USING SELECTED NATURAL FIBRES AS A SUPPORT FOR PICTURE MAKING

BY

SAMUEL BOADU

Bed (Art)

A Thesis submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology in partial fulfillment of the requirements of the degree of

MASTERS OF ARTS IN ART EDUCATION

Faculty of Art, College of Art and Social Sciences,

May 2009

DECLARATION

I here by declare that this submission is my own work towards the M.A and that to the best of my knowledge ,it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university except where due acknowledgement has been made in the text.

SAMUEL BOADU (PG9135306)	…….....	.....
Student Name & I D No.	Signature	Date

Certified BY:

DR P.OSEI-POKU	……..	.....
Supervisor's Name	Signature	Date

Certified By:

DR JOE ADU -AGYEM	……	.....….....
Head of Department's Name	Signature	Date

ACKNOWLEDGEMENTS

The completion of this project report would not have been a reality without the support from GOD Almighty , followed by the invaluable help received from many people especially my colleagues Mr Adu Tutu Felix,Mr Owusu Wireko and Adu Gyamfi Seth.

I will like to offer my heart felt thanks to my supervisor Dr. P. Osei-Opoku, a lecturer at the Department of Art Education,college of Art and social sciences,KNUST for his constructive criticisms,suggestions and untiring efforts in supervising the project. I also wish to thank Dr S. K. Amenuke for his advice.

The acknowledgement would be incomplete without extending my profound gratitude to Mr A. L.Bainn who typed the report .I say , I am very grateful .May the God Almighty bless all those who helped to make this project a reality.

MAY, 2009

S.B

TABLE OF CONTENTS

CHAPTER THREE;METHODOLOGY

LIST OF PLATES

LIST OF FIGURES

PAGE

ABSTRACT

This research has been undertaken to experiment in the use of natural fibre such as pawpaw leaves , teak tree bark, raffia, cabbage leaves, pineapple, corn shucks and militia toningii for picture making.

In achieving the objective the study sought to identify and describe the selected natural fibres which are located in the local environment. Except for the raffia which was purchased on the open market, all other fibres were obtain at no cost. Those were performed through experiments and processing of the fibres into support showing different textures. There were several steps involved in making the support including boiling, pounding, forming, couching, pressing, drying and pressing methods.

Natural fibre support were produce and tested with water based paint and pastel. The results have proved to be successful in terms of colour flow.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Fibre is a major component of plant-based painting support. It provides elasticity, flexibility and tensile strength. Fibrous plants have been used for ages to make items such as rope, basket, mats and brushes. These plants can be used to make support and they often serve as the sole ingredient in this painting material.

Besides, fibres are the basic materials used in the production of variety of artefacts. In Ghana apart from medical and industrial uses, fibres are generally used in the production of clothing and home furnishing. All over the world, natural and artificial fibres are used for making cloth, sheeting, drapery, upholstery, electrical insulation and wigs. Woven fibres and artefacts in particular are very expensive in our local market. One way to produce support at a relatively cheaper cost is to go beyond imported supports and get closer to one's natural environment and utilize material and ideas one is endowed with. It is through this that one can gain comparative advantage over his counterparts in other environment and achieve international fame. Natural fibres such as raffia, teak tree, pawpaw leaves, corn shucks, among others, are raw materials which are rare and fairly known as possible ingredients for picture making support.

1.2 Statement of the problem

Picture making works have been done extensively on canvasses, cartridge papers and cardboards. These are conventional materials which have been overused in the areas of picture making. Creativity in picture making can also be seen in the material being used. It is in the light of this that it became imperative for a project that sought to explore the

possibility of developing some readily available natural fibres as alternative material for picture making that can be used by visual art students in the Junior High and Senior High Schools.

1.3 Objectives

1. To identify, collect and describe natural fibres that are suitable for making support for picture making.

ii. To process the selected natural fibres for support for picture making.

iii. To produce works on the support with acrylics, poster colours, watercolour and pastel on a trial basis.

1.4 Research questions

1. Are there locally obtainable natural fibres for picture making support?
2. Can these natural fibres be processed into picture making support?
3. Can the support made from natural fibres take media such as acrylics, poster colour, water coloour and pastel?

1.5 Delimitation

This project was limited to the use of selected tree barks, leaves, and vegetables as raw materials.

1.6 Limitation

The research encountered some problems during the execution of the project. The major problem which was encountered was the scanty nature of pertinent literature on the subject.

Another problem was that the blender broke down several times which was taken for repairs and this caused a delay in the carrying out of the project.

1.7 Definition of terms

Canvas; a cotton or linen cloth stretched over a wooden frame as a surface upon which pictures are painted.

Couching; transferring a fleshy made sheet of support from the mould surface onto a felt.

Deckle; the frame that is held on top of the mould during sheet formation to contain the loose pulp and determine the size, shape and thickness of the sheet of support.

Felt; a woven wool fabric with a smooth brush surface onto which support counched.

Fibre; plant cell that impart elasticity, flexibility and tensile strength in plant. Fibre is most often found in the structural parts of a plant such as stalk stem and trunks.

G-clamp; is an equipment used for pressing the water out of the formed sheet and keeping the support straight and flat.

Ground; the coating of a surface on which a painting is to be done

Mould; the fundamental support on which a sheet of support is formed. The mould surface is a mesh screen held rigidly by a frame which acts as a sieve for support to be formed, catching the fibres on top and allowing the water to drain through.

Pigment; is an insoluble finely ground colouring material that can be used to colour pulp.

Priming; a preparatory treatment of a surface before painting is done. This treatment provided a good working surface so that the paint does not sink into it.

Pulp; the net mass of plant material that has been cooked and beaten from which support is made

1.8 Importance of the study

This research will create awareness among students and teachers in Junior High Schools to accept the challenges of using the fibres found in their local environment to produce works similar to what has been described in the report. The study will help teachers handling picture making in the various Junior High Schools to broaden their scope of knowledge through the use of the identified local natural plant fibres to produce supports that are cost effective. The project will serve as a basis for further enquiry into the use of natural fibre for producing support for picture making.

Curriculum developers will find this research useful and can employ it in picture making curriculum. The research will serve as a basis for further enquiry into the use of natural fibres for producing support for the local and international market to earn foreign exchange for national development.

Craft centres could disseminate the information obtained in this report and other existing areas located throughout the country can be encouraged to tap available resources in their locality to teach the unemployed to acquire skills in creating support from natural fibres. The finished sampled works could be exhibited at the department of Art Education, for students in the college to appreciate and also learn from them.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 History of fibre

The earliest fibre known was a sort of felted layer of animal or vegetable fibre frequently bound and strengthened by gum or paste. The combination of these materials according to Hayter (1962) was found in two natural sources, stout reeds that grew on the banks of River Nile and the Polynesian Tapa. The reed when soaked in water for a while could be flattened out on a stone and allowed to dry in the sun, after which the sheet of papyrus could be peeled off. The reed contained matted fibre and sufficient sticking material to hold it together. The Polynesian Tapa which is a more cloth-like sheet was made from the outer fibrous coating of species of palm tree. The Tapa was flattened and pounded in water to produce sheets on which images could be made. Like fibre obtained from the papyrus reed, the Tapa sheets were also highly durable.

Hayter states that from about the 8th century AD wooden felt was made by a primitive but effective method in China. Using a level surfaced turf, a rectangular portion was cut away and the hollow filled with wool that was soaked with water and trodden flat. When the water soaked into the ground the matted fibre was allowed to dry in the sun to form a sheet of felt. The same process was adopted when vegetable fibre was used instead of wool to make support. It is suggested by some authorities that fibre originated from this Chinese process that was developed during the T'ang dynasty. With the passage of time, this hollowing method was replaced with the process of pounding soaked inner barks of the mulberry tree into pulp and putting it into trays made of woven strips of bamboo cane. The woven strips were then covered with a film of pulp, allowing the water to drain away and leaving a sheet of fibre which when dry had sufficient strength to be handled.

Hanton J.F. (1971) states that, the earliest records on China showed that the fibre was first made at Lei-Yang in China in the year 105 AD. According to the author the process was

invented by T'sai Lun, an official of the court of Ho Ti, Emperor of Cathy, but because the fibre made was unsuitable for writing it was used for clothing and wrapping.

Harold Osborne (1975) explains that support from papyrus is found growing along the River Nile. He also states the invention of support to over 2000 years. According to the Osborne in 751 AD Muslims captured a Chinese support mill in Samarkand along with a lot of Chinese people to what is now western Turkistan and urged the captives to continue the craft as well as teach it to the Moors thus spreading Chinese support making. By 795 AD there was an established industry in Bagdad (Iraq), Spain and in other parts of Europe around 950 AD. Osborne mentions that the first support such as paper mill in America built near Philadelphia in 1690 by a William Rittenhouse.

Nicholas L.R (1798) invented a machine to make support (paper) in continuous rolls rather than in sheets. Through other inventions and changes that took place through the ages the first chemically produced support was made from wood pulp in England in 1854. Around that time Tilghman BC (1882) an American chemist found that the first wood could be separated by treating it with sulphric acid, a process that evolved into the main method of support production in 1882.

From the 'World Encyclopedia' (1995) it is seen that properties of support depends on various factors which include the type of pulp used, the amount of refining done on the pulp and the kind of paper-making machine used. Special additives and treatment given to the support during and after its manufacture also affect the finished product. These days, substitute materials based on support are used where specialist properties are required for particular products.

According to Mathlouthi (1994) new research in support making has lead to the discovery of tyvek, a new material that is a span-bounded high density polyethylene. It was made by Du Point and is being used in place of paper for special applications. It is white in appearance and has exceptional strength. It has no grain, does not shrink and expand with changes in humidity like ordinary paper. The Japanese are also developing mastic support

which is said to have the strength and folding endurance that is better than coated support of the same thickness.

2.2 Fibre

Marjory (1961) defines fibre as any product capable of being woven or otherwise made into fabric. Fibres thus refer to any raw material that is capable of undergoing weaving or processed into fabric. In this research fibres from corn shucks, pawpaw leaves tree barks and vegetable will be processed and into support.

The World Book Encyclopedia (1995) has also defined fibre as the raw materials for all fabric. In relation to this project the identified fibres can be considered as raw materials because they have the ability to be used in producing support from plant fibre.

2.3 Natural fibres

Natural fibres are cellulosic in nature and subtleties inherent in natural things. According to Waukelman (1961) natural fibres have qualities that contribute to their beauty such as absorbency, porosity to make them responsive to changes in temperature, humidity and comfort to be used in a variety of climate conditions.

Herbert H. (1998) also says natural fibres are the major components of making support, and plants provide elasticity, flexibility and tensile strength. Natural fibres are any hair like raw materials directly obtainable from animal, vegetable or mineral source and convertible into non woven fabric such as felt or paper or after spinning into yarns.

According to Sackey J. (2002) a natural fibre may be defined as an agglomeration of cell in which the diameter is negligible in comparison with the length. Although, nature bands in fibrous materials especially cellulosic types such as cotton, wood, grain and straw can be used for textiles products or other industrial purposes. In relation to this research the identified natural fibres are elastic, flexible and have tensile strength.

2.4 Collection of natural fibres

Herbert H. says that there are three main types of plant fibre used in making support, namely the bast fibre (inner bark) leaf fibre and grass fibre. She says plant for support can be obtained along the road side, river beds, swamps, garden, farms and train tracks. All the natural fibres used in this project were obtained around the environment of Juaben Senior Secondary School and some from the local market. A quantity of each type of natural fibre was collected and made for this project.

2.5 Preparation of natural fibres for support

For natural fibres to be efficaciously used it is more convenient for them to be prepared before it can be made into a support. Herbert H. explains that there are series of steps one must follow after collecting a plant fibre before one can make it into support. All plants must be cooked and beaten to obtain the fibrous materials that constitute support pulp. Fibre preparation is just one step in transforming plants into support but by varying the way one cooks or beats the fibre one can change the characteristics of the result into a support. Picton (1979) has stated that

In Madagascar and most parts of the Zaire basin (Congo Basin), the leaflet of

raffia is divided along its midribs and each half is stripped back separately.

While in West Africa on the other hand the leaflet is treated at once.

This is relevant since a similar task of separating the leaflet is practiced. Picton further states that in Zaire Basin (Congo Basin) special palm midribs are used on the dried raffia to split them into strands. The fibre is now virtually ready to be processed into support. However, in Madagascar the raffia fibre is stored and boiled in alkaline medium (a mixture of caustic soda and water) and then cooked to break down the fibre into a pulpable material. The idea of cooked or boiled fibres would be used in this research since this process will strengthen the fibre and make them durable for making support.

2.6 Support

According to the World Encyclopedia (1995),a support is the material artist use as foundation for their painting. On the other hand, Macpherson at www.macphersoncraft says; the term support refers to any material onto which painting is applied. Mayer (1991) also says that support is the structure on which the ground or the paint layer of paint is laid. Again, Gilbert (1998) defines support as the surface on which a work of two dimensional art is made for example canvas, paper or wood. Several media techniques and treatment have been employed over centuries to prepare the surface of support and condition them to appropriately receive the painting medium.

Praeger (1958) also has to say to seal the surface it is advisable to prime the canvas or panel intended for, an oil or tempera painting. Furthermore, Amenuke et al (1991) explain that it is the coating of the surface on which painting is done. For example gesso is use asa ground on a panel while sizing and priming are the ground on a canvas. The World Book Specific confirms that most support materials must be given one or more coats of a special kind of paint like material called a ground or support.

2.7 Picture making

Amenuke et al (1991) explain that it is the art of making a representation of images such as person object and scene for example painting, printing, collage, mosaic and photography

Sarpong GN (2005) says picture making is the art of arranging images or elements of design on a two dimensional surface intended to have aesthetic value. It could be made in different techniques or form. He continues to say it can be in the form of drawing, painting, collage, mosaic, montage, appliqué or printing.

Picture making includes drawing, painting, collage and mosaic .Works in the form of paintings, collages and mosaics are used as various ways of education. Picture making in

the pre-school and primary school affords children opportunity to exercise their wrists and overcome their nervousness in writing.

CHAPTER THREE

METHODOLOGY

3.1 Overview

Research design

Qualitative research method was used.

The descriptive and experimental methods were aadopted ro carry out the project. Series of experiments were made.This chapter will discuss the general processes of support from leaves, tree barks, and vegetable fibres, apart from using the descriptive method to describe the collection of natural fibre suitable for making support for picture making, it is also used to describe processes of producing support from natural fibres. Fibres such as leaves, tree barks and vegetable were experimented to produce painting support. There were attempts to find out which fibre, leaves, tree barks and vegetables were combined with militia toningii to produce good support.

Media such as acrylics, poster colours, water colour and pastel were used to produce works on the support on trial basis.

3.2 Identification of natural fibres used for the research.

Plants were found to be the main source of support. Besides, most plants can be different depending on how much fibre they provide as well as their quality. Every plant is unique on its own. Some plants yield excellent fibres while others do not. The fibres can be obtained from various parts of the plants such as barks, leaves and fruits. For this project leaves, barks and vegetables were used.

3.3 Collection of raw materials

All the plant materials were harvested and collected around the environment of Juaben Senior High School and KNUST campus. Some were obtained from the local market. Large quantities were produced through cutting and plucking during the day.

3.4 Cleaning of raw materials

Owing to the wind and dusty nature of our environment most of the leaves, tree barks, and vegetables were dusty and dirty when harvested. They were cleaned with rag and washed in water before they were soaked in plastic bucket of water over night for removal of the dirts.

3.5 Selected natural fibres used for the project.

3.5.1 The African Teak

The botanical name of African Teak is tectona grandis. The reason for the choice of teak is that it grows very well and its leaves are shed in the dry season. The project was indeed carried on in the rainy season where teak leaves were in abundance (Plate 1).

Plate1: Teak leaves

3.5.2 Pawpaw Leaves

The botanical name is triboba. It is a small tropical-looking tree. It is a fast growing plant, has beautiful green leaves, on a stalk of lighter shades of green (plate 2). Every part of the plant contains some whitish latex. It is common and easily obtainable.

Plate2: Pawpaw Leaves

3.5.3 The Raffia Palm

Its botanical name is Raphia. Raffia palm is a genus of twenty species of palms, native to tropical regions of Africa. Raffia fibres have been used especially in the area of textiles and construction. In our local environment, they are used for ropes, hats, shoes and mats. It was chosen because of membranes on the under side of each leave which have long thin fibres.

Plate 3 Raffia palm

3.5.4 Cabbage

Its botanical name is Brassica oleracea. It is herbaceous biennial and dicotyledonous flowering plant with leaves forming a characteristic compact cluster (Plate 4). It is a vegetable. The researcher after trying with the leaves, tree barks, there was the need to include vegetables. Cabbage was used since it is common and easily available.

Plate 4: Cabbage

3.5.5 Pineapple leaves

Its botanical name is Ananas sativus. Pineapple has strands inside the leaves (Plate 5). The strands found inside the leafy tops of the pineapple can be used for support. Leaves contain long stingy fibres. The strands of the fibre are putty when pulled apart easily. Pineapple is common in our environment and therefore the researcher could easily lay hands on.

Plate5: Pineapple Leaves

3.5.6 Militia Toningii

Its botanical name is militia. It is woody bast fibre. The bark is obtained by peeling from the tree (Plate 6). The bark shrinks back and it is easily peeled away from the woody core strip in the bark. It has a good fibre when green chlorophyll layer is removed and this made the researcher to select it for the project.

Plate6: Militia Toningii-Tree

3.5.7 Corn Shucks

Its botanical name is zea mays. Corn shuck is a leaf-like sheath which covers and protects maize cobs from external influence. Dry corn shucks are obtained when the matured corn is harvested (Plate 7). By making silt through the shucks with a sharp object ,the cobs are separated from the corns and the shucks. After this the cobs are broken away from the base of the shucks and then separated. This dry corn shuck has various browns leaves, made an obvious choice of this project.

Plate7: Corn Shucks

3.6 Tools

For support to be made by hand or machine the use of tools, and equipment is essential. The following were the required tools, and equipment which the researcher used.

3.7 Tools and equipment

Scissors- used for cutting materials into pieces.

Mould and Deckle- for the preparation of the support.

Felt-pounded fibre was spread on it.

Press Wooden Metal (G-Clamp)- used to squeeze out water from the support and make them flat.

Mortar and Pestle- used for pounding fibre.

Flat Surface Table- used for drying the support

Firewood- used for boiling the fibre,

Stick- used for stirring the fibre when boiling.

Silver Pot- for boiling the fibre.

Bucket- for fetching water.

Bowl of Water- for the immerse of the mould and deckle.

Pieces of Board- used to press the fibre.

Blender- for blending the fibre.

Cup- for fetching water

3.8 General procedure

There are several steps that were followed in making the support. The process involved boiling, cooking, pounding method, forming method, couching method, pressing method, drying and dry pressing.

3.8.1 Boiling method

Fire was set under a shady tree and used to cook the cabbage, teak bark, pawpaw leaves, corn shucks, raffia; pineapple leaves separately as well as militia toningii taking into consideration the quantities of the material used. To soften and speed up the cooking of the leaves of tree barks, about five tea-spoonfuls of soda ash were added to the raw material. For each material the average time of boiling was 1 hour 30 minutes which was enough for the leaves or barks to soften and were drained after boiling. (Plate 8)

Plate 8: Boiling of raw material

3.8.2 Pounding method

Mortar and pestle were used to pound the leaves or barks until fibres were loose (Plate 9). The pounded leaves or barks were blended with 3 cupfuls of militia toningii and each one was put in different containers.

Plate 9: Pounding Fibre

3.8.3 Forming process

After getting the pounded fibre ready, a bowl was filled with clean water, making sure the mould and the deckle were fixed together. They were immersed in the bowl of water. A handful of pulp was taken and evenly spread in the mould. During that time the mould allowed the pulp to flow evenly and was stirred in the mould. After a few seconds the mould of water allowed the water to drain through the mesh. When the pulp was too thin

more pulp was added until the desired thickness was obtained. The deckle was shock for the fibres to settle on the mesh screen as the water drains but do not shake for too long. If shaking continues, the fibre sheet will be damaged.

Plate 10: Forming Process

3.8.4 Couching method

This process involves transfer of the sheet of support from the mould onto the felt for fibre to be stuck onto the material used as a base for laying support. To obtain the best result, apply pressure to the back of the mould's edges and screen to ensure that the sheet transfers to the feet. A little, water will come up through the back of the mould.

Lift of the mould that is set down, peel underneath to see that the sheet has released, and remove the mould taking care not to drip on the newly formed sheet.

Plate 11a: Pressing the back of the mould and screen

Plate 11b: Lifting the mould

3.8.5 Pressing method

After piling up the support one more felt was placed on the top and immediately sent to G-clamp press .when piled was properly pressed under G-clamp to eliminate excess water. After some time it was observed that no water came from the piled up supports (Plate12).

Plate 12: Pressing wet support

3.8.6 Drying method

The next stage is the drying method. Here each support was gently packed and positioned in an orderly arrangement on a large table for them to dry and the process used natural ventilation which lasted for two days.

Plate 13: Drying of support

3.8.7 Dry pressing

Upon observing that some of the supports were wavy, bent and wrinkled after drying they were pressed again in the dry state under G-clamp pressing. In order to achieve straight even support they were neatly arranged on the board and placed on the G-clamp to press the support for two days. They appeared straight and flat when released.

3.9 Specific experiment

Apart from the description of how the supports were produced, this section deals with the individual raw materials in terms of how they were made to go through various processes into the finished stage. About two or three cups of militia toningii fibre were used to combine with other fibres to strengthen them. These were as follows:

3.9.1 Fibre: Pawpaw leaves and Militia Toningii.

Boiling: The pawpaw leaves were boiled for 20 minutes and militia toningii was cooked for 3 hours with 3 spoonfuls of caustic soda.

Pounding: The boiled pawpaw leaves were blended together with 2 cups of pounded toningii.

Sheet forming: The sheets were formed with a film of fibre on mesh screen using the mould and deckle.

Pressing: The sheets were pressed under G-clamp.

Drying: The sheets were dried in a room temperature for 24 hours and pressed on a G-clamp to straighten it.

Observation: The sheet was strong and firm and had a beautiful light green colour. (Fig. 1)

Fig 1: Sample of Support from Pawpaw Leaves

Problems: Pawpaw mixed with caustic soda produce unpleasant scent. For preparation of support, from the wet stage to the drying stage. The support kept on drying with unpleasant smell.

The unpleasant scent reduced drastically when it was dried in the sun. Support from the pawpaw leaves developed severe cracks during drying. The cracks destroyed the support for the first time. There was the need to add 2 cups of militia toningii which made it strong, firm and avoided cracks. After drying the support seemed to work more and more. It was found out that there was the need to press again to make the support flat and straight.

3.9.2 Fibre: Cabbage and Militia Toningii

Boiling: The cabbage was boiled for 30 minutes and the militia toningii was boiled for almost 3 hours with 3 teaspoonfuls of caustic soda.

Pounding: The boiled cabbage was blended together with 3 cups of pounded militia toningii.

Sheet forming: The sheets were formed with a film of fibre on the mesh screen using the mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water out from the support.

Drying: The sheet was dried in a room temperature for 24 hours and pressed in a G-clamp to straighten it.

Observation: The sheet was strong, firm and tough. It was light and also soft and smooth. It was brown colour (Fig. 2)

Fig 2: Sample of Support from Cabbage

Problems: Cabbage mixed with caustic soda produced unpleasant smell. The smell was reduced after drying in the sun. Support from the cabbage also developed cracks after drying. 3 cups of militia toningii was mixed to make it strong and firm to avoid cracks. After drying the support seemed to warp. It was pressed again to make it flat and straight.

3.9.3 Fibre: Teak Tree Bark and Militia Toningii

Boiling: The bark was boiled for 1 hour and the toningii was boiled for almost 3 hours with 5 teaspoonfuls of caustic soda.

Pounding: The boiling bark was blended together 2 cups of pounded militia toningii.

Sheet forming: The sheet was formed with a film of fibre on the screen, using the mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water out from the support.

Drying: The sheet was dried in a room temperature for 24 hours and press in a G-clamp to strengthen it.

Observation: The sheet was strong, firm and had a dark brown colour, the sheet warped after drying (Fig.3).

Fig 3. Sample of Support from Teak Tree Bark

Problems: Teak tree bark was very hard to pound. It took about 1 hour in pounding to the final stage before blending it. After drying the support warped. It was pressed again to make the support flat and straight.

3.9.4 Fibre: Militia Toninigii Tree Bark

Boiling: The bark was boiled for 3 hours with 5 teaspoonfuls of caustic soda.

Pounding: The boiled bark was pounded and blended.

Sheet forming: The sheet was formed with a film of fibre on the mesh screen using the mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water from the sheet.

Drying: The sheet was dried in a room temperature for 24 hours and pressed in a G-clamp press to strengthen it.

Observation; It is strong, hard and has dark yellow colour. It warped a little (Fig. 4).

Fig4. Sample of Support from Militia Toningii Tree Bark

Problems: Militia toningii tree bark was very hard and tough to pound. Pounding took 1 hour 15 minutes in pounding to the final stage. Warping was very low. It was made flat and straight after pressing again.

3.9.5 Fibre: Dry Corn Shucks and Toningii

Boiling: Dry corn shucks was boiled for 45 minutes and the toningii was boiled for almost 3 hours with 3 teaspoonfuls of caustic soda.

Pounding: The boiled corn shucks was blended together with 3 cups of pounded toningii.

Sheet forming: The sheet was formed with a film of fibre on the mesh screen using the mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water out of the sheet.

Drying: The sheet was dried in a room temperature for 24 hours and pressed in G-clamp press to strengthen it.

Observation: The sheet was strong, thick and yellow. There was slight warping. (Fig. 5)

Fig5. Sample of Support from Dry Corn Shucks

Problem: There was slight warping. It was made flat and straight after pressing again.

3.9.6 Fibre: Raffia and Toningii

Boiling: The raffia was boiled for 30 minutes and toningii was boiled for almost 3 hours with 5 teaspoonfuls of caustic soda.

Pounding: The boiled raffia was blended together with 2 cups of pounded toningii.

Sheet forming: The sheet was formed with a film of fibre on the mesh screen using mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water out of the sheet.

Drying; The sheet was dried in a room temperature for 24 hours and pressed to strengthen it.

Observation; The sheet was strong, thick and brown in colour. The warping was low (Fig.6)

Fig6. Sample of Support from Raffia

Problem: After pounding the pulp of the raffia was very hard blend. It broke down the blender. It was pounded to finest before blending again.

3.9.7 Fibre: <u>Pineapple Leaves and Militia Toningii</u>

Boiling: The pineapple was boiled for 1 hour and the toningii was boiled for almost 3 hours with a 3 teaspoonfuls of caustic soda.

Pounding: The boiled pineapple leave was pounded and the blended with a 2 cups of toningii.

Sheet forming: The sheet was formed with a film in the mesh screen using mould and deckle.

Pressing: The sheet was pressed under G-clamp to get excess water out of the sheet.

Drying: The sheet was dried in a room temperature for 24 hours and pressed to strengthen it.

Observation: The sheet was strong, hard, and dark brown in colour. The sheet warped after drying. (Fig. 7)

Fig7. Sample of Support from Pineapple Leaves

Problem: The warping of the support was very high after drying. It was made flat and straight after pressing it for two days.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter discusses the various findings of the supports. Some of the properties considered in the discussion of the main findings included, colour, texture and weight.

4.1.1 Pawpaw Leaves Support

The interesting thing about pawpaw support made from pawpaw leaves were various shades of natural green colour it exhibited. Naturally, the plant leaves were green in colour and become even lighter green after exposure to light. The diversity of shades of green that were achieved due to either over exposure or under exposure of the support to ventilation of sun light. The manipulation of support also created interesting and stimulating effect. Apart from manipulation of the pulp to create certain textures on the support at the damp stage, some of the textures were altered after the support was pressed. The support was pressed at semi dried stage; the support appeared to be soft and was easily ground. Pawpaw leaves mixed with militia toningii made the support to be strong and very tough to touch, it was light in weight. The surface of support seems to warp after complete dryness.

4.1.2 **Pre-Testing Suitability of Pigment (Paint) on support produced**

Supports produced were tested by some artists and students on trial basis for some months. The following pigment (paint) acrylics, poster colour, water colours and pastels were tested on the support. The supports were primed with emulsion and glue to make the surface smooth and workable before applying colours.

4.1.3 **Samples of picture on Pawpaw Leaves Support**

Poster colour, acrylics, water colour and oil pastel were applied on the support produced. Acrylics and poster colours were found to work very well on the support, but water colour and pastel looked very pale. This shows that water colour and pastel do not work well on the pawpaw leaves support.

Plate14: Acrylics work

Plate15:Poster colour work

Plate16:Water colour work

Plate17: Pastel Work

4.1.4 **Appreciation of Pastel work on pawpaw leaves support**

The theme of the work is a woman grinding pepper. The size of the work is 24 cm by 20 cm. pastel was gently and smoothly applied on the support. The woman is sitting on a stool grinding pepper in an earthen ware pot. Due to rough nature of the surface of the support, control of the medium was little difficult yet an excellent work was executed on the support. The support is receptive to acrylic paint.

A woman

Plate18: Grinding pepper

4.2.1 **Militia Toningii Support**

It is generally light brown in colour even though some traces of green spots were found on the support. It was noticed that colour of the support at the damp stage was brown but as the support dried completely it turned out to be grey or light brown.

The opacity of the toningii is low when a casual look is taken at it when it was lifted up against the sunlight; no traces of transparency were observed because of the thickness of the support. The texture created exhibited threadlike projections, creating variety of smooth and rough textures on the surface of the support. The traces of natural impurities can also be seen on the support giving clear indication that impurities can be gotten rid off in support. The support appeared to be heavy in weight because of its thickness. Interestingly, the researcher made a discovery that the pounded pulp exhibited a tougher appearance and heavy weight in comparison with the pulp that was ideally suited for drawing and painting.

4.2.2 Samples of pictures on Militia Toningii Support

Support made from militia toningii was tested with the following acrylics, poster colours water colour and pastel. Poster colours, acrylics and water colours were most appropriate for the support. The surface of the support seemed too smooth so the use of the pastel was difficult to control.

Plate 19: Pastel work

Plate 20: Water colour work

Plate 21: Acrylics work

Plate 22: Poster colour ork

4.2.3 **Appreciation of Poster colour work on militia toningii support**

The theme of this work is a musician. The size of the work is 24cm by 20cm. The man is wearing a hat. The man is playing a guitar. The background is painted light brown

and foreground is also painted dark brown. He is wearing blue dress. The work looks fresh and attractive on the support so it indicates that the medium is receptive to the support.

Plate 23: A Musician

4.3.1 **Corn Shucks Support**

Support from corn shucks gave a spongy effect. The dry nature of the corn shucks made it necessary for it to be cooked with soda ash for three hours before it was pounded. During the wet stage of the support after the first press it gave yellowish brown. The support appears dark brown in colour. Also, the particles of the support are heavy in thickness due to the amount or quantity of pulp used. The fibres were more visible and stringy.

From observation it is possible for the support to have more weight when the degree of refinement is less. Due to the thickness of the pulp after pressing at the wet stage the

support has more weight. The study of the corn shuck indicates that the strength of the fibre of the shucks reduced, when the fibre was not squeezed out tightly. Touching the support, it can easily be seen that it has a very tough surface. The rate of warping was low after drying. The smooth surface made it suitable for painting and drawing.

4.2.3 Samples of pictures on corn shucks support

Poster colour, acrylics, water colour and pastel were tested on the support. Corn shucks supports have spongy effect. This effect has created interesting textured surface which has enhanced the work. All the media were found to be very appropriate on the support. The quality of the works produced with colours made the work look professional.

Plate 24: Poster colour work

Plate 25: Acrylics work

Plate 26: Water colour work

Plate 27: Pastel work

4.3.3 **Appreciation of acrylic work on corn shucks support**

The theme of the work is a porter. The size of the work is 38cm by 22cm. the work was painted in acrylics. The work shows a girl holding a head pan ready to go for daily work. There are two empty pans beside her. Warm and cool colours were smoothly applied. The work depicts a porter who has come to the city to work. Acrylic paint was found to be appropriate on the support because it has achieved the desired purpose. It is also a decorative work.

Plate 28: A Porter

4.4.1 **Teak tree bark support**

Support from teak tree bark also gives high spongy effects. Support at the damp stage was lighter shade of green but as the support dried completely it turned to be grey. Due to the spongy nature of the support, it gave a rough texture after drying. After the support has been pressed at the wet stage the fibres are more visible showing network of lines. When

lifted against sunlight some small holes were observed in some parts of the support. Priming filled the small holes which made the support workable. Researcher observed that pounded pulp became tougher in appearance and heavy in weight. Teak tree support is very strong and firm after complete drying. Warping was not exhibited greatly. Priming made the support suitable for painting.

4.4.2 **Samples of pictures on teak tree bark support**

Painting media tested on the tree bark supports were acrylics, poster colours water colours and pastel. Poster colours and acrylics were good for the support. Water colour was also found to be good especially for washes. Pastel was not easy to be controlled because of the rough surface of the support.

Plate 29: Pastel work

Plate 30: Acrylic work

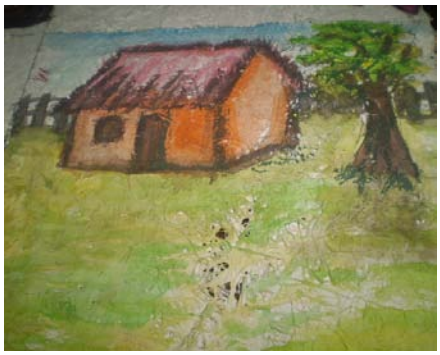

Plate 31: Water colour work

Plate 32: Poster colour work

4.4.3 **Appreciation of poster colour work on teak support**

Theme of the work is still life composition of vegetables. The size of the work is 24cm by 20cm. The colour was smoothly applied. The colours used to execute the vegetable have been made to look real. Warm colours have been used in the work because the vegetables seem too ripe. Poster colour is very appropriate on the support because the work executed on the support look beautiful and active. It can be used as wall decoration.

Plate 33: Still Life Composition of Vegetables

4.5.1 **Cabbage support**

It was noticed that the colour of the support of the cabbage at damp stage was green and as the support dried completely the green colour reduced and became grayish green. Some traces of green spots on the support were observed. Mixture of the cabbage and militia toningii made the support to be strong and firm. Support breaks easily at wet stage. The support becomes smooth when completely dried. Support is lighter in weight as compared with pawpaw leaves support. There were no traces of holes when observed against light. Cabbage support has smooth surface after drying.

A mixture of toningii and cabbage increased the thickness of the support after drying. Support was flat, warping was very low. Media applied on the surface had good effect.

4.5.2 **Samples of pictures on cabbage support**

Support made from cabbage was tested with the following media acrylics, poster colour, pastel and water colours. Poster colours, acrylics, water colours were most appropriate for the support. The surface of the support seemed too smooth so the use of pastel was difficult to control.

Plate 34: Pastel work

Plate 35: Water colour work

Plate 36: Acrylic work

Plate 37: Poster colour work

4.5.3 **Appreciation of acrylic work on cabbage support**

The theme of the work is a hen feeding in a tray. The size of the work is 19cm by 17cm. The hen is feeding in a tray. The medium was applied gently and smoothly on the support. Warm colours were used in the painting. Light yellowish green colour was used for both foreground and background. The work looks realistic and attractive. This shows that the medium is receptive to the support.

Plate38: A hen feeding in a tray

4.6.1 **Pineapple leaves support**

Pineapple leaves support is dark brown in colour. Some parts of the surface of the support appear darker and some parts lighter brown in colour. The fibre was heavy in thickness due to the quantity of the pulp used. The surface of the support is not smooth and completely flat. It is observed that it is possible for the support to have more weight because the degree of refinement is very little. The surface of the support appeared to be very rough and tough. The soda ash added some amount of strength at the cooking stage to make the pineapple fibre strong which was difficult to tear off. Due to the warping nature of the support, the surface appeared a bit undulating. The fibre has unique strength which can be used for painting and drawing.

4. 6.2 Samples of pictures on pineapple leaves support

Painting media tested on the support from pineapple leaves were poster colours, acrylics, water colours and pastel. Acrylics, poster colour water colours from the work produced were quite good for the support. The support was not receptive to acrylic colour.

Plate 39: Poster colour work

Plate 40: Acrylic work

Plate 41: Water colour work

Plate 42: Pastel work

4.6.3 **Appreciation of acrylics work on pineapple leaves support**

The theme of the work is a market scene. It is painting in acrylics. The work measures 28cm by 24cm. It shows Ghanaian women buying and selling in the market. The composition has six women and the arrangement of the figures and items in the work show perspective in the work. The colours were smoothly applied. Warm colours dominate in the composition which depicts a day in the afternoon.The work produced, showed that the teak support is receptive to acrylics paint. The work can be used for decoration.

Plate 43: A market scene

4.7.1 **Raffia support**

Raffia support is yellowish brown with some traces of cream. The texture produced also exhibited threadlike projection, creating a variety of roughness on the surface. Raffia support appeared to be heavy in weight, because the amount of pulp in it was big. Due to the thickness of the pulp, opacity of the support was quite high when lifted against sunlight.

4.7.2 **Samples of pictures on raffia support**

Acrylics, poster colour, water colour and pastel were tested on the support. The rough textured surface gives an interesting effect when the pigment (paint) is applied on it. Acrylics, water colour and poster colour were found to be very appropriate. Pastel was difficult to control because of the rough surface. (Plate 44 – 47)

Plate 44: Water colour work

Plate 45: Poster colour work

Plate 46: Acrylics work

Plate 47: Pastel work

4.7.3 **Appreciation of water colour work on raffia support**

The theme for the work is drummers; It is water colour work on raffia support. Water colour applied did not show complete characteristics of water colour. Two figures are playing drums. One with sticks in the hands is playing the big drums; one is playing a small drum in her arm pit. The support is not very receptive to the colour medium.

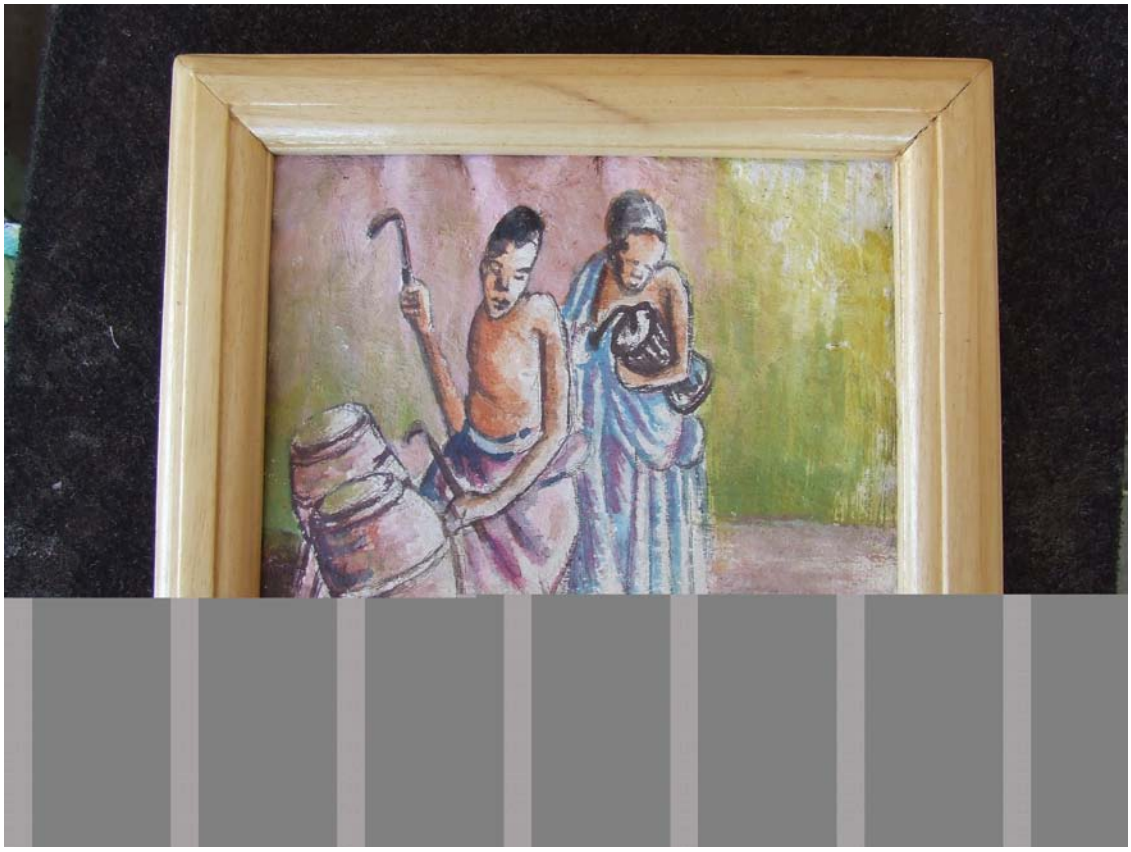

Plate 48: Drummers

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The process of making support in the project has been challenging yet successful. Right from the early stages through to the final stage, the researcher discovered a variety of interesting results.

1.Natural fibres will be easily used to produce supports.

2.Supports made from natural fibres have different colours.

3.The supports have different textures,some were smooth and rough.

4.The weight of the supports were different,some were heavy and others were light.

5. Some of the media can work well on the support and some do not have good effects on the support

5.2 Conclusions

After going through the procedure of production, the researcher believes it is time to utilize the natural resources we have around us, for the benefit of the nation.

Although the natural fibres were successful in making supports ,the textures of the natural fibre determines the suitability for a particular media.

5.3 Recommendations

1.The curriculum developers should encourage the use of raw materials for support in schools for students to produce their own supports as an alternative.

2.Visual arts teachers should take interest in teaching their students how to prepare their own support from natural fibres.

REFERENCES

1. Amenuke S.K, Dogbe B.K, Asare F.K, Baffoe R.K (1991) General Knowledge in Art, Ministry of Education, Accra.

2. Gilbert, R, (1998) Living with Art, McCraw Hill, New York.

3. Harold, O (1975) The Oxxford Companion to the Decoration, Claredon Press, London.

4. Hanlon, J.F, (1971) Handbook of Package Engineering McCraw Hill Book Company.

5. Hellen, H,(1998) Handmade Paper Offset Publishing.

6. Mathlouth, M, (1994) Food Package and Presentation, Blackle Academy Publishing.

7. Marjory, L, (1991) Introduction to Textiles Holt Reijebont and Winston Publishers, New York.

8. Mayer,R (1991) Dictionary of Art, Terms and Techniques Harper Publishers, Glassgow.

9. Praeger, F.A, (1958) The Praeger Picture Encyclopedia of Art, New York.

10. Wankelman, (1961) Hand book of Art and Craft Elementary Junior High School Teachers. WMC Brown Company Publishers, 135 South Locust Street.

11. Sackey, J, (2002) Introduction to Textiles Technology, Fibres to Yarns.

12. Sarpong, G.M, (2002) Picture Making for Senior High Schools (Unpublished).

13. World Book Encyclopedia (1995), World Book Inc, New York.