clay which is similar to that of the Nok culture. The traditional clay works done in Ife were naturalistic and idealistic in nature. The works were produced in clay in such a skilful manner that the contours of the flesh and faces were the expression of nobility.

In recent years the Yorubas of Ekiti in the western part of the country became prominent in the construction of representational objects in clay. According to Slyle (1969), the Yorubas of the western Ekiti use clay for molding objects like lions, elephant....by their gates. Molded objects in front of a house may symbolize something to the landlord. This may be used for worship, ritual and so on. In the Northern part of Nigeria, traditional clay is used as an additive to mud which they use in building their houses with elaborate traditional architectural wall decorations and designs. Clay is used as a building material in the Northern part of Nigeria because of the climate that is dry most of the year. Clay is used to maintain the coolness of their rooms in the buildings.

Before the advent of western education, traditional art was passed from father to son through apprenticeship, so it was therefore not strange to hear of "the families of carvers" or bronze casters in those days. According to Talabi (1979), art education was the business of parents and art enthusiasts who depended solely on nature as well as what they could create with their hands. During this period, traditional society was always looking for men of talent to produce such art as would satisfy people's social and religious cravings.

The coming of the Christian missionaries to Nigeria later brought about western type of education particularly directed to the purpose of saving the soul. Rev. Kelvin Carroll a Catholic missionary began to encourage and promote African artists to portray Christian themes. Two of the most important artists consulted at this period were Areogun a sixty-four year old man, professionally trained in African traditional art, and Lamidi Fakeye who was also a master in traditional art. Both worked in the European established art center in the Catholic mission at Oye-Ekiti and some other parts of southern Nigeria in the 1940s.

However, the introduction of art into the school syllabus in Nigeria was traceable to Chief Aina Onabolu, who was the first Nigerian who made this persistent demand. After his arrival from the art schools in London and Paris, he persuaded the then Director of Education to employ Kenneth Murray who he came in contact with during his sojourn in London as an art student. Since then art education had been introduced into the formal school system (Akolo,

1982).

Mrs H. Williams, the wife of the first principal of Uzuakoli College was another eminent personality, with regards to the growth of art in schools. She introduced art into the school curriculum and actually taught the subject herself. One of the products of her effort was A. J. Udo Emma, an effective Nigerian art educator. With the efforts and the successes of Onabolu, Murray and Mrs Williams, many people started to support the teaching of art in Nigerian schools. An example was the support of Carline in his literature 'Draw they must' (1968:179) which states that "we have failed too often to value the active culture which shows its presence through creative power". Carline here, is putting a lot of emphasis on the teaching of art along people's cultural way of life.

Quite a lot of artistic works done in Nigerian societies for various purposes are reflected in three-dimensional way. In this category are sculpture, pottery and other forms of modelling as well as metal work.

It is unfortunate that the art of Nigerian cultures is fast disappearing because of the influence of the western culture. These have got some effect on the use of clay as a medium for three-dimensional art in our secondary schools. The fragility with which clay work is viewed is another point that affects the use of clay among secondary school students.

Lowenfeld (1971) believes that clay can be used to develop creative ability in children. He says that clay is adequate for

self-expressions and it is easy to change and build ideas in different ways. According to Lowenfeld (ibid) the real nature of clay is its plasticity. Clay can be used as a material to determine how successful the students can apply the elements and principles of creative work. It is believed to be an excellent, three-dimensional material for children's creative training.

Consequently, this study is an attempt to review some of the pertinent problems of students in the use of clay for molding activities in Nigerian art Education.

1.2 THE STATEMENT OF THE PROBLEM

Experience has shown that the art teacher at the secondary school is faced with the challenges of dealing with adolescents with various aims, interests and abilities. It is easy to see that the work of young children is closely related to their developmental level. Adolescent feelings and emotions and understandings of the world around them are clearly reflected in their art products. Clay will be an excellent material for such expressions. Teachers' poor methodology and motivation has scared off many students from participating in clay-work subject.

The mass production especially on the aspect of the utilitarian art is challenging since it lays emphasis more on reproduction rather than creativity and the materials can be bought cheaply. Gone are those days when emphasis was laid on traditional utensils like clay pots now overtaken by factory produced aluminium pots. Wooden dishes and spoons have now been overshadowed by

plastic, aluminium and enamel hardware. Iron and plastic buckets has been made to replace the traditional pots and wooden basins used for water collection. It may be argued that this is a developmental trend, but the questions is should this be so at the expense of our tradition and creativity?

It is the general belief that secondary school students in Nigerian do not use clay for molding. A pilot study was conducted to investigate the position of the use of clay in about four schools in Zaria. The result of this pilot study showed that most secondary schools in Zaria did not use clay and there was a need to conduct a further study among junior secondary school students in the area. This is regarded to be necessary in creative learning. Akolo (1984) believes that for art learning to be meaningful, secondary schools should provide appropriate learning experiences in cognitive, affective, and psychomotor domain. It is therefore true that the use of clay for learning purposes is an essential part of child development.

The central issue of this study, therefore, is the examination of the extent to which clay is being used by junior secondary school art students in Zaria as a material of creative arts. The study is to further examine the followings:

- (1) types of clay available;
- (2) how they can be procured;
- (3) available facilities for teaching clay work in schools; and
- (4) ideal model of classroom management for clay work.

1.3 THE PURPOSE OF THE STUDY

The purposes of the study are to:

1. examine the various types and qualities of local clay in Zaria;
2. examine how clay can easily be procured in classroom for teaching;
3. develop a model for classroom management with emphasis on the use of clay in schools; and
4. investigate the extent to which local clay has been used in teaching children in schools.

1.4 RESEARCH QUESTIONS

1. What types and qualities of clay are available in Zaria?
2. To what extent is clay easily obtained in Zaria?
3. What are the characteristics of a model classroom management for clay work in a secondary school?
4. How effective is clay used as an art material in the selected secondary schools?

1.5 SPECIFIC OBJECTIVES

The specific objectives of this study are to:

1. determine the types of clay available in Zaria;
2. determine how they can be procured for use in the school system;
3. identify what facilities are available for preparing these types of clay for use in the schools system;

4. identify how well teachers in the school system manage the use of clay;
5. establish how students can be involved in the use of clay in terms of time-table allocation, storage facilities, classroom space etc.

1.6 SIGNIFICANCE OF THE STUDY

This study will be significant in that at the end of it, the following would have been accomplished:-

- i. The specific types and qualities of clay available in Zaria would have been identified.
- ii. The source of clay for use in the school system would have been identified.
- iii. Facilities available for preparing these types of clay for use in schools system would have been known.
- iv. How well the teachers in the school system can manage the use of clay would have been determined.
- v. How students can be involved in the use of clay in terms of time-table allocation, storage facilities, classroom space etc, would have been determined.

1.7 SCOPE AND DELIMITATION OF THE STUDY

The study has a population of all twenty-four Junior Secondary Schools in Zaria which are suppose to offer creative art subjects being a compulsory subject at that level but a sample of four of them has been made based on the type of population components.

The schools sampled are:-

- i. Comprehensive College, Zaria.
- ii. Demonstration Secondary School, Zaria.
- iii. Federal Government Girls College, Zaria.
- iv. Government Day Secondary School, Bomo, Zaria.

The reason for this stratified sampling method is that schools in Zaria are set up based on the heterogeneous nature of the inhabitants. Zaria is an academic and commercial centre consisting institutions such as University, College of Education, College of Agriculture, Military School and similar types. The children that attend these schools also reflect the parents population types. The junior secondary school stage has been selected because it is the determining point for students to start art creativity and decide whether or not to continue with Art courses as one of their future subjects. The selection also encourages an exhaustive treatment of the study.

One limitation of this study is that for the sample class experiment, the types of clay that could be collected due to the seasonal constraints would be used. Another limitation is that questionnaires would be administered based on the permission of the children parents and that of the schools authorities. The third constraint depends on the extent to which the school administration allows the field study conduct of the work.

1.8 CLARIFICATION OF SPECIAL TERMS

Any special term used in this study is explained under appendix towards the end of the work.

CHAPTER TWO

REVIEW OF LITERATURE2.0 INTRODUCTION

In this chapter, the researcher attempts to review the related literature based on the following general concepts:

1. the function of clay;
2. the origin of clay and types of clay
3. some methods of constructing objects in clay and'
4. the uses of local clay in secondary school system.

2.1 FUNCTIONS OF CLAY-WORK

Logan (1980) stated: "It is an educational truism that three-dimension art aids in the development and transmission of manipulative and physical skills".

Clay has been used in different ways by many people of different cultural background. According to Green (1972) clay is perhaps more useful to man than any other single substance, and the ease with which it can be shaped has led to its use for an astonishing variety of purposes in almost every culture. Green (1972) traces the earliest major building civilization of man to the Hindus use of clay in the Hindus valley. He says that the Hindus attached prominence to the use of clay in building houses. According to Green "The least expected but most important among these discoveries have been the earliest written records of man in the clay tablets and cylinders of surates and other races of Chandas in Hindus Valley. Clay has provided homes and places".

Just as the Hindus attached a great importance to clay in building, so do Nigerians. Isichie (1983) illustrates that the beauty and variety of much Nigerian architecture in clay and its practical merits are becoming increasingly recognized. Clay is used for making tiles and bricks. the author emphasises that a clay house is cool with a traditional way of building the small window apertures and it is commonly found in the Northern part of Nigeria. She explains that like all building materials, clay has its own disadvantages. An example is that the flat clay roofs of Hausa Houses have been known to collapse in the rainy season - if not carefully maintained. A thatched roof with clay support also harbors insects and presents a fire hazard during thunderstorms.

Apart from the Northern Nigeria People's use of clay in building, people in the southern part of Nigerian also build their houses in clay. For example, the Afin, the palace of the traditional ruler of Ijebu Ode, was built in clay with attractive designs on the wall surfaces. Isichie (1983) illustrates that the Oba's palace of Benin is the best documented building in clay in pre-colonial Nigeria time.

According to Isichie (1983):

"The King's Court is as big as the town of Harlem and enclosed by a remarkable wall that is the most common form of Igbo domestic architecture, with a rectangular house of clay plastered on a timber frame. Both walls, floor and clay benches were given daily

polishing...floor and wall tiles were also made out of clay".

Clay has been used for architectural purposes in many places in Nigeria. It is not only useful for domestic needs but it is also used for industrial purposes.

Clay is also used for medicinal purposes. Slyle (1969) states that: "As some western orthodox church members derive comfort from wearing on their person the effigy of a saint as protection against sickness or misfortune. So in like manner do Mwona tribesmen provide themselves with a common ailment for sickness, they also had objects to counteract misfortune and sickness among their livestock and cattle". These are phylacteries in clay according to Slyle, far outnumbered the particular uses of their utilitarian ware. Also, Jonathan (1969) says that among the Mwona tribes in Borno State, a person who suffered from or feared a certain sickness or complaint, consulted the jujuman who with due ceremony communicated with his oracle. Having received the words he explained to his supplicant the particular phylactery needed. The supplicant then approached the artists, who for a consideration, produced the article or figurine in clay. It was then returned to the juju man who again communicated through his oracles with his unseen mentors of the spirit world.

Finally with additional ceremony and a libation, the figurine will be invested with power. The procedure was repeated should a person feel the need of a phylactery to protect cattle or livestock from sickness, accident or becoming prey to wild animals. Most

figurines, jugs and vessels made in clay were oracular vessels for children, motherhood and expectant mothers suffering from various sort of problems in Mwona area of Borno State of Nigeria.

According to Slyle (1969), pottery figurine vessel with bird-like feature was made as therapy for any person suffering from violent headaches. He pointed out that traditional utilitarian earthenware pottery has remained a social embrace of the Mwona tribe since the time immemorial, since the figurine vessels made in clay was perceived as a healing phenomenon to diseases or sickness, the use of clay by Mwona tribe in those days has been favourable. Of recent, the advent of Western Civilization has been making the tradition to decline fast.

The people of Nok in Northern Nigeria attached a great importance to clay work. Objects made of clay found in Nok were fragments of monkeys, snakes, lizards and various quadrupeds which were portrayed in lively and realistic impression. According to Musa (1986), one important observation is that the Nok people were great hunters. They kept records of their hunting success by keeping some parts of the animals killed. This explains why there are many animal sculptures in the ancient art of their ancestors. Clay is used to portray the culture and tradition of the people of Nok. According to Musa (ibid), the people of Nok have a very elaborate way of dressing during their festival like the Tuk-Ham Day. The "Tuk Ham day" is an annual festival organized by the entire Jaba people to promote Jaba culture and tradition. The women in particular during this festival wear lots of beads around

their waist, wrist and ankles. They also have taperod which they wear as a plug in their nose, as well as at the upper and lower lips. The tradition of the people is reflected in their terra-cotta sculptures. The Nok terra-cotta sculptures are highly decorated with elaborate bead work.

Another interesting aspect of Nok cultural value according to Joseph (1986) is the type of hair style worn by their young ladies during the everyday activity and especially during this festival. This hair style among the young ladies is comparable with those elaborate hair styles predominantly noticeable in Nok sculptures.

Isichie (1983), says that clay is used to produce some sculptural pieces in Ife which are similar to Nok terra-cotta sculptures such as the elephant head which appear, with similar head-dress and beaded collar. At Owo the terra-cotta of a leopard is extremely similar to that of Ife Corpus stylistically and both are of relatively minor importance. She recounts that there are many terracotta sculptures of rams in Ife and Owo which represent subordinate political authority like the sacrificial victims, while the terra-cotta mud fish done in both places represents prosperity, peace, well being and fertility through its association with the water, Goodness of "Olokun". "Olokun" is the goddess of wealth and of the sea. Isichie (1983) justifies her assertion that the representation of the same animal in two different contexts is not necessarily the result of cultural interaction, but because of the innate ideas which they represent in their artistic form.

Peter (1983) views the terra-cotta chameleon made on an elephant clay-pot with snakes and a ram's head in Igbo-Ukwu art is an obvious symbol of magical power in Igbo-Ukwu Chief's shrine.

Also, in Yoruba land, there are figurative works done in clay which serve several social and cultural functions.

According to Johnson, in some part of Ilesha, Ondo and Ekiti, there are objects moulded in clay which are placed in front of houses which could be symbolizing ritual or a form for worship to the landlord. The way the object is elaborately decorated determines the wealth of the landlord and his attitude towards it. Johnson (1985) says that sculptors also work on tombs with clay representing the figurative expression of the dead person. The way and manner in which the deceased is represented in clay portrays his image in live and also determines one's wealth in the society. The decoration and the impression whether complex or simple, will really suggest the status of that person within the society.

Evidently, clay has been long in use by various tribes in many parts of Nigeria for different social and cultural purposes. Pottery making is said to have cut across every tribe of Nigeria society serving various uses as related to customs of each tribe. Green (1972) states that: "So widespread has been its use over such a long period of time, that clay has become a domestic utensil of various household serving as traditional domestic stoves traditional industrial boilers,....making of pots for storing water, foods, and other liquids".

Various ethnic groups in Nigeria make pottery utensils as related to their needs and purposes. For example, among the Hausas, it is noted that during the severe period of harmattan, certain places like Sokoto, have a custom of filling a small pot with hot charcoals which people normally put under their robe during the harmattan, especially in the morning period. Jefferson (1974) says that this is done in order to prevent or reduce the intensity of the cold in the body.

Apart from the preceding, pottery in clay serves various utilitarian functions among the people of Northern Nigeria. Heathcoate (1976), Jefferson (1974) and Cardew (1969) reveal the utilitarian uses of pottery wares. Some of these utilities include making of special pots for inclusion in a girls dowry which is colorfully decorated and this is used during traditional marriage ceremony. Other clay ornaments are: water pots/ceremonial jar (randa) commonly found in Jos and Bauchi; oil lamp (Kaskon fitila) looking like the candle stick shape; small three legged pots often lidded frequently used for keeping food hot; and ceremonial beer jars (commonly found in Birm and some parts of southern Zaria).

According to Cardew (1969) "Ceremonial beer jar among the Hausas.....serve as a kind of loving cup between a man and a woman, but unconnected with any betrothal ceremony. He says that

these are common in Jos, Angas, Birom and Zaria. The ceremonial beer jar as reflected in Heathcoate's writing (1974) is also said to be made in Jaba (Ham district), South East of Kachia town (Southern Zaria).

Jefferson (1981) enumerates the various pottery wares made by the Yoruba women which are as follows:

- 'Amu' - Water Jars.
- 'Isasun' - Cooking pots
- 'Agbada' - Shallow bowls for frying
- 'Apoti Iroju' - Money Boxes
- 'Atupa' - Small lipped lamp bowl
- 'Amo Ifa' - Cult pots.

All these are the various pottery of the Yorubas.

Among the Ibo's Pottery wares also have their specific functions. According to Heathcoate (1976) there are:

Small pots known as medicine pots for children and for giving water to babies.

'Udo Ngwo' is a large red spherical flask made by Agbaja Women at Ajalli. It serves as palm-wine container.

'Udu' Musical pots. These pots are peculiar to the Ibo and very popular. Like a small pitcher in shape with a higher neck, they have a central mouth with a second orifice placed mid way on the body. By beating the hands alternatively on the two openings, a resonant note is obtained. Only women are allowed to use these pots for their own women's dances.

'Udo anga Ono' - Cult pots. The blood of goat or chicken is put inside the pot with feather sticks inside for ritual ceremony. This is commonly found in Eke areas.

Heathcoate says that clay performs elaborate functions for the people of the Western part of the Niger Delta, who are primarily fishermen and traders. In his write-up, he states that the

Itsekiris are noted for making snuff trays 'akeregbe' with clay. Heathcoate (1976) states that 'To prepare the snuff which is widely used by men and women, the locally grown tobacco leaves are cut into strips, heated with a fire, then grind (sic) on the clay tray with a small smooth stone'.

2.2 THE ANALYSIS OF CLAY MATERIAL AS CHEMICAL SUBSTANCE

2.2.1 DEFINITION AND ORIGIN OF CLAY

Clay, which is a popular art material is essentially a chemical substance. It is analytically represented in Chemistry as $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$. It simply means Hydrated Alumina Silicate and water. Clay as Ahuwan (1989) describes, is an earth plastic material, which is wet in the plastic state, but rock-like after it has been fired. He further states that Clay owns its origin to the breaking down of a granitic type rock, by the force of nature such as temperature, pressure, wind and water. This process is what is generally referred to as weathering, that is, the gradual and continuous breaking down of the granitic rock. Since the breaking down is an activity which occurs daily, more and more particles of clay are produced. Ahuwan (1989) further states that clay is

classified into two main groups. Primary or (residual) clay and secondary or (transported) clay. According to him, "when granite decomposes, Kaolin is formed. This is as on the spot change that begins and ends in the same place. That is why Kaolin is known as primary or residual clay. It is found in its place of origin."

Norton and Cacace (1980) share the same views with Ahuwan about the formation of primary clay in that primary clay are coarse in texture than the secondary clay. The reason is that the particles of primary clays do not undergo any further breaking down into smaller particles after the initial formation has taken place. It is when primary clay is pushed by glacier, rushed down streams, or allowed to settle somewhere else, it becomes a secondary clay.

The secondary clay is what Counts (1989) describes as 'subterranean clay' which contains such organic matters as leaves and bits of decayed stick, all of which must be removed before kneading. Ahuwan (1989) shares the same view with Counts in that secondary clays have developed in locations other than the ones in which they are found, and as they evolved, they have gathered impurities which alter their characteristics.

Norton (1972) categorizes clay into different types. He stated that "personalities differ and so do clays, and like personalities, some clays are more popular for obvious logical reasons. Clays can be chosen to suit the user's tastes, as long as they do the job that is required to (sic) them". On this basis, he classifies clays into four major categories.

Kaolin:-

These are the whitish clays because of their low iron content, and therefore they are the principal ingredient of white earthen and porcelain bodies. Ahuwan (1989) is of the same view, that it is the purest type of clay, that in the potter's language it is referred to as China clay. It is used to make white ware pottery. It is the basic material in porcelain.

Ball Clays:-

These are important ceramic clays, that are good for pottery work. They are called ball clays because they are fine-grained and therefore of high-plasticity with high and dry strength. Ball Clays is named after the town where it is found in Zaria 'Bomo'. This type of clay is not water-washed as the kaolin. This clay is suitable for hand-building

Stone-Ware Clays:-

Norton (op cit) asserts that many stone-ware clays contain sufficient feldspar, combined with a plastic clay to give both good working properties and a dense body when fired. These Clays are widely used by the artist-potter because they can be readily thrown on the wheel or pressed into the mould. Stone-ware clay are mainly white to grey in color and non-porous in nature.

Red Earthenware Clay:-

Clark (1970) and Count (1973) agree with Norton that red clay which they referred to as secondary clay are cheaper and easily obtainable than the white clay which is very suitable for the beginners. There is an abundant supply of good, plastic red clay

in most parts of the world, many countries use it for building bricks, roof-tiles, pipes and floor tiles often with an addition of sand to reduce shrinkage and excess plasticity. On the whole, red clays impart good working properties when they are used as an addition to low-firing bodies, and they give a warm red or orange colour to the fired piece. Clark (1970) explains that some clays can be dug and used immediately, and others should be weathered or kept moist for long periods before use. This, he said can be discovered by experiment.

2.3 PREPARATION OF CLAY

Preparing a mature clay involves little or no difficulty. Ahuwan (1989) and Counts (1989) have the same approach towards the treatment of clay. They both agree that in the preparation of clay, the following steps must be followed. "Remove from the clay all unwanted materials such as rock fragments, roots, twigs or rock leaves. Place the dry clay in a large container and cover it completely with Water. Avoid using metal containers because with time, these will become contaminated."

When the clay is soaked enough to break down all the lumps, stir it thoroughly until it reaches the creamlike consistency called slip. This can be done naturally by treading matching in a reservoir or with any type of mixing machine.

Having done the sifting, the slip should be allowed to stand and settle overnight, the next day, the excess water on top of the clay is removed and the thick slip can be poured into a sack to squeeze out the remaining excess water or poured into a plaster bat. When the clay has been dried to the point where it can be removed without sticking to or remaining on the finger, it is ready for use.

Ahuwan (1989) states that local potters who are not used to the modern method of preparing clay for their pots adopt a different method to get their clay processed. He express that:

Generally, their clay is spread out in a wide space to dry, much the way farmers spread maize and other grains to dry. Pound the large lumps with a mallet to break them down. When the clay is dry, force it through a sieve or fine screen. I have seen a local potter in Nigeria use "sifter" made of clay, or one of metal bought in a local market. The point here is to break the clay down into the finest particle size. If the clay is dry this goes rather easily. Fill a bucket with your sifted clay and water. Let the clay slake overnight. Do not stir this mixture, just let it absorb the water naturally. Try not to drown your clay in water but have enough water so that every grain of clay has a chance to become wet. This exercise will become easier and easier with experience.

He threw more light on the subject by saying that clay is always processed in the way the user feels will always suit his use. Clay is kept covered with a thick cloth already soaked in water to keep it moist. This, they do not touch for about a week so that it can properly mature before it is used for making objects.

2.4 METHODS OF CONSTRUCTION WITH CLAY

Norton (1972) enumerates some object forming techniques with clay. They are: the coiled method, the pinch method, the slab method, the mould method, and throwing on the wheel.

Coil Method:-

This is described as a simple process which involves the rolling of the length of clay. The clay is put or placed on a smooth platform. Both hands are laid on it lightly while the clay is gradually rolled back and forth. The pressure of the hand should be light and even, and the motion should be outward towards the end of the cylinder. The base of the clay cylinder should be made to dry slightly before the subsequent clay ropes of even thickness are mounted on it. This can always be done on a verandah, floor or on a plank.

Pinch Method:-

Hands are the most important tools when working with clay. Wood (1978) explains that in using pinch method, a lump of clay is rolled between both hands into a small ball or a sphere. It should fit comfortably in the hands. The ball should be held gently, but firmly in the left hand then punched down, exactly into the center of the ball to within a quarter of an inch of the bottom, with the

thumb of the same hand. The right hand thumb is to be placed on the hole that have been made, while the other four fingers of the right hand will rest on the outside part of the ball. Slowly, rotating the ball of clay anti-clockwise in the left hand, pinching thumb towards the supporting figures to a form of a base of a pot. After very complete revolution, the pressure is moved slightly down from the base and continue until the edge is carefully finished.

Slab Method:-

This could be achieved by selecting two strips of wood of desired thickness. The clay is rolled to an even thickness between the two strips of wood. By this method, a piece of clay is cut into shapes which when joined together form the desired object. Wood (1978), in contributing to Norton's (1982) assertion, pointed out that "most slab built objects are geometrical in shape and they lack the intimacy and immediacy of pinch and coiled objects. Wangboje (1978), here, points out that the slab built pot is different from the other sets of pots that are built with the popular pinching and coiling method. It has its own advantages too, since it enables the potter to make angular forms which are not too easy with other methods.

Mould Method:-

To do this, according to Nerg (1977), one needs to line the inside part of a cylindrical can with wet newsprint, old newspapers or wet sack. Fill the outside with clay of even thickness so that it is hollow outside. This should be left in the art room or a cool

store. After two or three days, pull out the clay gradually and remove the wet newsprint around it. This leaves the clay cylinder but through the can mould. Place the clay cylinder on a wet circular clay base and join properly. With this style, the mould method could be said to have been achieved in constructing an object.

Throwing on the Wheel:-

According to Clark (1983), this is another method used for constructing pottery objects. Having done a through wedging of the clay, a lump of clay will be left on a revolving wheel head. Perfect catching must be attained, good lubrication is needed so that the clay flows through the hands easily. This lubrication is furnished by adding a coating of water to the clay on the wheel. The clay is then moistened and caused to run through by containing it rigidly in the hands and at the same letting the clay rise up in the centre into a taller form. Hands are used to smoothen until the impression the potter desires is arrived at. Norton, Cooper and Blackwell (1983) maintain that throwing is primarily a skill, which can be learnt by most people. They affirmed that for some it is an easy and natural process, while for others it may be a difficult task.

Object in Scripture:-

To make a piece of sculpture in clay, Clement and Blackwell (1983) recommends the use of an armature for the figure. This is a wire that will be bent to achieve the sculpture's desired position, as determined by the artist. The use of the armature is

some-times not used by all artists as some starts moulding objects without any supporting device. Some piece may quickly collapse due to lack of supporting metal or wire.

2.5 CLAY ACTIVITIES IN SCHOOLS

Clay is one of the most exciting and rewarding materials for students to use in schools. It can be moulded into abstract forms or made into objects for practical use. Some technical knowledge and skills, according to Wood (1978), must be learnt and with enthusiasm, so that they are soon mastered. The techniques are learnt gradually by working through each stage from raw clay to glazed and fired pot style, dish or model. He further explained that as the children gain experience of handling and treating clay they will be more able to plan and control what the end product will be. However, early trial and error experiments are just as much fun and may produce exiting results.

Stanfield (1984) agrees with Wood that clay is a messy stuff for tables and benches. As far as practicable, therefore, clay modelling lesson should be conducted outside the classrooms provided that there is a shady place available. He said the principal aim of teaching very young children the art of clay-work is to teach them muscular control and self-expression.

Tempp (1977) agrees that clay work can make the classroom dirty. He prescribed a shady piece of verandah or under a tree for the teacher to conduct the lesson and suggested that before a teacher begins to teach the students clay work, he should review the

various methods of construction such as the lump, coil, slab, pinch methods in production. He should remember that the clay must be well wedged, free from foreign matter and be sufficiently moist. The teacher, according to Wood (1978), should teach the students how to preserve their clay before use. With this knowledge, the teacher can now discuss what his students are to make considering the various possibilities of size and shape as well as the limitation imposed by the use of clay. For instance, if they are to mould a pot or bird, Tempp upholds that teacher gives each student a lump of clay about the size of his fist. The teacher demonstrates how to make to the students and how to dry the clay when it is too wet and sticky to the fingers. Tempp (1977) insists that a small piece of clay should be taken at a time to work with.

Gonzales (1983) also advocates for guidance of students by teachers when working with clay. He stated that "suggestion are of course unavoidable, but should be minimized, in as much as students, in their anxiety to please tend to interpret a suggestion as that which is wanted". To him this interrupts the explorative process which a teacher must not permit. Teachers should free students to express the immediacy of their perception. Smith (1983), in contributing to the aforementioned point, maintains that students should be provided with a valuable lesson in clay-work which provides students with ample room for experimentation and discovery. Methods of working with clay processes from the beginning to the firing stage should be taught.

The basic technique for working with clay according to Wood (1978), is as follows:-

1. Clay is modelled and left to dry. This may take several hours or several days depending on the temperature of the room. At this stage it is called greenware.
2. When thoroughly dry it is put into the kiln for the first firing (biscuit firing) usually to a temperature of about 960-980°C then left to cool in the kiln. It is now called biscuitware.
3. A selected glaze can now be applied to the biscuitware if desired.
4. The glazed biscuitware is put into the kiln for the glaze firing usually to a temperature of about 1050°C or more. After cooling, the finished article is removed from the kiln.

Wedging:-

Before using the clay it must be wedged to remove air bubbles which would expand during firing and shatter the clay. Wedging also ensures that clay is of an even consistency so that the shape of pot or model can be controlled. Wedge the clay by squeezing, rolling and throwing it into the work surface. The clay is ready for use if no air bubbles can be seen when the clay is cut with the wire clay cutter.

Crosshatching:-

Pieces of Clay are joined together by crosshatching so that they will not fall apart as the clay dries. The surfaces to be

joined must be roughened with a pointed stick sprinkled with water and then pressed firmly together with a twisting action to ensure a good joining. All signs of the joint can be smoothed over with a modelling tool or a wet finger.

Between sessions, the clay must be kept damp if work is to be continued on it at a later stage. It can be placed inside a damp plastic bag which is then sealed with a rubber band.

Clay that has dried out completely can be reconstituted but it is hard work. It must be broken into small pieces and soaked in a bucket of water for several days. When the clay has broken down completely, pour off the surplus water and carefully dry the clay. To do this, place the wet clay on layers of newspaper or a slab of plaster of Paris until it is sufficiently dry to wedge and roll into balls.

Slip:-

Slip, according to Wood (1978), is thick, creamy liquid of water and that powdered clay can be used for decoration and for joining two cross hatched surfaces together instead of water. It is made from dried, powdered, unfired clay which has been sprinkled into water, stirred and then sieved. Different coloured clays will naturally produce different coloured slips. Oxides, which can be purchased from pottery suppliers, can also be added to the slip to produce more colours.

Talabi (1979) also elaborated on the teachers' role of taking the students to a potters' working center. An hour lesson arranged for this purpose basing observation on techniques, styles,

materials and tools used will be worthwhile and rewarding - providing a sort of first class experience. This, Talabi said is a role that teachers should perform in promoting the art of clay work in the students. Sawa (1985) upheld that it is the teachers role to awake the student's inner sensibilities, to be his counsellor and friend. He helps the child to become familiar with materials and tools, which help the students in determining a favorable attitude towards the art of the clay work.

2.6 CHARACTERISTICS OF A MODEL CLASSROOM MANAGEMENT FOR CLAY WORK IN A SECONDARY SCHOOL

I. ORGANISATION

According to Wood (1978), a part of the classroom (art room) needs to be reserved for clay activities and equipment. The clay must be stored in airtight buckets or bins with lids, near to study tables where the activity can take place. Much work with clay can be done on absorbent surfaces which will absorb some of the water in the clay and make it easier to handle. Shelves, cupboards are useful for storing equipment and finished work.

He states that it is best to avoid a situation where only one group of students will be allowed to use clay, otherwise the rest of the class will be distracted and frustrated in their desire to have a go for themselves.

Wood (1978) emphasises that the teacher should start clay exercise by demonstrating a simple technique to the whole

class which can then be attempted by all the students at the same time allowing ample opportunity for free play as well. In this way some of the initial excitement and eagerness of the students to try moulding with clay for themselves will be satisfied. Newspaper should be placed on the tables and floor to minimise mess.

It is a good idea to reserve a space in the classroom for a display of models, pictures and postcards to serve as a stimulus.

II. EQUIPMENT

Equipment according to wood includes

- (a) Clay: A wide range of coloured clay is available but for secondary schools, a choice of any clay available in the school location is sufficient.
- (b) Tools: A collection of tools should include:
 - (i) Rolling Pins: These can be made by cutting wooden broom-handles into sections about thirty centimeters long.
 - (ii) Clay-Cutters: To make a cutter for slicing the clay, twist each end of a piece of wire (about forty centimeters long) around a toggle or a small piece of wood. When small shapes of clay are required a simple cutter can be made by pushing a headpin through a cork.
 - iii) Making Clay Slabs: Straight wooden sticks in pairs of equal thickness about half a metre long. These

are used for rolling out slabs of clay and can be bought as off cuts from sawmills for shops selling wood.

- iv). Bowls for water
- v). A tool box containing a wide selection of numerous useful materials for texture patterns and experimentation. It should include a sponge, a knife, spoons, stones, twigs, buttons, matchsticks, a comb, driftwood, texture paper, nuts and bolts, a cotton reel, small blocks of wood, some paint brushes and strings.
- vi). Plastic or wooden modelling tools and heavy turntables can be purchased later for more advanced works.

2.7 SUMMARY

According to Green (1972), Isichie and Baikiz (1983) noted the beauty and practical merits of Nigerian architecture in clay to the important big, old and young people of reputable high and low cadre in Nigeria.

Slyle (1969) states how the Mwona tribesmen of Borno state of Nigeria used clay as an ailment to counteract misfortune and sickness among themselves, livestock and cattle.

Isichie (1983), Slyle (1969), Peter (1983), Musa (1986) and Johnson (1985) described the nature of the terracotta sculpture of some traditions found within their respective areas of field-work.

Some of the terra-cotta sculptures of each of these traditions like Igbo-Ukwu, Ife, Ondo, Owo, Ekiti, Ilesha were given their full symbolic meanings.

Heathcoate (1976) and Cardew (1969), agreed that the Yoruba, the Igbos, Hausas are good makers of pottery wares. Green (1972) remarked that so widespread has been its use over such a long period of time, that it has become a domestic utensil of the various households serving as traditional stores, traditional industrial boilers, for the storage of water, food and other liquids.

The origin of clay, types of clay, some methods of constructing objects in clay, including the preparatory processes involved in clay work have been discussed by Ahuwan (1989), Counts (1989) Norton (1972) and Clark (1970).

Also, the contributions expected of the classroom art-teacher and his students in the clay-work class have been analysed by Stanfield (1984), Tempe (1977), and Wood (1978) for the enhancement of clay-work in schools.

CHAPTER THREE3.1 INTRODUCTION

In this chapter, the emphasis is on the description of the research design, description of research instruments, the size of sample and the instrumentation. It also discusses the statistical analysis used in the study.

3.2 PROCEDURE

The researcher used the descriptive survey method in collecting information for the study. According to Degan and Ali (1983), a descriptive survey method involves collecting large and small samples from populations in order to examine the distribution, incidence and interactions of educational and sociological phenomena (p. 193). A descriptive survey also involves selecting unbiased sample from a large population in order to generalize. By studying a representation sample, it is possible to make inferences from and generalizations to a larger population that could be too expensive to study as a whole. The descriptive survey method is one of the most economical among others, and it permits a wide coverage. The ease and economy that is the characteristic of a descriptive survey method makes its use popular among researchers. According to Nachimas and Nachimas (1981), it may lead to insights that in turn could be studied as research hypothesis. For the methodology of the survey research, Kerlinger (1973) suggested the flow-plan which has been followed for this research. According to him, the flow-plan starts with objectives, the general and specific objectives to be solved are stated as

carefully as possible. The operational definition of the variables or terms are then given, followed by the sampling procedure, instrumentation, measurement, pilot study and proposed treatment of data.

To determine the samples for the study, the "stratified" sampling method was used. According to Kelinger (1973), this is a method designed to permit the inclusion of parameters of Special interest and to control for internal validity in terms of selection factors through the use of moderator or control variables.

The researcher also held informal interviews and discussions with the principal and art teachers of each school where she carried out this study. The researcher used the observations technique in collecting information from class room environment. Observations has been described as an important technique studying the Overt behaviours of people in order to record such behaviours as they happen simultaneously. Ndagi (1976) stated that; "An observation technique enables teachers and students classroom activities to be assessed or recorded on the spot. The technique also enable an observer to describe and monitor classroom practices and instructional system with ease".

3.3. SAMPLING OF THE SUBJECTS

In Zaria, there are a total of twenty-two post-primary schools. Fourteen of these are State Government owned school, two are owned by parastatals while the remaining five are private owned schools. These schools were categorised under three types: The federal government owned school by name Federal Government Girls'

College as one, the State Government owned schools, which are Barewa College, Zaria; Kufena College, Alhudahuda (formally Government) College Zaria; Government Commercial College Zaria; Government Day Secondary School Bomo; Government Day Secondary School, Samaru; Government Day Secondary School Tukur-Tukur; Government Day Secondary School Dogon Bauchi; Government Day Secondary School Kofan Gaya; and Government Day Secondary School Chindit Barracks. The Parastatal owned schools are namely: Nigerian Military School (NMS), Demonstration Secondary School (Owned by the Ahmadu Bello University) and the Private Owned schools are International Secondary School, God's Time Secondary School, BUKs International Secondary School, Comprehensive College and Therbow Secondary School.

The selection of the four schools used for the study was carried out following a disproportionate allocation within the stratified samples, that is, the number of schools selected did not take into account the size of the population (that is, number of schools within the type of school). Also, it was found that not all the Secondary Schools had art teachers (both the state government owned schools and private schools). To avoid picking out a school where art was not taught, some schools were excluded.

The Hat-draw method of random selection was used to pick out the schools.

Table 3.1 Illustrates:

Category of Schools	Total Number of Schools	No of Schools Chosen
Federal Government Schools	1	1
State Government Schools	14	1
Parastatal owned schools	2	1
Private Schools	5	1
Total	22	4

According to Shaibu (1995) the size of a sample and method of selection often affect the validity of a research. He further argue that the larger the sample, the more it represents the population.

In view of this fact, three hundred J.S.S. three art students were randomly selected from four selected secondary schools and given the questionnaires for completion.

The schools selected for the study were:-

Demonstration Secondary School, ABU, Zaria - (Parastatal Owned)

Comprehensive College S/Gari, Zaria - (Private)

Federal Government Girls College, Bassawa, Zaria - (Federal)

Government Day Secondary School, Samaru, Zaria - (State Govt.)

Out of the total number of 300 questionnaires distributed to the four schools, 75 were administered to the Demonstration Secondary School, 75 to Federal Government Girls College Bassawa, 75 to Government Day Secondary Samaru and 75 to the Comprehensive College Sabon Gari, Zaria.

The students in form three were chosen because form three is a determining point for students to make up their mind whether to continue with art in the Senior classes or to discontinue with the

subject. Also, since the subject was made compulsory the students would have got a wide repertoire of knowledge and motivation about the subject.

The schools, under study provide a fair representation of the larger society, in that, students come from different cultures and socio-economic backgrounds.

3.4 INSTRUMENTATION

Three methods were used in collecting the data viz.: the questionnaire, observation, and interview. The procedure for the collection of data is discussed under the various instruments.

3.4.1 THE QUESTIONNAIRE:

Questionnaire is one of the research instruments commonly used in collecting information in a descriptive survey method. A questionnaire is usually comprised of carefully designed questions for the respondents to answer on important items that are related to a study. The researcher, therefore, used two sets of questionnaires in collecting information from her subjects (art students and teachers). The method of presentation of the questionnaire was by direct contact. This was necessary in order to "explain the purpose and significance of the study, explain some points, answer questions and motivate respondents to answer questions carefully and truthfully" (Ndagi 1976).

The researcher used the structured (closed) type of questionnaire. Such structured questionnaires usually consist of

prepared list of specific questions and a choice of possible answers. They are usually easier to fill, and to analyse than the unstructured type. In a structured questionnaire, all that the respondents need to do is to complete the blanks with a thick () or one word, underline or draw a circle round their choice of the alternatives provided.

Questionnaires for Teachers:

According to Shipman (1979), he warned that a study of this type would not be complete if it excluded staff roles and effectiveness. Some concrete activities of classroom teacher are evidences of what he tries to achieve. Such activities could be assessed through a questionnaire. The researcher sought for some information from the art teachers through a fourteen-item questionnaire thoroughly scrutinised by the supervisor. The items include general information on qualification and experience, supportive evidence as regards their teaching of clay-work, their methods of reaching it, the conditions at which they worked, the students involvement in the use of clay. The last item in the questionnaire was open-ended. It sought for information on the problems the teachers encounter during moulding lessons.

Questionnaire for Students:

The questionnaire, well scrutinized by the supervisor was to collect data on the students' interest in the use of clay, sources and types of clay the students use; the classroom and facilities available for the use of clay; the teachers management of the class; and the problems facing them in the use of clay. For

example, item 9 to 13 (Appendix B) contained a list of possible problems that students face in clay work lessons. They were to indicate by a tick whether they face the problems or not. Fourteen (14) items were contained in students' questionnaire.

3.4.2 INTERVIEW GUIDE

The interviews and discussions centred on the government in art education vis-a-vis other school subjects and the contributions of art education to school environment. Art teachers were interviewed on the conditions in which they work with their students in the class and students attitudes toward clay work in particular.

3.4.3 THE OBSERVATIONAL GUIDE

The researcher collected data by means of an observational guide suggested by Fatuyi (1986). It concerns mainly the three components of classroom teaching and learning activities, namely the classroom, the teacher and the students. In the observational guide, space is provided for short important comment on the behaviours observed. The space could be used also to indicate the presence, absence or frequency of occurrence of the observed phenomenon. The use of a checklist or observational facilitate the recording of behaviours. However, such a checklist must contain a list of carefully defined and observable items of behaviours or interaction that are relevant to the study.

The researcher made an appropriate objective evaluation of the

students and their clay works based on obtainable evidence such as photographs. Photographs are quite essential in depicting the art forms (Claywork) studied because the acquisition of all the clayworks for this study may not be possible. Therefore, the researcher employed photographs in expanding and documenting the work. The researcher properly documented the photographs with the name of the students and their schools..

3.5 PILOT STUDY

Data Collection

As stated earlier the purpose of this study was to determine the position of the use of clay in teaching art students creative arts in junior secondary schools. To achieve this purpose, a pilot study was carried out. Investigations were conducted by the researcher with the use of interview as an instrument to verify the position of the use of clay in selected junior secondary school in Zaria.

The analysis of data collected in this study is presented in accordance with the instrument used as discussed in the following:-

Interview

The interview data has been presented as documented on the individual questions asked during the interview. The first question was: What percentage of your student population offer art at the junior secondary school level in your school? The responses of the Art Teachers concerning this is represented in the table below

Table 3.3: Student Population Offering Art at the Junior Secondary School Level

School	%	Class J.S.S
Comprehensive College, Zaria	100	1, 2, & 3
Demonstration Sec.Sch. Zaria	100	1, 2, & 3
Fed. Govt. Girls College Zaria	100	1, 2, & 3
Govt. Day Sec. School, Zaria	100	1, 2, & 3

Questions:1. Are there Art teachers in your school?

2. How many are they?

3. What are their qualifications?

The answers to these questions are shown in Table 3.4 below.

Table 3.4: Number of Art Teachers per school.

School	No of Teachers	Qualified	Not Qualified
Comprehensive College Zaria	1	-	1
Demonstration Secondary School, Zaria.	2	2	-
Federal Govt. Girls College, Zaria.	3	2	1
Govt. Day Secondary School, Zaria.	2	-	2
Total	8	4	4

Question:3 How many periods are allocated for art lesson in your school? The response to this question indicated that in the four schools, the time allocated for Art was three periods (1 double period) and one additional single period per week.. The number of periods for each school are shown in Table 3.5 below.

Table 3.5: Periods Allocated for Art Lesson in Junior Secondary Schools

School	Classes	Periods
Comprehensive College, Zaria.	1,2,3	2
Demonstration Sec. School, Zaria	1,2,3	3
Federal Govt. Girls College, Zaria	1,2,3	2
Govt. Day Secondary School, Zaria	1,2,3	3

Question: 4. What percentage of the time allocated do you use to teach clay work?

None of the Art Teachers could say exactly the number of periods they used in teaching clay work. However, some of them pointed out that as a result of the unavailability of materials to teach other aspects of art e.g. moulding, painting and crafts, about half of the time allocated for art was spent on drawing.

Question: 5. What methods do you use in teaching clay-work?

Both the teachers and the students were questioned about the methods used in teaching clay-moulding. This method simply involved introducing the lesson by writing out the topic on the board and discussing on it. Explanations and definitions would then be given to the students. They are then asked to embark on the activity. While moulding, the teacher would go round, correcting them, and helping them in the areas of their weaknesses. The descriptions given by some of the students when asked to comment about this, confirmed that this was the general method employed by their teachers to teach other areas of art but for claywork, that the teachers usually give them as home-work exercises.

Question 6: Are there sufficient materials for teaching clay-work in your school? What are these materials?

In response to the questions most of the teachers complained that materials were not supplied to the schools presently. Some of the teachers complained of lack of working space, lack of working materials, like clay, brushes, paint, bowls among other were simply not available.

Observations and Conclusions

In secondary schools, claywork was taught under creative arts, and as the name suggests, claywork was combined with other aspects of art such as drawing, painting, textile etc. These aspects were allocated the same period on the school time-table. This suggests that enough time was not given for effective learning to take place in the various aspects. Due to time allocated, each of the areas may be taught once in a month or a term. A survey of the time-table of some randomly selected schools within the delimited areas of study was made to see how much time was allocated to art, and to determine how these periods were judiciously utilised. The intermediate class (class three) was used for this assessment.

Table 3.6: Illustration of Time-Table

School	Location	Class	Studio	Period per week
Comp.College, Zaria	S/Gari, Zaria	3	No	2 periods (1double)
Dem. Sec. School, Zaria	ABU Samaru	3	No	3 periods (1double and 1 single)
F. G. G. C, Zaria	Bassawa Zaria	3	Yes	2 periods (1double)
Govt. Day Sec.Sch.Zaria	Bomo Zaria	3	No	3 periods (1Single and one double)

From the above, the four sampled schools had (2) two periods of art lesson in a week, double period with the exception of Demonstration Secondary School and Government Day Secondary School. Bomo which has a double period mostly and one single period. What obtained in Demonstration Secondary School and Government Day Secondary School is what the national curriculum recommended. Some of the schools sampled were meeting the recommendation, while some schools were not. The double period is to take care of practical lessons while the single period is meant for theory lessons. With one double period alone, the teacher is left with the option of trying to alternate each of the areas of art either on weekly basis or on project basis, thereby making the students to work in groups. Under such circumstances, the teacher has to rely on giving the students who are more enterprising home work.

From the general observation, it seems certain that teachers preferred to teach drawing and crafts than working with clay and paint. During the process of this study the researcher interviewed several art teachers in the selected school. The art teachers revealed that the magnitude of the problems of art teaching could not be easily enumerated. For instance, it was emphasized that there were very few qualified art teachers in secondary schools. Mostly the studio artists taught in the schools and concentrate mainly on their areas of specialization. For instance, a teacher who trained as a sculptor would concentrate the students in drawings and sculptural forms mostly.

Most of them tended to run away from clay material. Secondly, the teachers revealed that many students were not interested in art work. According to available information, these limitations are the main reason for the absence of the use of clay in most secondary schools.

3.6 ANALYSIS AND TREATMENT OF DATA:

Questionnaire results would be displayed and reported in tabular form. Morris and Fitz-Gibbon (1978), Henerson, Morris and Fitz-Gibbon (1978) suggested two types of tabulating and reporting data. In the first instance, responses to each questionnaire are examined separately. In doing this, they maintained that the answers which each group of respondents made to each question are considered important enough to be displayed and discussed individually. In the second method, "responses to two or more questions are added together or combined in some other way to

produce an index of the degree to which people hold an attitude or possess a trait" (Morris and Fitz-gibbon (1978:69). This second method is very much an application of an attitude rating scale. They remark that in discussing responses to single questions, arranged responses could be reported per group, or number or percentage of respondents in each group answering a certain way. While an average is reported only where it makes sense, most questions can be summarized by reporting the number or percentage per group responding in a certain way. Since percentages make it easy to compare numbers from different sized groups, they are preferred.

The researcher, therefore, will present questionnaire data by putting summary statistics. That is, presenting the average response or the number and percentage of persons choosing a particular response directly onto a reproduction of the questionnaire as shown in the example below:

Table 3.2: Example of Summary Statistics Item 8: Do you enjoy present Art Teacher lesson in clay activities?

	<u>Freq.</u>	<u>Percent</u>
Neutral	8	3.1
Yes	161	62.9
No	87	34.0

CHAPTER FOURANALYSIS OF DATA AND FINDINGS4.0 INTRODUCTION

This study was aimed at determining the extent to which clay is sourced and used in the junior secondary schools creative art programmes in Zaria. To achieve this purpose, investigations were conducted by the researcher into some aspects of art education programmes in selected schools in the area. This enabled the researcher to collect some relevant information or data on the attitude of students, background in clay work, availability of material (clay), classroom activities, achievements in clay work and problems confronting the students in clay work activities..

In this chapter, the researcher presents the analysis of data collected in accordance with the research instruments used. The names of sampled schools are listed in chapter III (p.35). In presenting data analysis, only the said number of each schools has been used in place of the names. A total of 300 students were sampled from four secondary schools that their students studied art. Approximately seventy-five students were therefore sampled in each school. A total of three hundred (300) questionnaires were distributed in all the sampled schools to students who studied art. Since the researcher herself travelled to all the schools to administer the questionnaires, all the questionnaires were expected to be duly filled and returned, but out of the total of 300 questionnaires 256 were returned. Therefore 85.3% return was recorded. However, there are 8 art teachers in all the sampled

colleges. Some of them that teaches form III students were interviewed.

The researcher used two methods of data analysis recommended by Morris and Fitz-gibbon (1978) These methods involve the use of simple frequency distribution and percentages in tabulating data as shown in the sample on page 40.

4.1 ANALYSIS OF STUDENTS' QUESTIONNAIRE

The age range of students to whom the questionnaire was administered was between 10-22 years.

Items 1: Students Background in Art.

The researcher used this item to seek information on students' background in clay work. Nine hundred and fifty-four (36.7%) of the respondents indicated that they did mould with clay in their school, while 16 (62.5%) said that they did not mould with clay.

Table 4.1: Moulding with Clay

	1	2	3	4	Row total
Yes 1	45	19	15	15	94 (36.7%)
No 2	11	51	44	56	16 (63.3%)
Column Total	70 (27.3%)	56 (21.9%)	59 (23.0%)	71 (27.7%)	256 (100%)

Item 4.2: Does your school supply you clay materials?

In item 2 students were requested to indicate if the school supplied them clay material.

Table 4.2: Supply of Clay in Schools

Count	1	2	3	4	Row Total
1	27	1	10	4	42 (16.4%)
2	29	69	49	67	214 (83.6%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Table 4.2 indicates that 42 (16.4%) students said yes the school supplied clay material while 214 (83.6%) said that the school did not supply clay material.

Item 3: Do you have facilities in the school for preparing Clay?

In this item students were requested to indicate if facilities were available in the school for preparing clay. Responses showed that 51 (19.9%) students indicated that there were facilities for preparing clay in their schools while 205 (80.1%) indicated that no facility was available for preparing clay in their schools. Table 4.3 below illustrate the responses.

Table 4.3: Availability of facilities for preparing clay

Count	1	2	3	4	Row Total
1	23	5	14	9	52 (29.9%)
2	33	65	45	62	205 (80.1%)
Column Total	56 (21.9%)	70 (27.0%)	59 (23.0%)	71 (27.7%)	

Item 4: Does your school have a place for storing clay?

The response to this question indicate that 43 (16.8%) students said yes that the school had a place for storing clay while 213 (83.2%) students said 'No' the school had no place for storing clay.

Table 4.4: Availability of Place for storing clay in school

Count	1	2	3	4	Row Total
1	10	8	12	13	
2	46	62	47	58	
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	

Item 5: Do you enjoy your present art teacher's lessons?

Response to this item showed that 161 (62.97%) students enjoyed their art teacher's lessons, while 95 (37.1%) did not enjoy their art teachers lessons. Table 4.5 below indicates the responses.

Table 4.5: Enjoyment of Present Art teacher's Lesson

Count	1	2	3	4	Row Total
1	44	39	22	56	161 (62.9%)
2	12	31	37	15	95 (37.1%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Item 6: Based on your experience in moulding with clay, would you like to continue to study art? 117(45.7%) students answered 'Yes' while 139 (54.3%) answered 'No'.

Table 4.6: Readiness to continue studying Art

Count	1	2	3	4	Row Total
1	26	36	10	45	117 (45.7%)
2	30	34	49	26	139 (54.3%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Item 7: Do you enjoy moulding with clay as much as you enjoy other art activities?

Table 4.7: Enjoyment of Moulding with Clay

Count	1	2	3	4	Row Total
1	30	40	25	50	145 (54.6%)
2	26	30	34	21	111 (43.4%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

In the above, 145 (56.6%) students indicated that they enjoyed moulding with clay as much as other art activities, while 111 (3.4%) said they did not enjoy moulding with clay as much as other art activities. This item attempts to assess the views or opinion of students on their art teachers' lessons.

Item 8: Do you frequently experience lack of clay in class?

Responses to item 8 are indicated in table 8. One hundred and forty-five (56.6%) students experienced lack of clay in class while 111 (43.4%) did not experience lack of clay in class.

Table 4.8: Lack of Clay in the Class

Count	1	2	3	4	Row Total
1	26	40	38	41	145 (56.6%)
2	30	30	21	30	111 (43.4%)
Column Total	56 (21.3%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Item 9: Is there an art room in your school?

Respondents were asked to indicate by answering 'yes' or 'no'. Responses showed that 129 (50.4%) students indicated 'yes' while 127 (49.6%) students indicated 'no'.

Table 4.9: Availability of Art Rooms

Count	1	2	3	4	Row Total
1	17	22	58	32	129 (40.4%)
2	39	48	1	39	127 (49.6%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Item 4.10: Do you have art teachers in your school?

The responses to this question is shown in the table below.

Table 4.10: Availability of Art Teacher

Count	1	2	3	4	Row Total
1	46	69	59	70	244 (95.3%)
2	10	1	-	1	12 (4.7%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Response to this item showed that 244 (95.3%) students said yes while 12 (4.7%) students said 'No'

Table 4.11: Adequacy of Time Given During Art Lessons

Count	1	2	3	4	Row Total
1	39	52	53	49	191 (74.6%)
2	19	18	6	22	65 (25.4%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

In table 11 above, 191 (74.6%) students indicated that they had sufficient time for art lessons. While 65 (25.4%) said enough time was not given for art lessons.

Item 12: Was your art teacher frequently or sometimes absent during art lessons?

Table 4.12: Absence of Teachers During Lessons

Count	1	2	3	4	Row Total
1	24	34	13	24	95 (37.1%)
2	32	36	46	47	161 (62.9%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23.0%)	71 (27.7%)	256 (100%)

Responses to item 12 are indicated in table 12. 95 (37.1%) students indicated 'yes' while 161 (62.9%) said 'no' to the question.

Boring

In response to this item, 77 (30.1%) of the respondents indicated that the clay moulding classes were boring. 179 (69.9%)

students felt that the classes were not boring. This is shown on the table below.

Table 4.13: Information on Whether Clay-work was Boring

Count	1	2	3	4	Row Total
1	15	24	21	17	77 (30.1%)
2	41	46	38	54	179 (69.9%)
Column Total	56 (21.9%)	70 (27.3%)	59 (23%)	71 (27.7%)	256 (100%)

Item 14: Is Clay work valuable to Man?

Responses to this question indicated that 229 (89.5%) students viewed that clay work was valuable to man while 27 (10.5%); of the respondents felt that clay work was not valuable to man.

4.2 ANALYSIS OF TEACHERS INVENTORY, OBSERVATION AND DISCUSSION

There were (14) fourteen items on the art teachers inventory. (mainly for those that teach J.S. III) The first part of it sought for general information from each art teacher such as the name of the school in which they taught, their qualifications and teaching experience.

There were (8) eight art teachers in the four schools sampled for this study. One of the teachers was with Higher National Diploma in Arts, Three of the teachers were with National Certificate on Education plus First Degree, One of them was with the first degree and Post-Graduate Diploma in Education while the remaining three had the first degree respectively.

In all, four of the art teachers mentioned that they had above 12 years teaching experience, two stated that they had above 5 years and two had below 5 years experience. In terms of number, there were few teachers in each school. The ratio of the art teachers to the approximate number of student is of importance. In the junior secondary class, the ratio was 1:965 in the Demonstration secondary School, while in the Comprehensive College it was 1:600, in the Government Day secondary school Bomo, Samaru, the ratio was 1:150 while in the Federal Government Girls College it was 1:300.

Table 4: 14: A Comparison of the Number of Art Teachers' to Students Population in the Junior Secondary Schools

Name of School	Student Pop. (Approx.)	No of Teachers	Ratio of Art Teachers to Students
Comprehensive College Sabon- Gari, f Zaria.	600	1	1:600
Demonstration Secondary School, ABU, Zaria	965	1	1:965
Federal Government Girls College Zaria.	600	2	1:300
Government Day Secondary School, Bomo, Zaria.	1,150	1	1:150

From the Table above, it is clearly seen that the ratio of the art teachers to students in all the colleges showed evidence that art teachers were overworked. No thorough teaching and effective supervision can take place in a clay-work lesson where teachers are left with too many students to cope with.

When art teachers were asked the number of periods they utilized for teaching claywork per week with their forms I to III students, all of the four teachers indicated that they had one double period (80 minutes) per week for each of the classes for their clay work lessons. Except for the Demonstration Secondary School that had one double plus one single period making a total of three periods per week. The four teachers indicated that they applied demonstration and assignment methods in teaching clay work lessons. The researcher assumes that the high population of students might have made some of the teachers to employ the grouping and assignment method of teaching.

When teachers were asked to indicate the source of clay they used for their students work activities, all of the four teachers acknowledged that it was provided by the students themselves. As regards the students' performances in clay work, all the teachers admitted that their students' performances in clay was fairly satisfactory, the researcher assumes that the students perception of clay as a dirty material meant for children to play with might have been the case for the fair performance.

In order to further determine the effect of the method of teacher presentation on the interest of students towards clay-work,

teachers were requested to indicate the methods they employed in 'winning students' attention during clay-work lessons. All of the four teachers agreed on the use of motivation. Also, to determine the amount of cooperation and assistance from the school principals, the art teachers were asked if their principals were aware of their role as art teachers in the schools. The four teachers signified that the principals were very much aware.

Before a good lesson can hold, the students' state of mind is an important factor to be considered. When teachers were asked on how their students usually felt when it was time for clay-work, three of the teachers responded that students were usually very happy, one indicated that the students were usually unhappy. It should be noted that if students are motivated in a lesson, they will be enthusiastic and the teacher will enjoy their cooperation and attention.

The item requesting art teachers to state if the art of clay-work should continue to feature in the junior secondary school art curriculum was responded to in the affirmative by the four teachers.

The five major problems encountered in teaching clay-work by all of the teachers were that:

1. They do not enjoy the cooperation of the students as some refused to bring clay on requests,
2. There were too many classes, whereas some students even lacked interest in clay-work.
3. There were no art rooms and facilities for clay-work,

4. The 80 minutes allocation per week for clay-work, was said to be too short for any meaningful creative work to be achieved.
5. The teachers expressed the difficulty of organising extra practical lesson since the students were not living in the school as boarders and had to take their unfinished clay-works home for completion and were probably assisted by outsider with the exception of Federal Government Girls College.

In order to confirm the teachers' answers in their responses to the inventory, the researcher engaged in an observational study with the students of the schools under study. The observational guide (checklist-Appendix D) was used along with short notes in recording classroom interaction between teacher and the students. The items were simplified to quicken the checking of the observed behaviours.

It should be noted that information derived from the observation study of the clay-work class between the teachers and the students should not be absolutely accepted as what actually operated in the classroom due to possible observer effect.

In all the four schools sampled, the researcher noted that the generality of the students were delighted with clay-work, and there were lots of potential sculptors and ceramic artists among the observed students. This is contrary to the teachers' response that students were not happy with clay-work. This difference might be attributed to the observer effect which has been previously

discussed. Another common phenomenon in all the classes observed was students tendency to complete their clay-work in a hurry. Many of the students lacked patience in executing their clay-work assignments and such students felt bad when their teachers told them to start again, since the teacher complained about the time allocated to art as too little for any meaningful work to be done. The researcher assumed that the students might be rushing to complete their work to save them from the task of going home with clay, as some might not want to be identified with clay-work.

Just as the teachers indicated in their response about the absence of facilities for clay-work, the absence of physical activities in most of the schools was observed ^{since} students had to bring all the items used for the clay-work. Apart from the Federal Government Girls College Zaria that had a separate small room for clay-work, other schools used usual class rooms that could hardly take students' size which did not pave way for students' comfort and free movement. In some of the schools, it was observed that students were colliding with clay-work of other students in the process of one student moving from one place to the other at intervals to beg other classmates for the materials which they lacked. In most of the schools, the students in a class were more than 50. This observation confirms some of the responses that the teachers stated as problems confronting them in their clay-work classes.

Although the teachers' responded, one teacher indicating that he used group method of teaching and three teachers indicating that

they used the demonstration methods of teaching. Each

teacher was seen moving from one student to the other with his moulding tools assisting students where they had difficulties in manipulating with clay. It could be that some teachers were acting just to please the researcher because their behaviour was not in consonance with what they stated in the questionnaire as methods used by teaching the students clay-work.

Also, discussions were held with the principals of the schools sampled so as to cross-check on information provided by the teachers just as the teachers affirmed that the students were required to bring clay for their work, the principal confirmed the assertion that students had to bring clay. The principal of the Demonstration Secondary School told the researcher that the school enjoyed the cooperation of their 'sister-university' (ABU) by requesting from the Departments of Fine Arts and Industrial Design for some quantity of clay at intervals of a month for their art students. The principal of the Government Day Secondary school, Bomo responded that clay was obtained by students from a stream not too far to his official residence.

All the principals confirmed the claim that there were occasional exhibitions with emphasis on clay-work. Usually, they were not formal exhibitions.

On teachers' complaint that they had too many classes, all of the principals agreed but explained that they had a shortage of art teachers and facilities for the subject as a whole and not just clay-work.

CHAPTER FIVESUMMARY, MAJOR FINDINGS, CONCLUSION ANDRECOMMENDATIONS5.1 SUMMARYINTRODUCTION

This chapter attempts to give a summary of the procedures and present the major findings of the study. It also outlines some recommendations based on the finding of the study.

Statement of Specific Objectives

The problems of this study was to survey the position of the use of traditional clay among the junior secondary school students in Zaria. Specific objectives were to determine:

1. types of clay available in Zaria;
2. how they can be procured for use in the school system;
3. the facilities available for preparing clay in the school system;
4. how well teachers in the school system can manage the use of clay; and
5. how the students can be involved in the use of clay in terms of time-table allocation, storage facilities, classroom space among others.

Description of Procedures

In the study, various methods were used to collect information on the extent to which traditional clay is used in the junior secondary school. These include the administration of questionnaire to a sample of form 3 art students in Zaria post-

primary schools and their art teachers' and the use of observational technique, and discussion in collecting information on the use of clay from teachers and principals. However, the researcher opines that information derived from observational study between the teachers and the students should not be absolutely accepted as what actually operated in classroom due to possible observer effect.

The questionnaire administered to the students and the teachers was developed by the researcher and scrutinized by the supervisor. The questionnaire administered to students contained information on students's interest in clay-work, the availability of clay material and facilities for processing clay, students experience in clay-moulding, and possible problems students face in clay-work lesson. The teachers' questionnaire sought information on their methods of teaching clay-work, the conditions under which they worked and the problems they encountered.

5.2 MAJOR - FINDINGS

(a) Types and qualities of clay in Zaria

It was found that majority of the art teachers indicated the secondary clay of different colours ranging from red to grey were available in Zaria. The white clay which is the primary clay was discovered in Kankara village near Zaria. And it was mentioned that the clay was in turn named after the town "Kankara".

(b) How they were procured for use

About 57% of the students indicated that the unavailability of clay was a serious impediment to clay-work in schools. This can be attributed to location of the soil and climatic conditions which makes digging of clay easier only during the rainy season. The strength of the junior secondary school students can hardly cope with clay digging and as such extra labour is to be borne by the students who see it as extra burden. On the other hand, Art teachers could be resourceful enough to provide clay for use in the school system. Ironically, red mud could be substituted for clay to teach clay work in the junior secondary school.

(c) Facilities available for preparing clay in the school system

Raw clay obtained from the earth is always mixed with other impurities such as stones, sand grasses among others. The separation method to remove these unwanted elements requires some processing tools such as sieve, basins, plaster bath and good working surface.

Unfortunately, 100% of the teachers revealed that all these working equipment are lacking in their schools. There were no containers available for storing the improvised clay nor improvised equipment for processing the clay such as pistol and mortar. Lack of relevant textbooks was also indicated as a hinderance to the use of clay at this level. The books are supposed to augment teachers efforts as well as prepare new teachers coming into the profession.

(d) How well the Art teachers in the schools can manage the use of clay

The major findings of the study showed that clay was not well managed in the secondary schools. The narrow path of drawing and painting constitutes the major content of art programmes in schools. Important art programmes such as moulding with clay, history and appreciations of art, art criticism, aesthetics, traditional and modern crafts were neglected.

Both art teachers and students faced several problems in moulding with clay. These problems include lack of vital materials for moulding, inadequately qualified teachers, shortage of art teachers and too many classes to teach by the art teachers. There was general discomfort in all art classes as all art lessons were held in regular classrooms. The time allocated to art was too short and it was impossible for them to organise external classes because of the institutions were mostly day schools.

Students attitudes remained favourable to clay activities as one aspects of art. The researcher also found that the method of assessing students in art was narrowed down to only the production aspect, while derogatory remarks were being made on each student considered to be performing below expectation in such assignment.

That moulding with clay could be made interesting in art education programmes in all post-primary schools in Zaria

rests solely on the supply of art teachers and the provision of essential requirements for both teachers and students use. A lot was being done with the provision of science laboratories and their equipment, but no simple art room has been built in many schools in Zaria. Based on the researcher's observation, the Art teachers were not resourceful enough. The researcher observed that art teachers can use improvised materials rather than ignore clay-work in the school programme.

(e) How the students can be involved in the use of clay in terms of time-table allocation storage facilities, classroom space among others

In the secondary school setting, the maximum time allocated as student/teacher contact session is one hour and twenty minutes, popularly tagged three periods. The use of clay however certainly deserves more than this 1.20 hours. 100% of the teachers indicated that a double period is inadequate for claywork. They argued that claywork requires all the three learning domains - (affective, cognitive and psychomotor). To develop and train these three learning domains in students needs more time than allotted.

A processed clay is to be handled with some care to avoid it getting contaminated. Consequently, there is need for a good art-room and stores for storing processed clay. The Result showed that 85.2% of the students indicated that there were no art rooms talkless of rooms for storing clay. In fact, most teachers used their offices as art-rooms which could not be an encouragement for

the students.

The ratio of teachers teaching clay-work in secondary schools showed that art teachers were overworked. Also, community resources, field-trips to potting or local craft centres where clay-work is produced, were hardly used by some teachers, and many teachers did not organise art exhibitions regularly. The finding also revealed that some of the art teachers were not qualified professionally to teach the subject.

5.3 CONCLUSION

From the above findings, it can be safely concluded that the use of clay in Junior secondary school is far from being efficient. If the objectives and the goals of including clay work in the school curriculum is to be achieved these deficiencies have to be addressed.

5.4 RECOMMENDATIONS

Based on the findings and conclusion of the study the following recommendations are made:-

1. The art teachers should endeavour to increase the moderate positive attitudes demonstrated by the students. This can be done by making clay-work lessons meaningful and practical to the students. The students should be actively involved and made to see the worth of learning clay-work aspect of the three-dimensional art. As teachers, they must not only provide an environment which affords the necessary direction

and substance of learning but they must also give the students the opportunity to develop self-direction, skills and attitudes commensurate with their experience and potential abilities. Teaching according to Brooks (1984) involves interactions between someone in the role of learner, with the explicit goal for changing the learners cognitive and or effective states. It is then proper that the learner be actively involved in the teaching-learning process.

- . Art teachers should endeavour to use a variety of teaching methods, not only to avoid boredom in the clay-work practical class but also because some techniques or strategies seem appropriate to achieve particular objectives. However, they should give room for the students' right to explore with materials which involves creativity.
- . Some basic text-books that deal with the processes and method of clay-work should be written by art educators and made available at moderate cost to students and teachers.
- . Clay work should be formally developed in our primary, post-primary, tertiary institutions as part of indigenous crafts. In order to supplement art teachers efforts, traditional artists and craftsmen should be employed on part-time basis to teach pupils and students the techniques of their trade. According to Sawa (1983), this recommendation is contained in the suggested Fine-Art programme for secondary education development at the National curriculum Development Workshop (1973). The workshop was organised by the Nigerian

Educational Research Council (NERC) part of the recommendation that reads that "It would be necessary that the work of the art teacher is supplemented by employing the services of traditional craftsmen and women" (With demonstrated ability in various crafts to teach such crafts).

5. Art teachers should organise exhibitions of students' works and invite parents to see their childrens' works, as this will consequently enlighten parents on their students creativity and what is conceived out of clay. Students should also be made to under take tours of museum or art gallery where clay-works are kept.
6. Principals should support the exploration of the school environment for clay and other materials for students' use.
7. The school should help in procuring facilities like basins, plaster bath and other necessary materials.
8. There is need for standard art studio in secondary schools.
9. The curriculum designers should look into possibilities of adjusting the allocated time without necessarily disrupting the school calendar.
10. Government should provide finance to purchase art materials for schools as well as recruit professional art teachers.

SUGGESTIONS FOR FURTHER RESEARCH

Since the study confined itself to only one local government area of the state, the researcher would suggest that similar investigation be carried out in other parts of the state with a view to comparing what obtains in these areas with the findings in

this study. On the other hand, an attempt should be made to compare the use of clay among students in the rural areas with those in the urban areas of the state to ascertain whether environmental factors affect the use of clay by students. It is hoped that the results of this findings will go a long way in inspiring those concerned to bring about necessary changes in clay-work in particular and art in general.

BIBLIOGRAPHY

Ahuwan-Counts et.al (1989): You can be a potter. Printed by Charles Counts; University of Maiduguri, Nigeria.

Akolo, J.B. (1982) Evaluation of an Arts and Crafts Programme in the Fourth and Fifth Years of Teachers' College in Ten States of Nigeria; Unpublished Ph.D Dissertation, Indiana State University.

Akolo, J.B. (1984) A Handbook for Art Teachers in Post-Primary Schools. Institute of Education, Ahmadu Bello University, Zaria.

Cardew, M. (1969) Pioneer Pottery; London. Longman Group Ltd.

Cardew M. (1971) Pioneer Pottery; New York: St. Martons Press.

Clark S. (1983) Pottery Throwing for individuals. Art and Activities (Art Education Magazine.) San Diego Publishers' Development Corporation, Camino de la Rana.

Clement et al (1983) Sculpture for Beginners. New-York; Harper and Row Publishers, New York.

Count, C. (1973) Pottery Workshop. New York: Macmillan Publishing Company. Inc.

Danga I. Deniel and Ali Anthony (1983) An Introduction to Research Methods and Statistics in Education and Social Sciences. University of Jos.

Fafunwa, A.B. (1974) History of Education in Nigeria. London: George Allen and Unwin Ltd., London.

Fatuyi, R.B. (1984) Lecture Notes on "Classroom Art Activities: Inventory Guide for Art Education Student". Department of Fine Arts, Ahmadu Bello University, Zaria.

Fatuyi, R.B. (1984) Art and Culture Evaluation (Selected Topic on Visual Learning) Institute of Education, Art and Printing Division, A.B.U., Zaria.

Federal Republic of Nigeria (1977) National Policy on Education Federal Government Printers.

Gonzales et al (1983) Motivating Expressions in Ceramics and Sculpture Arts and Arts Education Magazine. San-Diego: Publishers' Development Corporation. Camino de la Reina.

Green, D. (1972) Pottery: Materials and Techniques. London: Faber and Faber Ltd. The Trinity Press, Heatcoate, D. (1976) The Arts of the Hausa. World of Islam Festival Publishing Company Ltd.

Isichi, E. (1983) History of West Africa Since 1500: London; Macmillan.

Jefferson, L.E. (1974) The Decorative Arts of Africa. London: Collins St. James Palace.

Jonson, S. (1985) Introduction to the Traditional Art of the Yorubas. Journal of Cultural Studies, Ministry of Information, Ibadan.

Joseph, S. (1986) Terracotta Arts in the Northern Nigeria. Unpublished B.A. Fine Arts Project, Faculty of Creative Arts, University of Benin.

Kelinger, F.N. (1973) Foundations of Behavioral Research U.S.A: Holt, Rinehart, and Winston Inc. 2nd Edition.

Logan, L. (1980) Design for Creative Teaching. Canada: McGraw Hill Company.

Lowenfeld, V. and Brittain L.W. (1971) Creativity and Mental Growth New-York 5th edition, Macmillan Publishing Company Inc.

Medley and Mitzel (1963) Measuring Classroom Behaviour by Systematic Observation. In A.E.R.C. Handbook of Research in Teaching. Chicago: Rand McNally and Company.

Moris and Fitz-gibbon (1978) How to Present an Evaluation Report. London Sage Publication Beverly Hills.

Musa, J. (1986) Nok Sculptures. Unpublished B.Ed. Creative Arts Project, Faculty of Education, ABU, Zaria.

Ndagi, J.O. (1977) Essentials of Research Methodology for Nigerian Educators. Institute of Education, ABU, Zaria.

Norton (1972) Understanding Pottery Techniques. New-York: Studio Vista Publishers London and Wiking.

Ogunor (1984) Certificate Art for Junior and Senior Secondary Schools. University Press Plc., Ibadan.

Olaosebikan, W.A. (1982) Cultural and Creative Arts: A Course Book for teachers. Evans Brothers (Nigeria Publishers) Ltd., Ibadan.

Panlus (1974) Finding One's Way with Clay London: Pitman Publications.

Peter (1983) Pottery Among the Yoruba and Hausa Tribes of Africa Nigerian Magazine. Daily Times, Pub. Nig. Ltd., Lagos.

Shuaibu, M.J. (1995) Lecture Notes on Research Methods and

Education Statistics, Faculty of Education, ABU, Zaria.

Slyle, J. (1969) Pagon Juju Ceramics in Northern Nigerian Magazine
Daily Times Publishing Nig. Ltd., Lagos.

Smith, P. (1983) Figures with Feelings. Arts and Art Education Magazine. San Diego: Publishers' Development Corporation, Camino de le Reino.

Stanfeld, N.F. (1976) A Handbook of Art Teaching in Tropical Schools. Ibadan: 4th Impression, Evans Brothers (Nig.) Ltd. Ibadan.

Steiner, E. (1981) The Qualitative Art in Inquiry, The Journal of Aesthetic Education.

Wood, A. (1978) Teaching Art and Craft in Junior Schools Britain: Robert Macbehoser and Company Ltd.

APPENDIX "A"

DEPARTMENT OF FINE ARTS
AHMADU BELLO UNIVERSITY
ZARIA

Date:.....

The Principal,
School.....
.....

Dear Sir,

Amao-Awoqbade O.Y. PG ART EDUCATION STUDENT

The bearer is a post-graduate student in this Department. She is conducting a study on the use of clay in selected secondary schools in Zaria. Your school is one of those schools she has indicated her interest to carry out this study.

I would be grateful if you could grant her permission and necessary cooperation to conduct her research and administer her questionnaire on the students.

Yours faithfully,

(Signed)
Prof. R. B. FATUYI
(Supervisor)

APPENDIX "B"QUESTIONNAIRE FOR SELECTED JUNIOR SECONDARY III STUDENTSINTRODUCTION

Please read the following items carefully before responding to them. The aim is to investigate the use of clay among selected Junior Secondary School Art students in Zaria.

NAME: (Optional).....College.....

Age.....Sex.....Date.....

1. Do you mould with clay in your school? Yes/No
2. Does your school supply you clay material? Yes/No
3. Do you have facilities in the school for preparing clay?
Yes [] No []
4. Do your school have a place for storing clay? Yes []
No []
5. Do you enjoy your present art teacher's lessons in clay activities? Yes [] No []
6. Based on your experience in moulding with clay would you like to continue to study art? Yes [] No []
7. Do you enjoy moulding with clay as much as you enjoy other art activities? Yes [] No []
8. Do you frequently experience lack of clay in class?
Yes [] No []
9. Is there an art room in your school? Yes [] No []
10. Do you have art teachers in your school? Yes [] No []
11. Are you given sufficient time during art lessons?
Yes [] No []
12. Is your art teacher frequently or sometimes absent during art lessons? Yes [] No []
13. Are your clay moulding classes boring? Yes [] No []
14. Is clay work valuable to man? Yes [] No []

APPENDIX "C"INVENTORY FOR SELECTED JUNIOR SECONDARY
SCHOOL ART TEACHERS'

Please read the following items and respond to each accordingly. It will help me to carry out an investigation on the use of clay among selected Junior Secondary Schools in Zaria.

1. Name of School.....
2. Qualification.....
3. Area of Specialization.....
4. Teaching Experience.....
5. Total number of students in JSS III.....
6. Total number of Art Teachers in your school.....
7. Total number of periods Clay-work is taught in a term in your school.....
8. Method employed in assessing or grading your student clay work
.....
9. The source of your clay.....
10. Performance of students in modelling generally in your own opinion.....
11. Which of the methods do you employ in winning students' attention during clay-work lesson?.....
12. Should clay-work continue to feature in the JSS art curriculums.....
13. Factors affecting your students performance in clay modelling.....
 - (a)
 - (b)
 - (c)

14. Art Syllabus in your school contain clay
activities.....
.....

APPENDIX "D"
OBSERVATIONAL GUIDE FOR STUDYING THE CLASSROOM
SITUATION IN MOULDING LESSON
(CHECKLIST)

S/No.	List of Behaviour	Comment
1	Students are happy in class	
2	Teacher gives clear explanations	
3	Students are confident in work at hand	
4	Students held materials competently	
5	Teacher supervises students work	
6	Students wait on Teacher	
7	Teacher shouts students down	
8	Task at hand's difficult for students	
9	Teacher lack control over class	
10	Teacher uses clear art terms	
11	Students are uncomfortable	
12	Teacher gives individual attention	
13	Students lack materials and stay idle	
14	Students feel bound with work at hand	
15	Students receive encouragement from teacher.	

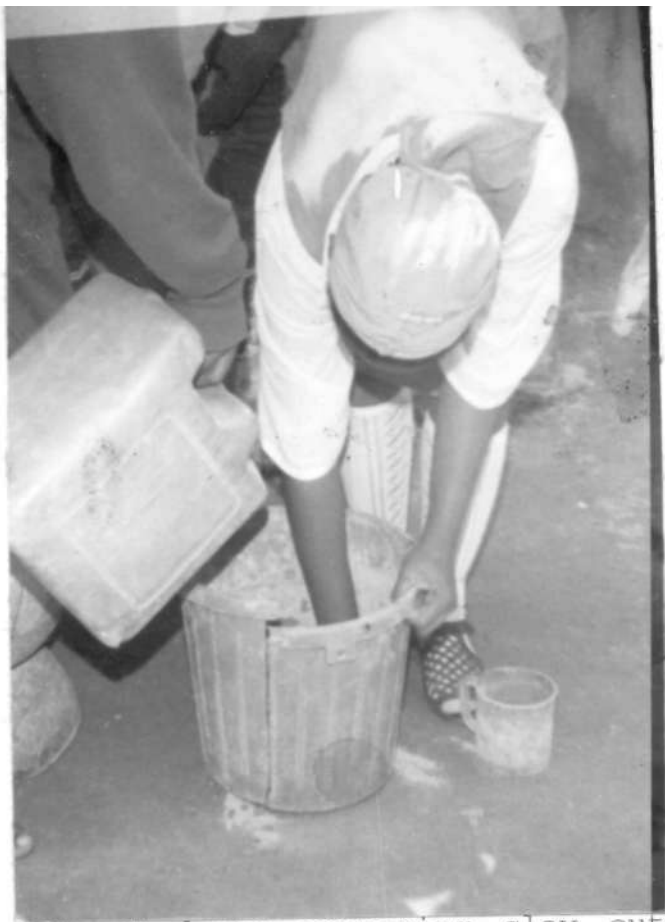


Plate 1 - J.S. III Students preparing clay outside the class-room in F.G.G.C. Zaria



Plate 2 - Shows inadequate art room being used for moulding Lesson.



Plate 3 - Illustrates the situation in Demonstration Secondary School.

No art room at all Normal classroom is used for moulding and other art lessons.



Plate 4 - F.G.G.C. JS III Students moulding with clay in a small store room.