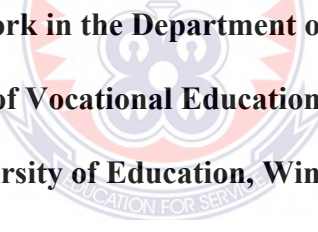


**INCORPORATION OF TRADITIONAL SYMBOLS OF UPPER EAST  
REGION INTO *FUGU* FABRICS**

**Fuseini AYAABA**

**190000457**

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**A Research Project work in the Department of Fashion Design and Textiles  
Education, Faculty of Vocational Education, submitted to the School of  
Graduate Studies, University of Education, Winneba in partial fulfilment of the  
requirements for award of Master of Philosophy in Fashion Design and Textiles  
degree.**

**AUGUST, 2022**

## DECLARATION

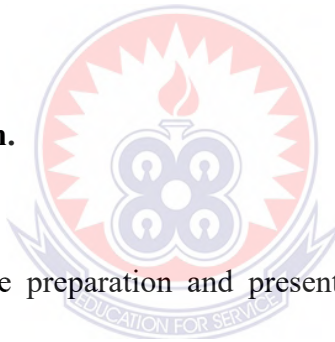
### Candidate's Declaration

I declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Name of Candidate: **FUSEINI AYAABA**

Signature ..... Date .....

### Supervisor's Declaration.



I hereby declare that, the preparation and presentation of this research work was supervised in accordance with the guidelines and regulations for supervision of research work laid down by the University of Education, Winneba.

Name of Supervisor: **DR. DANIEL KWABENA DANSO**

Signature ..... Date .....

## ACKNOWLEDGEMENTS

My utmost praise goes to Almighty Allah for the gift of life and good health bestowed on me. Then, I am very grateful to my supervisor, Dr. Daniel Kwabena Danso, for making time to guide and direct me to be able to complete this research work successfully. It is also prudent for me to make mention of all the lecturers in the department of Fashion Design and textiles for their patience and guidance. I also appreciate my parents, Mr and Mrs Ayaaba Ayamba for their support and well wishes that kept me moving. May the Almighty Allah Grant you good health and long life.



## **DEDICATION**

I sincerely dedicate this research work to my entire family especially my lovely wife Ayamba Nancy and to my children, Ayaaba Adelwin Abdul-Baaki, Ayaaba Awinpang Abdul-Jalil, Ayaaba Awinnongiti Fauzan and my lovely twin daughters Ayaaba Apuasaan Radiyatu and Ayaaba Apuasaanbil Mardiyatu



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## ABSTRACT

This research sought to produce fugu fabrics with traditional symbols of Upper East Region incorporated in them. The qualitative research method and the studio based research design were adopted for this research project. Both the purposive and the random sampling methods were employed in this research which made it possible to reach the respondents. Yarns of various colours such as brown, blue, white, yellow, green and cream are the main materials used in construction of the fugu fabrics in the plain weave structure with stripes. This was followed with the application of the traditional symbols through the use of a digital embroidery machine, after the symbols were transformed into embroidery stitches on the computer with CorelDraw. This research discovered that the people of Upper East Region have not documented their traditional symbols. They have totems that they used as symbols of identification. Another major finding of this research is that fugu fabrics contribute a lot to the cultural and socio-economic lives of the people as they use them for funerals, festivals and marriages and it also helps them earn good living through occupations such as weaving of the fabric, sewing and sale of smocks. In a nut shell, the modified *fugu* fabrics produced have rendered the fabrics more attractive and added more meaning and value to them. The researcher recommends that the various clans adopt the symbolic fugu fabrics for the performance of their traditional ceremonies. This will serve as a means of showcasing their rich culture and traditional symbols.

## CHAPTER ONE

### INTRODUCTION

#### 1.1. Background to the Study

There are quite a lot and varied textiles fabrics in Ghana. They are used for various purposes, such as for ordinary clothing, traditional ceremonies and for industrial activities. Martin (1990) and Sackey (2005) noted that textiles is believed to have originated from two words in Latin, “textilis” and “Texere” meaning “woven” and “to weave” respectively. Textiles is also referred to as a flexible substrate that consist of a network of fibres from nature or man-made (Wikipedia, 2019). The idea of weaving is said to have originated from the spider weaving its web (Wikipedia. Org, 2021). In simple terms early definitions pointed out that textiles is a fabric made from fibres that are interlaced alternately at right angles. The textiles industry in Ghana today, includes integrated mills, factories of horizontal weaving and the traditional manufacturing firms involved in twisting, weaving with the hand and processing of fabrics (GIPC 2017).

More often than not, the major textile activity actively practiced worldwide was weaving until research revealed other textile ativities such as bonding, braiding or plaiting, lace making, dyeing and printing.

The term textiles was originally used to mean woven fabrics until civilization expanded the scope of definition to cover any products from fibres, filaments or yarns, either natural or man-made. (Adu-Akwaboa,1994). Textiles have been part of humankind since the pre-historic era. Textile fabrics serve as protective covering to the human’s delicate skin (Adu-Akwaboa, 1994). Textiles also involves the

manufacture of items such as industrial machine belts, ropes, fishing nets, household items, medical materials, military clothes, uniforms and various clothing items.

The Textiles industry in Ghana manufactures a very wide variety of fabrics including the Northern fugu fabric that is manufactured specifically in Northern Ghana. This is a hand-woven fabric used for the production of mainly smocks.

There are quite a lot of traditional symbols found in the northern regions of Ghana that represent their beliefs, values and their traditions. There are various objects, symbols and totems that have their meanings being used by the different ethnic groups in Ghana's Upper East Region. A very popular instance is Sirigu pottery and art which deals with the use of images of animals, lines and geometric shapes in embellishing their pots and the interior and exterior of their homes. There are other symbols of authority that are used by traditional leaders in the Upper East Region. Some clans have also adopted certain animals as their totems and they adore them so much.

Again, the researcher seeks to unearth the cultural and socio-economic contribution of the smock fabric to the people of the Upper East Region as well as possible ways of improving the aesthetic quality of the fabric.

According to Arku, (2013) smock fabrics offer a great deal of employment opportunities to quite a lot of people as they are engaged in fibre production, spinning, the sale of yarns, weaving of fabrics, sewing and sales of finished garments. The fabric has been used for the construction of a variety of items such as bags, smocks, slit and kaba, casual shirts, straight dresses and many others. It is a narrow fabric that ranges between four inches to twelve inches wide. The four inches wide fabric is the one used for the sewing of smock. Whereas the wider fabric is joined together to form pieces of cloth used as wrappers and production of other garments. The fabric is



basically characterized by few stripes of varied widths which occupy the entire breadth of the fabric.

The fabric forms part of the culture of the people of Upper East Region as it is often used for traditional worship, covering mouths of deceased persons, used as dresses for special occasions like festivals and some of them made of certain colours worn with the believe to ward off the evil eye. It is similar to *kente* which is made by the people in southern Ghana, but *Kente* is a broad fabric that is up to fifty-two inches wide with motifs and traditional symbols on them.

## 1.2 Statement of the Problem

Unlike some African fabrics such as wax prints and *kente* cloth (of the Asantes) which are nicely decorated with motifs and Asante traditional symbols such as *Gye Nyame* and *Sankofa* among others, the *fugu* fabrics of the Northern regions of Ghana are characterized by just stripes, arranged in a rhythmic order. Clarke (1997) brings to the fore that various abstract designs on *kente* have a lot of symbolic names obtained from very important persons, wise sayings and significant social events. Where as the *fugu* fabrics are characterized by few coloured stripes that run longitudinally along its length. Raphael et al., (2017) affirmed this as they stated that “these coloured yarns are arranged in pattern (stripe) and woven in a warp-faced structure”.

In spite of the numerous significance of the traditional symbols in the lives of the people in the Upper East Region, it is problematic that they have not been propagated and preserved more through effective means like incorporating them in the *fugu* fabrics produced in the region for all the past years as found in other cloths like *kente* and *kete* fabrics of Ghana.

Furthermore, very little is heard about the various tribes in the north and their rich traditional symbols.

### **1.3 Purpose of the Study**

This research is to produce *fugu* fabrics with Upper East Region's traditional symbols as motifs into them in order to render them more attractive, give meaning and add value to them.

### **1.4 Objectives**

The objectives of the study are to:

1. discuss socio-economic and cultural relevance of 'fugu' fabrics to the indigenes of Upper East Region.
2. examine relevance of traditional symbols to the people of Upper East Region.
3. find out the extent to which traditional symbols of the Upper East Region of Ghana are incorporated in *fugu* fabrics.
4. produce *fugu* fabrics with traditional symbols of Upper East Region incorporated in them.

### **1.5. Research questions**

The questions for the study are:

1. What is the cultural and socio-economic relevance of *fugu* fabrics to the people of Upper East Region?
2. How relevant are traditional symbols to the indigenes in Upper East Region?
3. Are there *fugu* fabrics with traditional symbols of the people of Upper East Region incorporated in them?

4. How can traditional symbols of Upper East Region be incorporated in fugu fabrics?

### **1.6 Delimitations**

This research work involves the incorporation of traditional symbols of Upper East Region into fugu fabrics.

### **1.7 Significance**

Outcomes of the work would be helpful in several ways. The benefits are that It will unearth the extent to which the fugu fabric contributes to the cultural, social and economic advancement of the natives in Upper East Region.

Again, it will correct the notion that the *fugu* fabrics are used for constructing only traditional garments used during festivals and traditional ceremonies but make it very versatile for all other clothing items that can be worn on various occasions.

Another benefit of this project is that the incorporated traditional symbols will suggest unique names, improve usefulness, give symbolic names and add value to the *fugu* fabrics.

### **1.8. Limitations**

Though the project was successful, there were few setbacks that should be notted. One of them is that some of the respondents such as the chiefs and opinion leaders were not easily reachable. Some of them also asked for financial remunerations before they respond to the interview questions.

## 1.9 Definition of Terms

**Tradition:** Adomo, (1992 & 1993), states that Tradition comes from the Latin word *tradere*: meaning to hand over. It recalls the continuity of generations, what is handed over by one person to the other, even the heritage of handicraft.

**Tane:** Name of smock fabric by Frafras in Bolgatanga.

**Pien:** Name for smock fabric by Kusaasis is known as pien.

**Fugu:** This is the name given to the smock fabric by Dagombas

**Fibres:** These are fine hair-like structures either natural or man-made that are characterized by flexibility and a high length to width ratio. They are the smallest components of a textile product. Cotton is an example of a natural fibre, whereas polyester on the other hand is a manufactured fibre.

**Indigenous:** Ideas or concepts that pertain or belong to an ethnic group, a region or a country.

**Loom:** a machine that is used for weaving cloths and for production of tapestry.

**Smock:** A garment which is gathered at the waist having a loosely fitting lower part, and it is worn by men, women and children.

**Spinning:** The process of drawing and twisting together strands of fibers to make a continuous strand.

**Shuttle:** Part of a loom that carries the filling yarns.

**Weaving:** a fabric manufacturing technique which involves interlacing of two sets of yarns at right angles to form a uniform fleece.

**Warping:** Warping is defined as the parallel winding of yarn from cone or cheese package on to a warp beam.

**Yarn:** a continuous strand formed by spinning fibres together.

**Fugu:** Name given to smock in Mossi language.

**Batakari:** Means smock in Hausa language.

**Banaa:** Name for smock by Kusaasis.

**Dansica:** Means smock in Frafra language.

**Bingmbaa:** The name given to smock by Dagombas.

**Kusaug:** The name given to kusaasi land and its catchment areas.

**Piena:** plural of *pien* by kusaasis.

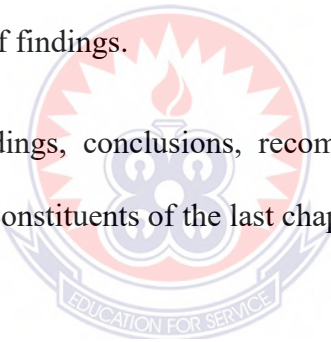


### **1.10 Organization of the Text**

The report is made up of six chapters. The first Chapter contains background, statement of problem, research questions and delimitations of the study. It also presents significance of the study, limitations, definition of terms and organization of the text.

The second chapter contains review of related literature. Whereas methodology of the study is contained in Chapter Three. The methodology describes the research design, the population, sample and sampling procedures, data gathering instruments and data collection procedures. Variables and methods of data analysis are also found in the third Chapter. Results of this study are presented in the fourth chapter. Then Chapter Five contains discussion of findings.

Finally, summary of findings, conclusions, recommendations and suggestions for further research form the constituents of the last chapter.



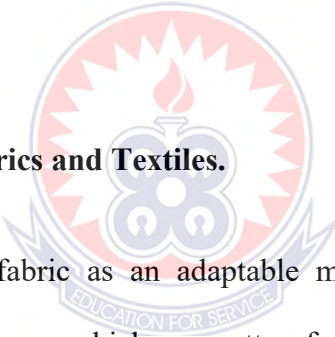
## CHAPTER TWO

### REVIEW OF RELATED LITERATURE.

#### 2.1. Introduction

This chapter makes recapitulation of literature related to Concepts of Textiles and fabric, the history of textiles in Ghana, traditional symbols, totems as symbols, history of smock in Ghana, the Northern Smock as well as *fugu* fabric which is used for constructing smock and the concepts of decorations made on fabrics. It also encompasses the various uses of *fugu*, and cultural and socio-economic contribution of textiles in Ghana and that of the of smock fabric to the people of the Upper East Region.

#### 2.2 The Concepts of Fabrics and Textiles.

The logo of the University of Education, Winneba, is a circular emblem. It features a central sunburst or starburst design in white and red. Below the sunburst is a stylized lamp or torch with a flame, also in white and red. The entire emblem is set against a light blue background. A banner at the bottom of the emblem contains the text "EDUCATION FOR SERVICE" in white capital letters.

Webster (2011) defines fabric as an adaptable material that is made by making interlocking network of yarns which are gotten from twisted strands of continuous wound lengths. She added that fabrics are then made through the cycles of weaving, stitching, meshing, tying, tating, felting or holding the strands together. In textiles the terms textile, fabric and material are related and utilized as equivalent words in the textile manufacturing process. (Wikipedia.org).

Akwaboa (1994), and Martin (1990) noticed that the word textiles is accepted to have started from two Latin words *textilis* and "texere, which means woven and to weave. The strength of weaving idea considered in textiles from the onset maybe the immediate connection of the idea to the Latin *texere*.

Sackey (2005) affirms this by saying that, early meanings of textiles highlight fabrics created by weaving. Since the word was gotten from a word in Latin “texere”, meaning to interlace. He further expresses that, throughout the long term, the word has gone through various powerful changes, bringing about a more extensive degree to typify creation of various filaments, yarn, assembling and improvement techniques.

As a rule, the significant textile manufacturing effectively rehearsed overall was weaving, until research uncovered others like printing and coloring. The word textile was initially used to mean woven fabrics; until human progress and modern transformation extended the extent of definition to cover any fabricated thing (item) from strands, fibres or yarns, either natural or man-made (Akwaboa,1994)

As indicated by Sackey (2002), Textiles is the craft of creating, enriching and working on the properties and worth of filaments, yarns and fabrics, to serve the necessities of man. The 21st Century Dictionary (1996) characterizes textiles as any fabric or substrate made by weaving or sewing. It further determined that, fibre or yarn, and others suitable for meshing into fabrics are likewise viewed as textiles. Adu-Akwaboa (1994) again hypothesized that, textiles might be characterized as the production of fabrics and every one of the substrates that can be formed or have been shaped into yarns or manufactured into fabric.

By these assertions, the main idea of fabrics that strikes a chord is the journey for dress.

Fabric as postulated by McIntyre & Daniel (1997) is an assembling cycle from strands, fibres or yarn, natural or man-made by interlacing. The focal point of this definition is somewhat restricted having considered different cycles of textiles fabricating that are considered to be fabric making, not really by joining. Staying



away from such disputable ideas of definition, in any case, Akrofi (2004) referred to the Compton Pictured Encyclopedia focusing on that, woven fabrics and textiles are called materials or basically, results of filaments and yarns which might be produced using any sort of fibre: regular like fleece, silk and cotton, or man-made like nylon and rayon.

By this, the applied meaning of textiles is extended past the creation or assembling method, rather the qualities of the item. However, it is not the extremely current sort of definition.

### **2.3. Historical Overview of Ghana's Textiles**

The creation of “mummy cloth” in Ghana could be dated from the era of the Gold Coast time. Kroese (1976) stipulates that, the fabrics were first brought by some Ashanti officers that were bequeathed to the Dutch chief by the then Asantehene to serve in the armed force within certain settlements of Indonesian territory. The warriors were drawn in by the tasteful characteristics of the Javanese prints and they carried some of the fabrics to the Gold Coast after their administration. The Ghanaian ladies were extremely captivated after seeing the fabrics and communicated unique interest in the prints which prompted the foundation of exchange joints among Ghana and Holland on which huge amounts were sent to Ghana.

Nina (2007) also wrote and indicated that printing with wax began in Java out of batiks of Javanese and was created through the use of manual method with huge improvement. Those in Europe produced batik in large volumes of this fabric which affected them. However modern production process was of a poorer standard that left scarcely visible disparities in the surface quality which resulted from the breakage of the lost wax method. Those blemishes on the contrary rejected by the Javanese then,

were profoundly valued in Western part of Africa in which the prints became famous and received more extensive patronage. This proposes the fact that, wax print is not native to Ghanaian Textiles.

The main unfamiliar materials in the Gold Coast preceding the Javanese prints were coloured textiles from Manchester. Manchester coloured fabrics did not contend with the wax Javanese prints and lost their prominence. At a point when the British understood the intense change, they looked for assorted means of enhancing their coloured wax prints and this prompted a creation of imitated printed wax. Tragically for them, they could not overcome the opposition once the Gold Coast ladies had the option to identify imitated printed wax out of authentic ones (Osei-Bonsu, 2001). He shows that, the word Dumas that famously was seen as genuine printed wax in Holland had been obtained through a Lebanese seller's name who initially sold printed wax to Ghanaian women at that time. The British in the long run assumed control over the exchange in one of her driving firms in Africa known as the United African Company (UAC). Presentation of these prints in Ghana, as per Osei-Bonsu, compelled Ghana to create its own wax prints adding that Ghanaian fabric designers, from the beginning, had the option to make designs, gave them names and send them to Holland to be printed and brought back to be purchased from Ghana.

Before independence in 1957, Ghana was given no spot by book writers as a nation that has a brighter future for the development of textiles. Large groups of some other African nations and Ghana were grouped by experts as those with no future possibilities for the creation of textiles. Creation and commodity figures for cotton in the late 1940 and mid 1950 were the proof whereupon this decision was enacted (Economic Bulletin for Africa, 1980).

Ten years later when various African nations had moved forward to creation as well as cotton exportation, Ghana did not form part of this race. Somewhere in the range of 1960 and 1970, cotton selling nations of Africa included Uganda Tanzania, Morocco, Burundi, Zaire, Algeria, Cameroon, Egypt, Mali, Niger, Ivory Coast, Chad, Madagascar, and Sudan.

Nonetheless, it was realized that Ghana traded 487, 343 pounds of cotton in 1925 up to 1926 from its southern British Trans-Volta Districts. Neighbourhood assortments of cotton referred to as *Deti Je*, *Kadeanyigha* and *Sonko* were found in Adaklu areas. A common assortment that was filled in the Hohoe and Kpando regions was kidney moulded cotton which was supplied later by a further developed Nigerian assortment known as *Ishan*. This assortment was pushed for the Northern domains of the state where it was least exposed to the assaults of vermin when compared with the Ghanaian assortments. Overall, every one of the assortments were exposed to bother assaults, and as the present circumstance was hard to be managed, production stopped. Endeavors to develop cotton in Northern locale for trade additionally fizzled as input of seed was much more not worthy than yield of seed (Department of Agriculture, 1969).

Akosombo Textiles Limited (ATL), established in 1967, was set up by a Company from China. Other two joint organizations of the state were additionally settled. They included Ghana Textile Printing Company which was established in 1969 and Juapong Textiles Limited (JTL) in 1968. Numerous manufactutring plants which includes fabric producing organizations sprung up in Ghana's capital, Accra. Among them includes; Zakour Textiles, Millet Textiles Corporation, Freedom Textiles, Tejtex and Loyalty. Textiles business in Ghana flourished during the 1970s and there was no

question that, in spite of the way that the textile business relied upon imported unrefined materials, the business was made to become one of the main useful areas within the nation (MOTI, 1973).

Manu (1994) insists that advancement of textile industries was entirely quick, to the point that, not exactly a time of its manufacturing, the organizations had the option to supply the majority of the country's textiles requirements. He added that, in August, 1975, the government restricted the importation of textile substrates, woven textile substrates, shirting materials and ladies textiles, fully bent on securing the recently established textiles firms.

#### **2.4. Emergence of Textiles Industries in Ghana**

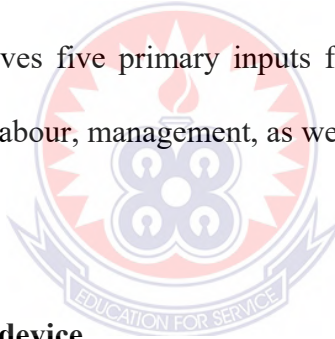
According to Comanor (2001), "An industry refers to a number of businesses which produce a similar item or provide similar services". Industry may also refer to all businesses together. The Encyclopedia Britannica (2008) describes an industry as a group of production entities or set-ups that manufacture or supply goods, services, or are sources of income. Examples are automobile industry, banking industry, among others and are generally classified as primary, secondary or tertiary.

From these explanations of an industry, it can be deduced that an industry is a collection of entities which produce goods or render services directed at an end-user. The textile industry set up in the Ghanaian communities however, provides similar services: that is producing for clothing satisfaction, and is thus qualified to be classified as industry. However, it falls within the secondary category of industries.

The indigenous textile industries of Ghana comprise of three set-ups and include: The Weaving Industry, The Printing Industry and The Dyeing Industry. These industries work hand in hand to come up with the desired textile goods.

Akrofi (2004) asserts that the textile industry of Ghana transforms raw cotton into yarns which are in turn fabricated into cloths. Others like the printing and dyeing industries use locally extracted dyes to produce cloth like *kuntunkuni*, *birisi* and *kobene* used mostly for funeral occasions.

Industry however, thrives on the productive resources or inputs. Industry experts stress that, the magnitude and level of output depends on the amount and quality of the inputs and how well a manufacturer uses them. According to Akrofi (2004), the success of a set-up involves five primary inputs for manufacturing. These include; natural resource, capital, labour, management, as well as technological resources.



## **2.5. The Hand Weaving device**

The loom is the most important and vital equipment used in the weaving of *fugu* fabrics. The term "loom" originated from an old English word *geloma*, formed from *ge* and *loma*, which is of unknown origin; it means a utensil, tool, or machine of any kind. In 1404 it was used to mean a machine that aids interlacing yarns into cloth. (Onlineetymology Dictionary). By 1838, the term *geloma* became the meaning of a machine used for weaving sets of yarns in order to form a fabric. Hand weaving is traditional method of weaving since it was known at the beginning of fabric production to date. This involves the use of the hands to throw the needle to and fro

across the width of the fabric, a process known as interlacing. There are various types of looms used in fabric construction. Some of them are outlined below.

### **2.5.1 Types of Hand Weaving Looms**

The olden day looms were made of wood, ropes and threads used in weaving the traditional smock fabrics. But due to advancement in technology there are a variety of modern looms that are now used to manufacture various types of fabric in very large quantities. Lartey, (2018) opines that looms come in sizes and forms. These include the shuttle-less, air jet, water jet, narrow and broad loom among others. She reveals that Hatch (1993), points to the fact that the shuttle-less is replaced by a discrete length of yarn taken from an external supply package that passes through a shed at the appropriate time in the weaving cycle. Lartey (2018) added that Hatch (1993) further described other looms such as Rapier looms that uses rapier, a rod or a steel tape, to carry woof yarns through the shed from a stationary yarn package at one end of the loom. This presupposes the width of the fabric that is to be produced.

Another Type of loom is Air-jet that uses a jet of air to carry the picks through the shed (Ross & Adedze, 1998) cited by Lartey (2018).

She went further by saying that the initial propulsive force is provided by a main nozzle with the electronically controlled relay nozzles which provide additional booster jets to carry the yarn farther.

The water-jet also uses a higher-pressure jet of liquid to carry the woof threads through the shed. The picks yarns are pulled from a stationary package at the side of the loom, it enters measuring drums and goes out of a guide to a water nozzle in which a jet of water carries it through a shed after the woof are beaten-up. Woof

streaks in fabrics are not common owing to little tension on the filling threads during interlacing. The above described looms are faster than the locally made looms that are operated manually (Lartey, 2018). The narrow loom is associated with the north which is used for the construction of fabrics that are smaller in width, called strip fabrics. Some of the manual looms are outlined below.

### **The Backstrap Loom**

This is a basic loom created by old civilizations that is as yet utilized in many nations at present. In this loom the warp is tied around an article which doesn't continue toward one side then the one weaving is on the opposite end. The weavers weight keeps up with the warp while weaving. (Handwovenmagazine.com). A sample is shown in Plate 2.1.



**Plate 2.1. The Backstrap loom. Source: handwovenmagazine.com (2021)**



## **Tapestry Loom**

This is one of the simplest types of looms. It is known as the frame loom. This can not create a shed for the weft to pass through, so a tapestry that is created with frame loom is in relation to the size of the frame. However, some larger tapestry looms types contain lengthy warp yarns which offer means of making shed. (Handwovenmagazine.com). This is shown in plate 2.2.



**Plate 2.2 Tapestry loom. Source: handwovenmagazine.com (2021)**

## **Inkle Loom**

The inkle loom is used for weaving narrow strip fabrics like wicks and cords. This type of loom is portable and ideal for beginners, weavers who are experienced also use them in weaving complex fabric patterns. (Handwovenmagazine.com). Plate 2.3 depicts an inkle loom.





**Plate 2.3. Inkle Loom. Source: [handwovenmagazine.com](http://handwovenmagazine.com) (2021)**

### **Rigid Heddle Loom**

This is also ideal for learners. Also, it makes room for the creation of patterns by experienced weavers through manipulation of the warp and weft. With one rigid heddle, it can be used for two-shaft weaving using yarns that are thicker than those used by shaft looms. When another heddle is added, the person weaving can use thinner yarns and weave more intricate patterns using pick-up sticks and hand manipulation techniques. Rigid-heddle looms are portable. They can be used with or without a stand. (Handwovenmagazine.com). A sample picture of the rigid heddle loom is shown in Plate 2.4.



**Plate2.4. Rigid heddle loom. Source: [handwovenmagazine.com](http://handwovenmagazine.com) (2021)**

### **Table Loom**

This kind of loom is more modest and more compact than a story loom, yet more perplexing than the other little weaving machines. They are meant to be used on top of tables or on a stand. Whereas there are some table looms in excess of eight shafts, the most well-known ones typically have either four or eight. (Handwovenmagazine.com)



**Plate 2.5. Table loom. Source: handwovenmagazine.com (2021)**

### **Floor Loom.**

This is one of the biggest types of home weaving looms. But some of them can be folded to ease some space. A story loom can be used to deliver longer and more extensive pieces of fabric, home cloths, embellishments, and carpets. Floor looms by and large have either four or eight shafts. Yet they could have more than eight shafts. They could likewise be electrically constrained by a dobby which raises then brings the heddles down and make sheds.



**Plate 2.6. Floor loom. Source: [handwovenmagazine.com](http://handwovenmagazine.com) (2021)**

## **2.6 The Concept of Weaving**

Amsden (1991), defines weaving as the process of interlacing twines, long, slender and flexible, that are commonly plant or animal fibres to form a single fabric. He added that it is a process which began by birds in their nest building which was continued by primitive man in his crude clothing and basketry. This was adapted by people of rudimentary civilization and finally in this modern era to the power loom. In plate 2.7 is an image showing weaving on a handloom during the 1830s.



**Plate 2.7. Weaving on an 1830 handloom.  
Source: [Museum Het Leids Wevershuis](http://Museum Het Leids Wevershuis), (2021)**

Weaving is done by way of intersecting the warp yarns with the crosswise yarns that are thrown across a shed of warp yarns thereby forming interlacing with each other, that which is woven (online etymology Dictionary, 2021).

## 2.7 Process of Weaving Textile Fabrics

The loom is composed of major parts which include: the ends beam, shuttle, Heddles, harnesses or shafts, take-up roll and reed. Processing of yarn in the loom includes creating shed, picking, battening to the fell of cloth and taking-up operations. These are the major motions in the weaving operation.

### Shedding

This process involves raising of part of the ends yarns to form an opening, in which the picks yarn, contained in the shuttle can be passed through, this forms the weave. But on the modern loom, simple and more refined shedding operations are spontaneously carried out by the heddle or heald frame, also referred to as harness. It is a rectangular frame on which a series of wires, termed as heddles or healds are attached. (wikipedia.org). The threads are pulled through the eyes of the heddles, which hang vertically from the harnesses. The pattern of weave indicates which harness controls which warp yarns, and the number of harnesses used depends on the complexity of the weave. Dobbies and a Jacquard Head are the common methods of controlling the heddles.

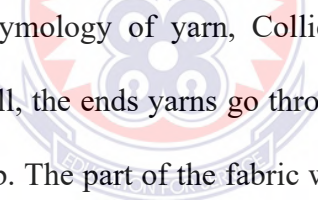


**Plate 2.8. Shuttles, source: wikipedia.org (2021)**

### **Picking.**

With this, the harnesses raise the heddles, that in turn raises the ends yarns, and a shed is created and the picks yarn is inserted through the shed by a small device carrying the woof yarn known as shuttle. The shuttle is normally pointed at both ends to allow passage of the woofs through the shed. In a traditional shuttle loom, the filling yarn is wound onto a quill, which in turn is mounted in the shuttle. The filling yarn is passed through a hole that is created in the shuttle as it moves across the loom. When the shuttle crosses from side to side of the loom once, it is referred to as one pick. As the shuttle moves back and forth across the shed, it interlaces a self-neatened edge, called selvage, on both sides of the fabric which prevents fraying.

### **Battening**



As cited in the online etymology of yarn, Collier, (1970) states that, within the heddles and the take-up roll, the ends yarns go through another frame known as reed. This part looks like a comb. The part of the fabric which has been formed already but not yet rolled up on the take-up roll is called the fell of the fabric. After the shuttle moves across the loom laying down the woof yarn, the weaver uses the reed to press (or batten) each filling yarn against the fabric's fell. Speeds of about 150 to 160 picks per minute can be operated on conventional shuttle looms.

There are two secondary motions, taking up is the process of winding the woven fabric on to a cloth bean. Because with each weaving operation of the newly constructed fabric must be wound on a cloth beam. Then the warp yarns must be let off from the warp beams at the same time. A tertiary motion known as filling stop motion is required so as to make the weaving process fully automatic. It automatically breaks the loom when any of the filling yarns cuts. (Collier, 1970).

## 2.8. The Fugu Fabric

Ulzen-Appiah, (1998) stated that traditional textiles are normally made on narrow traditional looms. She added that a village known as Bonwire in the Ashanti Region is noted as the origin of *kente*, a hand-woven fabric. This fabric was strictly made for the king of Ashantis and members of the royal family. It is composed of cotton and linen yarns. Though *kente* is generally used as a fashion fabric, some selected designs and colours are a preserve for the king. It is also said that a type of hand-woven cloth is *kete*, meaning open and close, originated from Agotime in the Volta Region.

The fugu fabric which is also hand-woven and is narrow strip is usually called strip fabric. The fabric is made up of combination of coloured and uncoloured yarns of cotton. Metallic yarns are also sometimes used for weaving. The strip fugu fabrics are sewn together by hand or with sewing machine into the smock dress, consequently giving the smock a plaid appearance.

The cotton fabric is made by the process of spinning cotton fibres into strands by drawing and twisting. These continuous strands are stretched and coloured with various colourants. They are then dried on a drying line for a period of time. Arku (2013). Earlier, hand twisted yarns were used yet their lower production rate has necessitated the use of machine spun yarns in the production of fugu fabrics. In order to achieve the hairy and heavy smock fabric effect made by the reliance on handtwisted threads, weavers used plied yarns or combine two or more strands of threads in weaving the fugu fabric. It brings about added weight to the fabric and ensures evenness as compared to the use of hand twisted threads. Moreover, most indigenes of Upper East Region cherish and consider smocks woven with hand twisted threads for its authenticity and uniqueness. Visual examination of fugu fabrics



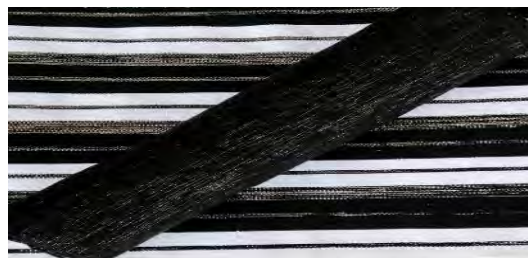
made from handtwisted threads indicates a fuzzier surface quality and a pattern of tiny holes' surface appearance. (Osuanya & Amissah, 2015).

## **2.9 Types of fugu Fabric Weaves in Upper East Region**

There are two main weaves of *fugu* fabrics in the Upper East Region. They are indigenous and contemporary weave structures. These weaves are outlined as follows.

### **2.9.1 Indigenous fugu fabric Weaves**

According to Raphael, Howard and Asinyo, (2017), *fugu* fabric weaves in Bolgatanga, the regional capital of Upper East Region, are mostly made of indigenous colours like red, black, white and blue. The use of red colour in weaving the cloths has a greater influence in the name given to the fabric. They added that, Luke (2009) attests to that as he said red and black colours determine the names of *fugu* fabrics in the Northern Regions. These colours as used in weaving the fabric give symbolic meanings to the fabrics. It is common knowledge that, white and black coloured fabric is said to be a protective fabric. Black and white striped fabric is also worn as a dress when sacrificing to the gods among others. In pate 2.9 are samples of white and black smock fabrics.



**Plate 2.9: White and black fugu fabrics. Source: [www.istock.com](http://www.istock.com) (2021)**

It has been known earlier that smock as a traditional dress was brought to limelight as an indigenous dress of Africans when it was worn by our first president (Dr. Kwame Nkrumah) as well as his fellow freedom fighters when they declared Ghana as an

independent nation at the Polo Grounds in the 1957. The fugu fabric weaves were also displayed during various national and international gatherings participated by him. Essel and Opoku-Mensah (2014), acknowledges that smock was projected to the extent that it was largely cherished by most people in the country as a dress of the nation. This consequently boosted smock weaving as an economic venture for weavers in the northern sector of Ghana and some weavers in the southern part of the country too as they produce the weaves for smock production.

Among the various tribes in the north with varied dialects, the smock dress is commonly known and called locally as fugu or batakari. The smock fabrics are traditionally made of cotton threads with certain colours such as black, blue, indigo, red, and white that have different values (Frimpong & Asinyo, 2013). Sackey (1995) asserts that the various colour schemes were gotten through the process of colouring yarns of cotton using vegetable dyes. This dyeing technique is still employed by some weavers in some parts of the Northern regions, specifically Daboya. But weavers in recent times now use synthetic dyes in colouring the yarns. Now ready-made yarns are available at the market where weavers easily access for constructing the smock fabric. These colours come in various shades of orange, yellow, green, pink, purple, and others to produce colourful fugu fabric weaves. The dyed threads are arranged in different patterns known as stripes and interlaced in a warp-faced structure that have symbolic meanings that are ideal for events like festivals, funerals, marriage rites, offering of libation and many others. Due to this, the smock weavers put in a lot of energy and skills in designing very colourful weave patterns in the warp while considering the symbolic meanings and aesthetic value owing to the idea that the filling yarns are embedded inside the fabric. However, this style of weaving has changed as weavers in recent times have decided to expose some parts of the filling



yarns as a means of decoration to add an extent of adornment to the woven fabric, thereby improving its value. What a cloth and print symbolize is one of the most significant features of African culture (Howard, Sarpong & Amankwah, 2012). Adding more, they are of the view that the indigenous people are very much appreciative of beauty and symbolic meanings on their outfits. They exhibited this phenomenon in the colourful fugu fabric and the garment known as the northern smock of Ghana. A look into the history of smock has it that the smock was a preserve of the people of the Northern decent. This notwithstanding, Akwaboa (1976) postulates that textile production in Northern Ghana focused on the Lobi, Moshie, Kokomba, Dagomba, Gonja and the Mamprusi. However, it has been noted that Kusaasis, Frafras and Kasenas of the Upper East Region have also established a strong tradition in the production of indigenous textiles. The fabrics that were manufactured by the Frafras are some how distinct from the other ethnic groups in terms of the loom structure, smock weave to the sewn garment (Raphael, Ebenezer & Benjamin, 2017)

The study of the smock in northern Ghana reveals the philosophy in the names and the beauty of the weaves. The types of smocks and the aesthetics that have been identified has revealed the long heritage of the people of Northern Ghana that has been communicated to the whole world (Acquaah, Amissah & Yankson, 2017). The smock has been produced to reflect our social customs, culture and tradition. This has made the smock weavers to produce weaves with symbolic representations that indicate a traditional event or myth. The design patterns, names and embroidery decorations of smocks produced by the Dagombas in Northern Region were established by Essel and Amissah (2015). Luke (2009) also observed the titles given

to some smock weaves produced in Northern Ghana. The type of coloured yarn used for weaving influenced the names of the fabric.

### **2.9.2 Contemporary Fugu fabric Weaves**

The idea of symbolization in Africa which has been eroding very fast has an impact on African prints (Howard et al., 2012). They realized that it has impacted immensely on modern fugu fabric weaves in Bolgatanga. The fugu fabrics seen in recent times have very little or no symbolic meanings (Raphael, Howard & Asinyo, 2017). Their survey revealed that the colours on the smock fabric changed from the indigenous colours to brighter and sophisticated ones purposely for adorning the wearers. Also, the colours of indigenous smock weaves are made of narrow stripes and the fabric being two and half to four inches wide. But the contemporary fabric is wider ranging from six to twelve inches. These are used in the construction of other garments other than the traditional smock. Plates 2.10 and 2.11 show fugu fabric weavers at work and Plates 2.12 and 2.13 are samples of fugu fabrics. Plates 2.14 and 2.15 also presents male and female smocks in fugu fabrics. Slit and kaba, batakari and jumpers are displayed in Plates 2.16, 2.17 and 2.18 respectively.



**Plate 2.10. A weaver in the process of warping.**  
**Source: Researcher's field work. (2021)**



**Plate 2.11. A weaver in the process of weaving *fugu*. (2021)  
Source: Researcher's field work**



**Plate 2.12. Samples of smock fabric. Source: Researcher's field work (2021)**



**Plate 2.13. Samples of Northern *fugu* fabrics. Source: Facebook.com. (2021)**





**Plate 2.14. Samples of male's smock. 92021)  
Source: www.facebook.com.**



**Plate 2.15. Samples of female's smock. Source: www.facebook.com (2021)**



**Plate 2.16. Samples of slit and kaba. Source: www.facebook.com. (2021)**



**Plate 2.17. Sample pictures of batakari. Source: [www.facebook.com](http://www.facebook.com) (2021)**



**Plate 2.18. Samples of Jumpers. Source: researcher's field work. (2021)**

## **2.10 Designs and Symbols on Textile Fabrics**

Various abstract designs on *kente* have a lot of symbolic names obtained from very important persons, wise sayings and significant social events (Clarke, 1997). He added by saying that Textile fabrics symbolize fertility when they are worn by women and also used to fasten their children securely at their backs. Thus, the colours used as well as the way they are combined suggest a particular idea thereby making it especially potent in a certain direction. For instance, traditionalists in the Yoruba land of Nigeria burn pieces of hand-woven fabric that are used to cure women of barrenness as well as other fertility-related problems. According to Clarke (1997) cited by Ulzen-Appiah (1998), most of the textiles of the twentieth century were not given attention by even those interested in African Art, and it is in the 1960s that the interest of those abroad grew to prompt a re-unearthing of African designs inspired by ideology of the Pan African in the 1960s. These developments have raised zeal in

clothing styles developed from ancestral traditions of the various cultures embracing the fashions of the contemporary world.

### **The Concept of traditional Symbols**

According to Gonzalez (2022), traditional symbols are physical manifestations that signify the ideology of a particular culture or that merely have meaning within the culture. In a related argument, Adom, Agyemang and Manu (2018) affirmed that traditional symbols reflect the ideals, philosophies, history, beliefs, norms, and values of particular societies and are potential instruments that can be used for cultural propagation globally. The symbols represent popular proverbs and maxims, record historical events, express particular attitudes or behavior related to depict figures, or concepts uniquely related to abstract shapes.

In the words of Ballengee-Morris and Stuhr, (2001), traditional symbols give meaning and structure to life. Annku and Lodonu, in 2012 stated that Ghana has a rich cultural heritage that dates back as far as the thirteenth century. According to Adom, Asante and Kquofi (2016), this rich cultural heritage has been preserved through their possession of various traditional symbols that are laden with powerful philosophical concepts and ideologies that convey the thoughts, beliefs and the entire culture of the people. Traditional symbols have the potential of binding a cultural group by fostering unity and a sense of belonging. This can be observed through the symbols of authority such as the royal skin, the stool, the sword and very revered totems that are highly upheld by some ethnic groups in the Upper East Region.

Traditional symbols have the potential of binding a cultural group by fostering unity and a sense of belonging. This can be observed through the symbols of authority such as the royal skin, the chief's walking stick and very revered totems that are highly upheld by some ethnic groups in the Upper East Region. According to Ulzen-Appiah (1998), the strength of a group of people's culture and supremacy lies in their ability to maintain alive in the dark secrecy of symbolism of the accepted truths and values of life. This implies that traditional symbols give a sense of greatness to a group as they could proudly associate themselves with those symbols. They have historical

links with those objects which may include being saved by them or conquering them in a dramatic manner, in the case of animals both domestic and wild. Again, objects that have been used by a people for a longer period are considered as their traditional symbols.

### **2.11. Totems used as Traditional Symbols**

Totems are mostly highly revered in the Upper East Region. Totemism refers to a complex system of practices, ideas, and symbols based on an assumed linkage among individuals or a social group and an object from nature referred to as a totem. (Asmah 2009). A totem can be a certain kind of animal, plant or a natural phenomenon or part of the landscape with which a particular group of people believes that they are linked to it in a certain way especially through being favoured or saved by that creature in a certain manner. It could also be regarded as a symbol of good fortune to a certain cultural group. These creatures are therefore adopted by those social groups by way of not eating flesh or fruits from them. In the case of plants, they express their linkage by not eating the fruits from those plants. They also make representations of the totems in the form of drawings, paintings and carvings or mouldings and keep in order to preserve the perceived bond between them. Asmah (2009), says the Microsoft Encarta (2007) explained that the term totem is originated from the language of the Ojibwa, indigenous people of Northern America. Totems are used widely by ethnic groups and social organizations in the world. These are usually displayed in the paintings on their buildings, umbrellas and the flags they possess. For example, Nigerians used the eagle for their national football team. Asante Kotoko football team also use the porcupine on their flag. Some tribes in the north also have their totems



such as the crocodile by the Kasena and Nankana tribes. The python by the Widi clan of Kusasis, the lion for the Kusasis' king, the tuna fish by some Frafras and others that were adopted by clans and individuals. They attach meanings to these totems. As the porcupine represents the fighting spirit of the Asantes, the crocodiles represent the souls of the people of Kasena and Nankana. Likewise, the python is said to have saved a section of some Kusasis so it was considered a saviour. The lion is a symbol of strength, so the royalty has power over everyone. Some people also adopt certain animals due to their smartness or their craftiness. For instance, the spider is admired for its crafty nature. Likewise, the rabbit is also thought of as a very wise animal in history. Some of the animals used for the symbols are presented in Plates 2.19-2.29.



**Plate 2.19. Monkey.**

**Source: [www. Vervet Monkey](http://www.VervetMonkey.com) - *Chlorocebuspygerythrus* stock photo (2021)**





**Plate 2.20. Monitor Lizard. Source: [www.istockphoto.com](http://www.istockphoto.com) (2021)**



**Plate 2.21. Chameleon.**  
**Source: [www.123rf.com/stock photo/chameleon.html?sti=me3d2u3g7hasa1jnvf](http://www.123rf.com/stock-photo/chameleon.html?sti=me3d2u3g7hasa1jnvf) (2021)**



**Plate 2.22. Tortoise. Source:[www.istockphoto.com](http://www.istockphoto.com) (2021)**



**Plate 2.23. Lion. Source: [www.istockphoto.com](http://www.istockphoto.com) (2021)**



**Plate 2.24. Cow's tail.[www.istockphot.com](http://www.istockphot.com) (2021)**



**Plate 2.25. A hawk. Source: [www.istockphoto.com](http://www.istockphoto.com)(2021)**



**Plate 2.26. A Crocodile. Source: [www.gettyimages.com](http://www.gettyimages.com) (2021)**



**Plate 2.27. A Fish. Source: [www.stylesatlife.com](http://www.stylesatlife.com) (2021)**



**Plate 2.28. A Python. Source: [www.kidsbritannica.com](http://www.kidsbritannica.com) (2021)**



**Plate 2.29. Hedgehog. Source: [www.business2community.com](http://www.business2community.com). (2021).**

## 2.12. The Origin of Smock in Ghana

The Columbia Encyclopedia (2010) defines smock, also called chemise as a loose shirt-like apparel which is worn by European women in the Middle Ages, under their gowns. This transformed into a loose, yoked, shirt-like outer wear of coarse linen that is used to protect the inner clothes that it was worn over, especially by peasants in Europe. Currently, smocks that are used now are loose, light weighted sleeved garments, usually worn to protect the inner clothes from dust and other environmental hazards when performing our day-to-day activities. Those who do art works used to wear smocks as a means of protecting their clothing from paint, marble, dust, or any other stains from the medium in which they were working with. The wearing of smocks has been prevalent among pregnant women (Encyclopedia Britannica, 2004).

As stated by Osuanyi (2015) in his historical research letter, on Ghana's smock origin, the term *Batakari* is a Hausa word that literally connotes an outer garment. This means that it is a robe-like external apparel that is worn over inner-wears. The *batakari* is given very attractive embroidery embellishments usually on the front part and sometimes on the back, and was of Hausa or Nupe made (Renne, 2004). Some of the colours resemble the feathers of guinea fowl. *Batakari* is usually a three-piece garment that consists of long flowing outerwear, long-sleeve innerwear and a pair of trousers.

Furthermore, as cited by (Osuanyi, 2015) in his Historical Research Letter, he asserts that Ahiabor, (2013) states that *fugu* is a term in Moshi language that means cloth. It is also referred to as a set of loosely constructed garments from narrow strips of fabric woven from traditional looms in Northern Ghana. (Tettefio, 2009). The *fugu* and



batakari have been interchangeably used to mean smock. Dagombas also name smock as *bingmbaa*.

Regarding the actual origin of smock in Ghana, there are varied opinions on this issue. As cited by Osuanyi, some asserted that the ‘Tang’ people in Karaga District were those who began weaving first and later moved to a village known as Kpatinga in Gushegu of the North East Region. They said it was started as a woven stripe to cover their nakedness. According to Ahiabor (2013), cited by Osuanyi (2015), others argued that some of the Moshies from Burkina Faso who came and settled in Northern part of Ghana brought the craft. Even before the movement of the Moshies to Ghana, they were dealing with barter trade through the Northern sector to Upper Volta. People of the north did not weave cloth, they rather clothed themselves with leaves, animal skins, waist beads, coverings for their genitals (Allman 2004). This assertion indicates that the Moshi settlers and traders were the originators of the smock fabric craft.

### **2.13. The Northern Ghana smocks**

The northern smock is a plaid tunic-like garment which is known as *dansik*, worn by men in Ghana. (Ghana and beyond.com). They added that the fugu is also called *Bunwɔ* or *Bana, fugu* or a loose outer garment called *batakari*. The Frafras call it *dansika*, whereas Kusaasis refer to it as *futik*. Both are tribes in the Upper East Region. The smock was mainly worn by chiefs and kings within the five northern regions but is now popular across Ghana. The origin of the fugu is in the northern parts of Ghana. (Ghana and beyond.com).

The smock was not commonly seen in Western countries. As recently as in the 1990s, emigrants from Ghana were the only individuals seen wearing the smock. All of this

changed as the popularity of movies produced in Ghana increased among Black Americans and Caribbeans. In recent years, people of African origin have started wearing smocks to African festivals, mosques, churches, and Kwanzaa celebrations in major Western cities such as Jamaica and New York.

Most smocks have decorations made on the neckline in the form of embroidery designs. The *fugu* is usually worn with a hat. Most of Ghana's chiefs usually wear their *fugu* with red furry hat.

*Fugu* which is often misconstrued with the *batakari* is an all-cotton hand-woven fabric made into a plaid tunic-like garment. Whereas, the *batakari* is composed of large flowing gown, an inner shirt and trousers made of various fabrics.

The "*dansika*" is an adaptation of the formal smock design which is more loose-fitting and has no sleeves. It is suitable for wearing during the warm season.

A distinction between traditional royalty and the ordinary citizens of the north is achieved by producing "royal smocks" that are for traditional rulers. This includes a cap, trousers with baggy crutch and knee-length leather boots.

#### **2.14 Types of Smock.**

There are various types of traditional smocks unique to various traditional areas of Northern parts of Ghana which manufacture most of Ghana's traditional smocks. There are mainly three traditional smock designs identified with Ghana's Upper East, Northern, Savanna, North East, and Upper West regions.

Upper West Region is noted for constructing the best “cool colour” fugus. They blend varied shades of blue and green or both colours with other “quiet colours” like yellow, white, blue and green. The Upper East Region is also noted for making “warm colour” smocks in which various shades of red or orange superceed other colours of the fabric. Savanna, North East and Northern Regions are associated with “heavy-duty” smocks. They are called so owing to the fact that they are generally larger in size and made of heavy fabric.

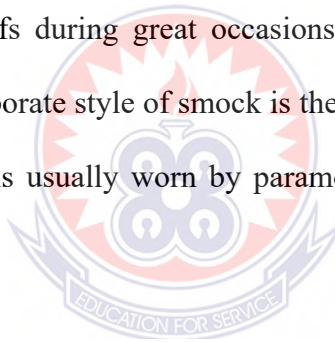
Currently, there are various styles of traditional fugu which are used in various events like weddings, funerals, festivals, the performance of rituals, child-naming ceremonies, as well as recreational activities and informal occasions. The fugu is usually made of one or more colours. Some common colour combinations are white, red, and blue, white and black only, green, and white, green and red, black or grey and white. A wide range of embroidery designs are usually made on the front, back and on the neck of the smock, most of them are aesthetically artistic. The most used colour of yarns for smock embroidery is white thread.

The range in quality of smocks is reflected in the range of prices, which may be as low as GH¢300 cedis and up to several hundreds of cedis. Traditional trousers and a hat to match will usually inflate the cost of the traditional outfit considerably. However, price is determined by the quality of stitches and style of fugu and all kinds of fugu have their own range of quality of workmanship.

### 2.14.1 Styles of Smock

The modern fugu is constructed in various distinctive styles. They are *Yenkisi*, a sleeveless smock usually worn by men, including chiefs. This is usually worn over singlets, vests, long or short-sleeved shirts. Another kind of fugu is *Banaa*, it is made of short sleeves which are usually above the elbow. Wearing of this type of fugu is associated with success and a general well-being. The jumper which is another type of fugu, has its sleeves extending to the wrist. Wearing of this smock denotes a sense of belonging to high social status or the wearer is a minor chief.

One other significant fugu type is *kpakoto*. It comprises the fugu, a pair of trousers and a hat (thus, three-piece smock). It has long and very wider sleeves and is usually worn by paramount chiefs during great occasions such as festivals and big social gatherings. The more elaborate style of smock is the *Kuntundi*. It is made up of longer and wider sleeves. This is usually worn by paramount chiefs only in times of very important events.



### 2.14.2 Meaning of Some Smock Styles and Designs

The smock garment is constructed in diverse styles. The distinctive features of the smock come as a result of the unique fabric construction method which is the hand weaving characteristic of the stripes that run vertically as well as the very compact structure of the plain weave. Hand twisted threads were used, yet this diminished as manufacture of the fabric demanded the use of yarns that are spun by the machine. This is due to the increase in demand. Manufacturing has called for the adoption of machine spun yarns in the construction of fugu fabrics. But in order to achieve the fuzzy and heavy smock fabric effect, weavers still relied on handspun yarns and plied



yarns. They also combined two or more strands of yarns in weaving the fugu fabrics. This practice imparts weight onto the fugu fabric. It also brings about evenness as compared to the use of the hand twisted yarns. Most people in the Northern Region cherish smocks made with handspun yarns. They consider it as unique and authentic in terms of quality. When you take a look at the handspun yarn, it reveals a hairy surface feature rendering it comfortable to wear. In addition to the use of the hand spun yarns and the use of a traditional narrow fabric weaving loom for the weaving, the sewing process is either by hand or a sewing machine or a combination of the two techniques.

By this, the smock can then be grouped as hand sewn, machine sewn or hand and machine sewn smock. The smock can also be classified regarding its purpose. For example, there is smock for sacrifice to the gods, we have smock for chiefs, reincarnated children have their smock and others that are for everyday use. One way of classification is by consideration of the style and elegance of the smock that has to do with the embellishments done on them through embroidery as well as accompanying accessories. Through these methods of classification, the Frafra smocks are classified as follows: The sleeveless smock called Yanshichi or Dansichi. Another one is the one with sleeves known as Bingmbaabari. We have one with larger and wider sleeves which is Kpaakuto. Sandan Yibuis another type that literally means leaving early morning. More of them are the Yebili that is meant those holding titles as well as kpanjag, the smock for enskinment of a chief. A lot of the Northern smock dresses are sewn hanging loosely on the body so as to pave way for aeration of the

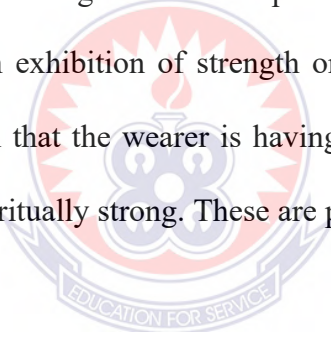
wearer Atampugre (2017). This makes it not uncomfortable to the wearer. However, smocks of various colours are used regardless of whichever occasion. Smock of any colour can be worn for funeral and the same one can also be used as a festival or merry making attire. The colours are chosen by the weavers and the smock sewers due to their aesthetic values. The use of political colours in the construction of smock is one of the current trends in smock production. For example, the New Patriotic Party's colours which are red, blue and white as well as the red, green, white and black of the National Democratic Congress are very common in smocks in the country Ghana. Other social groupings also have their colours being displayed on the smock.

### **2.15 Wearing of Smock with the Hat**





The hat is part of the smock that is usually worn in order to complement the outfit. Hats of smocks are usually made the same colours and weave of the smock fabric. They are however, sometimes made of different colours from the smock it is worn with. The people of northern decent have different ways of wearing it. This indicates functional and aesthetic appeal.

Dagombas sometimes wear more than one smock, usually up to six smocks of which the smaller sizes are worn under the larger ones. The wearing of the smock this way may mean a display of a person's wealth, resilience, royalty or power in the society. The wearing of more than one smock helps in the shape and adds to the drape of the smock. Notwithstanding the number of smocks being put on at a time, getting the tips rounded rather than either the front or the back part of the fugu hanging too low or high is highly cherished by the people of northern Ghana. Hats of smock are added items worn in order to enhance the aesthetic qualities of the wearer. The smocks hats

offer metaphorical information which may put the wearer in trouble in the northern sector, especially when a chief or a more spiritually powerful person in terms of juju is present, especially at a durbar or any gathering. Hats are usually worn in four main different styles. One style is the erect standing position. The oblique postures which are either skewed left or right. The third one is being skewed onto the front, and the last position is the hat being skewed towards the back of the head. Every particular positioning among the four has symbolic meaning. These can be expatiated as follows. The stiff standing and erect posture of wearing the hat connotes supremacy over the rest. Whereas oblique style of being towards either right or left means the wearer is for peace, unity or harmonious living. finally, wearing a hat that has been skewed towards the front is a sign of leadership and being ahead of everyone. Then, the backwards skew is an exhibition of strength or spiritual powers. The backward skew is also an indication that the wearer is having followers, he is a good wrestler and has strength and is spiritually strong. These are presented in Table 2.1.



**Table 2.1. Meaning of the various forms of wearing the hat.**

Cap Style	Illustration	Symbolism/Meaning
Stiff standing position		"I stand tall", except God, supremacy, superior ruler, no co-equal
Oblique postures (either towards right or left)		"no trouble", peace, harmonious living, unity
Skew towards the front		Leadership, no coequal
Skewed posture towards the back of the head		"I have followers", strength, spiritual powers, spiritual resiliency, good wrestler

Source: Dress Identity-Making, (2021).



## 2.16 Contemporary Issues on Smock Weaving

Howard, Sarpong and Amankwah, (2012) asserted that the symbolic meaning of a cloth as well as the printed one is one of the major good qualities of African people's culture. They added that the natives are always fascinated with the beauty and symbolic meanings of their outfits. This natural occurrence is clearly displayed in the very colourful woven cloth termed as fugu in Ghana. Historical evidence indicated that the wearing of smock was by only the people of the Northern decent, despite the fact that Adu-Akwaboa (1976) argues that textile production by the people of Northern sector of Ghana lies on the Moshies, Gonjas, Dagomba, Kokomba, Mamprusi and the Lobi people. But it was known that the Frafras of Upper East

Region have developed a stronger tradition within the indigenous textile production industry. The fabrics constructed by the Frafras are quite distinct from other ethnic groups fugu fabrics ranging from the structure of the loom to smock weave up to the sewn smock apparel. The study of the northern smock of Ghana has brought about the reasons behind the name and the beauty of the weaves. Ahiabor, et al., (2013), indicated that the identification of types of smocks and their aesthetics has revealed the good heritage of the people of Upper East Region to the world. The smocks are produced in conformity to their social norms, culture as well as their traditions. This has made weavers to make the smock weaves that have symbolic meanings which stand for certain traditional events or myths. However, Amissah and Essel (2015) have identified design patterns, names, and embroidery embellishments of smocks that are manufactured by Dagombas of Northern Region. Names given to some fugu fabrics emanating from the weave structures manufactured in Northern Region were identified by Luke (2001). The type of coloured employed during the construction process threads influenced the names of the smock fabrics.

### **2.17 Concept of Traditional Symbols**

I will first make a recapitulation of the meaning of the terms; tradition, traditional and symbol.

A tradition refers to a belief or behavior bequeved onto a group or society with symbolic conotation or special importance with origins in the past. (Wikipedia.org)

The oxford dictionary explains that traditional means existing in or as part of a tradition. That is something that is long-established. It further explained that the definition of traditional is a style or a custom that is long-standing. Tradition therefore

is a set of behaviours, attitudes, beliefs or practices that have been existing over a longer period.

A symbol also refers to a mark or character used as a conventional representation of an item, function, or process. It is a shape or sign that is used to represent something such as an organization. Symbols serve as items of identifying institutions, organizations, groups or individuals that make it easier to distinguish one from another. Symbol is an item that represents or stands for something else, for instance a material object representing something abstract. A symbol can further be described as a mark, sign, or word that stands for, signifies, or is understood as representing a concept, item, or relationship. Symbols are in the form of words, sounds, gestures, ideas, or visual images and are used to convey other ideas and beliefs.

(Wikipedia.org)

### 2.19. Other Popular Symbols

Some of the well known symbols are outlined as follows.

- **Heart symbol:** this represents love, compassion and good health.
- **Dove symbol:** this represents peace, love, as well as calmness.
- **Raven symbol:** it stands for death and doom. Whereas to others it represents good fortune. (Debora, 2021)

**The Tree symbol** stands for stability, growing, nature, and eternal life.

**The symbol of Owl** stands for intelligence then wisdom.

**The ymbol of Dragon** is for mysticism, power, wisdom, and strength,.

**The symbol of Butterfly** is a symbol of transformation, rebirth, and beauty.

**The Dog symbol** represents companionship, loyalty and protection.

**The Lion symbol** is a symbol of leadership, royalty and courage.

**The Fox** symbolizes cleverness and slyness.

### **2.19.1 Meanings of lines and shapes.**

Shapes of geometry are the most fundamental symbols which convey various meanings. As designers usually put together fundamental geometric forms to make more complicated and meaningful symbols, geometric shapes still have meaning on their own. The understanding of the meaning of some elementary shapes is the basis to the designing of logos as well as other forms of graphical designing. Below are ten elementary lines and shapes with their connotations:

**A circle** represents playfulness, cycles, completeness and continuation.

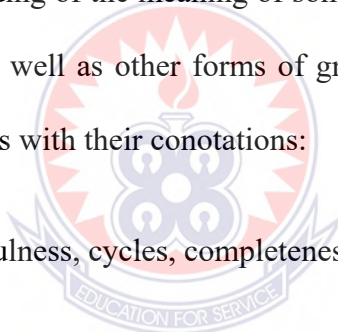
**A square** stands for straightforwardness, stability, security and tradition

**A triangle** means movement, balance and transformation

**Lines that intersect** is used to mean relationships, connectedness

**Spiral** is a symbol of evolution, transformation and growth

**Star with five points** is for excellence



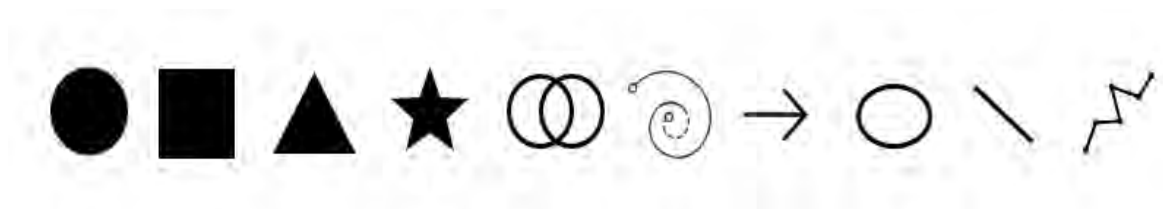
**The arrow** gives force, direction or movement.

**Curved lines** also connote fluidity, connection and movement.

**Diagonal lines** stand for tension, excitement

**Zigzag** is a representation of path and confusion. (learnreligions.com)

The symbols below are the geometric shapes and lines.(venngage-wordpress.s3)

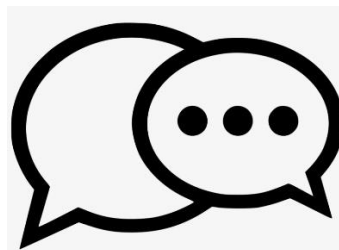


**Figure 2.1. Geometric shapes and lines. Source: venngage-wordpress.s3, (2021).**

### 2.19.2 Communication symbols

Symbols that are used to represent communication and collaboration with each other are presented as follows:

**symbol of speech bubble:** This is used to conote communication and speech (pikpng.com). The symbol is as shown in Figure2.2.



**Figure 2.2. Speech bubble symbol. Source: pikpng.com, (2021).**

**People symbol:** This symbol is used to represent teamwork and collaboration (VectorStock.com). It is as shown figure 2.3.





**Figure 2.3. People symbol. Source: VectorStock.com, (2021).**

**Mail/email symbol:** this symbolizes the effective sharing of information. It is used to represent sending and receiving of messages, which is known as communication. Communication is basically denoted with email or speech bubbles signs. Below in figure 2.4 is the symbol (shutterstock.com).



**Figure 2.4. E-mail symbol. Source: shutterstock.com, (2021).**

**Presentation symbol:** It serves as representation of teaching and learning (VectorStock.com). This is as illustrated in figure 2.5.



**Figure 2.5. Presentation symbol. Source: VectorStock.com, (2021).**

**Handshake symbol:** This is used as a representation of concord agreement and cooperation. The symbol is as in figure 2.6.



**Figure 2.6. Hand shake symbol. Source: vectorstock.com, (2021).**

### **2.19.3 Symbols used to represent business growth**

Another vital aspect of our lives is business. It is important that any business that is established see the light of the day by flourishing. Business growth is an aspect people might like to see in a business growth plan, a marketing plan, or a startup pitch deck for a particular business. But because business growth means varied things in other businesses, there is no one sure way to represent the growth of a business pictorially. There are a wide variety of symbols that are used to represent the growth of a particular business. Some of the familiar signs used to indicate the growth of business include the following

**Plant symbol:** the plant represents positivity, growth, change, and value. It is shown in figure 2.7.



**Figure 2.7. Plant symbol. Source: dreamstime.com, (2021).**

**Rocketship symbol:** It is a symbol of very fast growth or product launches. This symbol is as shown in figure 2.8.



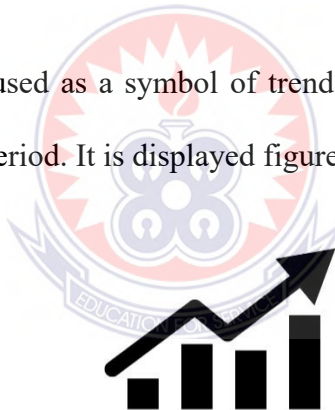
**Figure 2.8. Rocket ship symbol. Source Dreamstime.com, 2021.**

**Up arrow:** The arrow is used to represent positive change. That is moving in the right direction. It is presented as figure 2.9.



**Figure 2.9. Up arrow symbol. Source: Dreamstime.com, (2021).**

**Graph symbol:** This is used as a symbol of trends. That is changes that take place gradually over a certain period. It is displayed figure 2.10.



**Figure 2.10. Arrow symbol. Source: vectorstock.com, (2021).**

**Dollar sign:** This is used to represent money income or revenue as a result of business transactions. It is seen as figure 2.11.



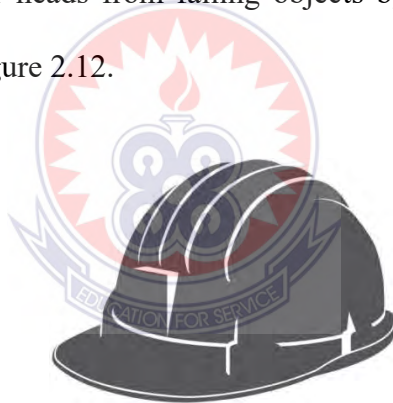
**Figure 2.11. Doller sign symbol. Source: Today foundout.com, (2021).**

Traditional symbol refers to an object that members of a cultural group instantly identify as possessing a shared symbolic meaning. They aid in sending messages to people within a particular cultural setting other than the use of words and gestures. Below are the symbols that are used to represent safety and security.

#### 2.19.4 Symbols used to Represent Safety and Security

The issue of safety in our environment is a necessity. Owing to this need, they have developed symbols to guide our activities. These are as outlined below.

**Hard-hat symbol:** This symbol is used to represent safety in the workplace. This requires workers in the building construction as well as in some manufacturing industries to protect their heads from falling objects by wearing the hard hat. This symbol is as shown in Figure 2.12.



**Figure 2.12. Hard hat symbol. Source: VectorStock.com/16066405, (2021).**

- **Lock symbol:** The padlock is used to represent data security in browsers and other digital products. It is as indicated in Figure 2.13.



**Figure 2.13. Lock symbol. Source: flaticon.com, (2021)**

- **Pylon symbol:** It serves as a sign for caution and safety. Especially when one is on the road or in the work place. This symbol is as displayed in figure 2.14.



**Figure 2.14. Pylon symbol. Source: vectoerstock.com/20648788, (2021)**

- **Shield symbol:** This symbol is used to stand for digital and physical safety. In figure 2.15 is an illustration of the shield symbol.



**Figure 2.15. Shield symbol. Source: VectorStock.com (2021).**

- **Umbrella symbol:** The umbrella is also adopted as a symbol of protection against harsh weather conditions and any physical harm emanating from the sun or rain. This is as shown in figure 2.16.



**Figure 2.16. Umbrella symbol. Source: VectorStock.com/1862649 (2021).**

There are other symbols that are used generally. These include symbols of alertness, information, insight or ideas. These are outlined below.

### **Symbols of alertness or attention**

Such symbols are used to represent the ideas stated below.

- **Exclamation mark symbol:** symbolizes importance and emphasis.
- **Loudspeaker sign:** represents an alert or announcement.
- **The hand sign:** is used as an indication that is required to stopping.
- **Bell sign:** stands for a notification or alert.

Another classic sign which stands for attention is a diamond shape or triangle that has an exclamation mark within it.

more other peculiar attention-grabbing symbol of alertness are alarms, bells, red lights, loudspeakers, or simply a circle with an exclamation mark. Any sign which draws attention with terms like “look at me” can be a good representation for this application.

**Symbols that stand for insight, information and ideas are as stated below:**

**Light bulb sign** is used to represent innovation, ideas, and creativity.

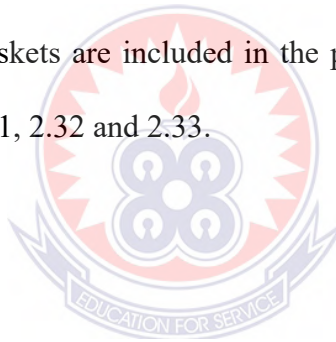
**The of spreadsheet** which is read sheet is used for representation of organization and information.

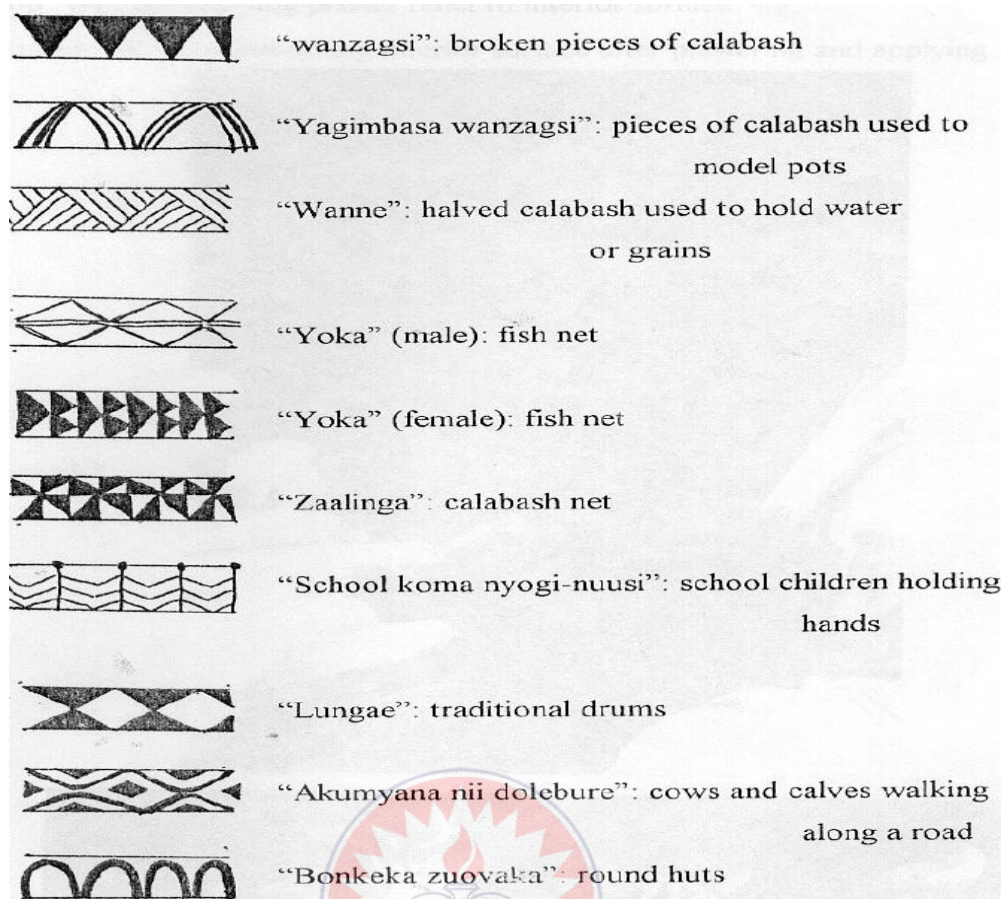
Light bolt sign stands for inspiration, insight and clarity.

**The Document sign** stands as a representation of knowledge and communication.  
(venngage. Com)

## **2.20 Traditional Symbols of Upper East Region**

The symbols that are visible in the Upper East region are usually displayed on murals and proverbs. A close look at Sirigu murals reveals shapes of various animals such as the bison, snake, crocodile, lizard, cat, different kinds of birds like fowls, ducks and guinea fowls among others, human figures also formed part of their paintings. In the Sirigu paintings, there are geometric shapes as circles, ovals, squares, triangles and rectangles as well as different types of lines which include horizontal, vertical, diagonal, curved, undulating and wavy lines. Household items like earthen ware bowls and pots, straw baskets are included in the paintings too. These symbols are shown in Plates 2.30, 2.31, 2.32 and 2.33.





**Plate 2.30. Illustration of common symbols as motifs of Sirigu murals. Source: Traditional Mural Arts of Sirigu.com (1996).**





**Plate 2.31. Traditional paintings of Sirigu murals. Source: African Diaspora Collection (2021).**





**Plate 2.32. Sample photos of Sirigu murals. Source: alamy stock photos**



**Plate 2.33. Sample photos of Sirigu murals. Source: starrfm.com.gh**

## **2.21. Cultural and Socio-economic contribution of textiles industries in Ghana**

The textile industries form a major part of production, manufacturing, employment and trading in Ghana. (Gereffi, 2002) reveals that the Textiles industry which is labour-intensive is said to be one of the oldest, largest and most global industries in the world. It is the typical ‘starter’ industry for countries engaged in export-orientated industrialization. it offers a wide range of employment opportunities including entry-level jobs for unskilled labour in third world countries. The features technology of the Textiles industry have rendered it suitable as the initial step on the ‘ladder of



industrialization' in poor countries of which Ghana is no exception and have seen a very high output growth rate in the sector.

Brenton et al. (2007) suggested some of the reasons why the textiles sector has played such a significant role in economic improvement. This sector absorbs large section of unskilled labour, typically obtaining them from rural agricultural households in rural areas. Notwithstanding the relatively low start-up investment costs, expansion of the sector provides a base upon which to build capital for more technologically demanding activities in other sectors (Brenton et al., 2007).

Improvement of the sector brings about imports of more advanced technologies to be financed through revenues gotten from fabrics exports. However, the characteristics of the industry (relatively low capital intensity; low investment costs; and use of low skilled labour, also mean that the industry is relatively footloose and able to adjust to changing market conditions quickly (Nordas, 2004). Trade policy rules have had a great impact on the pattern of textile production and are likely to do so in the near future.

According to Gereffi (2002), textiles and garment industries are significant in economic and social situations, in the short term by the provision of revenues, jobs, especially for women, and foreign currency receipts and in the long term by giving countries the opportunity for sustained economic development in the country with appropriate policies and institutions to enhance the ever changing impacts of textiles.

Kichura and Asare, (2012) explain that the ability of the textile industries to contribute to long term growth and development will depend not only on the desirable attributes or otherwise of the investors, but also on the quality and efficacies of

government policies and institutions in Ghana to build on this investment. The Textiles industries are very important for Ghanaians regarding trade, Development Projects and employment in Ghana. The industries provide opportunities for export diversification and increase of manufactured exports for Ghanaians that can exploit our labour cost benefits and fill emerging niches and meet demands of buyers (Kichura & Asare, 2012). There are also unstable impacts of Textiles industries and these unstable impacts are greater. The more linkages have been built up between the garment industry and local textile suppliers. At the macro level there are a number of ways in which the Textiles industries affect economic development. Thus, they feed our local industries with substrates, thereby creating a wide range of job opportunities for the general public. Therefore, the smock fabric is not an exception owing to the fact that it offers quite a lot of employment opportunities to the people of Northern Ghana.

## **2.22. Cultural and Socio-Economic contribution of the fugu fabric to the people of Upper East Region**

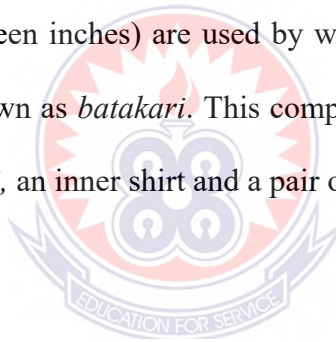
### **Functions the *fugu* fabric**

Quite a lot of items are being produced from fugu. A few among them are as outlined below. Fugu has been used for ritual purposes such as for tying round stems of certain trees that are believed to be going out during the night so as to prevent them from doing so (Nyaaba 2020). She added that, *Adaalya*, which is composed of red, white and black yarns, is used to clothe children that are perceived to be victims of reincarnation in order to protect them from dying again.

According to Nyaaba (2020), another fabric locally called *mulunzia*, which is composed of red and white yarns, has been used to sew garments for children to guard

them against frequently falling ill. For other purposes it is used to construct various styles of garment for funerals, to cover dead bodies, church services, as wedding gowns, party dresses, festivals and marriage ceremonies as well as for scarves and napkins.

Some of the smock fugu used in Bolgatanga are obtained from Daboya in the Northern Region. The fabric is produced in narrow stripes; those that are worn by women are a bit larger, fifteen inches wide and are joined on the selvages to form the women's cloth. They are used to construct shirts, trousers, hats, long dresses and "three-in-one" dresses for chiefs. The very narrow ones measuring three to four inches wide are used to sew the prestigious smock while those that are large (measuring twelve to fifteen inches) are used by women for slit and kaba as well as the three-piece dress known as *batakari*. This comprises an outer gown which is also referred to as the *batakari*, an inner shirt and a pair of trousers.



## CHAPTER THREE

### METHODOLOGY

#### 3.1. Introduction

This chapter deals with the steps taken to gather data about smock fabric weaving and to develop the smock fabric with symbols. The areas that have been discussed are Design of the Research, Population of the Study, Sample and sampling techniques employed, Data collection mechanisms or Research tools, Validation of the instruments, Administration of the Instruments, Secondary and Primary pools of information, Data collection procedures and Data analysis plan. It also involves the procedures of designing and weaving of the northern smock fabric.

#### 3.2. The Research Design

Amedahe, (2008), postulates that research design is known as to the totality of measures that a researcher chooses to integrate the various parts of the study in a chronological and an orderly manner. The choice of the qualitative design is due to certain considerations out of which the utmost reason being features of variables and the population of the study. In this thesis report, the qualitative approach is largely considered because social as well as cultural phenomena are being studied.

Qualitative research according to Jacob (1988) in James (1997) means that the word which denotes methodologies for investigating known to be phenomenal and based on nature as well as in the field of anthropology, or in the field of observation by the participating team. The work involves all features of the items described above and as such it is most appropriate to adopt the qualitative and descriptive research design.

This stresses on significance of observing variables in the natural state to ascertain the way they relate to each other. Data is sourced via open-ended queries which provide direct quotations. In qualitative research the researcher forms an integral part of the interogation. This is however different from quantitative research which attempts to gather data by objective methods and provide data about relations, comparisons and predictions and attempts to detach the investigator from the investigation.

The researcher's motivation for adopting qualitative research, as opposed to quantitative research, comes from the fact that, if there is one thing which differentiates humans from the natural world, it is our capacity to talk and judge. The qualitative research method is designed to aid researchers comprehend humans and the social as well as cultural context in which they dwell. This study focuses on variables from different social and cultural backgrounds. Their reaction to the environment is thus expected to differ even though similar facilities may be inherent in those environments. The location of these communities will adversely influence their performance within a given context. Given the same resources, a community situated close to a commercial city will perform creditably well than the one farther away from the commercial city. This could be as a result of available factors in the neighbouring commercial city closely situated to the first community which may be at a disadvantage to the other community. In such instances, the two communities' performance cannot be based on only available resources. However, other external factors influencing need to be investigated. This research focuses on one of the principal traditional textile regions in Ghana, which is the Upper East Region. Other related concepts that affect the operation of indigenou textile activities in the region were located in the other northern regions, where most of the smock fabric is being



constructed as well as Accra, where almost all the policies that affect textile manufacturing are formulated.

### **3.3. Population**

The population for the study includes the under listed personalities who are seen to be the major stakeholders in the traditional textiles industry:

- Weavers of the fugu fabric in Upper East region
- Marketing and sales persons of the fugu fabric in Upper East Region
- Consumers of locally made textiles and the general public
- Traditional rulers in Upper East Region
- Opinion leaders of Upper East Region

The above respondents were targetted because they are responsible for the production of new fabrics, packaging them, selling and using the fabric. Traditional and opinion leaders are also associated with the use and preservation of traditional symbols. They can again assess the impact of designs of the smock fabric on their usage and their purchases.

### **3.4 Techniques of Sampling**

This study adopted both probability and non-probability strategies of sampling to reach respondents. Amedahe (2008) stated that probability sampling method stands for a couple of sampling techniques which guide researchers in selecting units from a population which they are interested in studying. The non-probability sampling technique used was purposive sampling technique. The purposive technique of

sampling is a non-probability sampling method that is selected regarding characteristics of a population and the aims of the study (Amedahe, 2008).

Producers of the fugu fabric were chosen by the use of this method of sampling owing to the fact that it offers the chance of reaching people who have the needed experience and knowledge on the fugu fabric. A simple random as well as cluster sampling had been adopted too in selecting traditional leaders, those engaged in the production of smocks from both the marketing and production department and customers as well as the general public.

### **3.5. Sample Size**

According to Glenn, (1992), there are several approaches to determining the size of the sample. Some of them are the use of a census for smaller populations, mimicking a sample size of similar studies, using published tables, and applying formulae to calculate the size of a sample.

McDaniels and Gate (2004) defined sample as the part chosen out of the whole population and used as a representation of the whole group. With a targeted population of sixty people, a sample size of fifty (50) respondents were selected. This was reached by taking five percent of the targeted population. Thus, sample size out of which twenty (20) were manufacturers of the fugu fabrics, five (5) were traditional rulers and five (5) were opinion leaders such as assembly members, clan heads unit committee members and educationists. Then fifteen (15) of them were consumers or wearers of the smock and five (5) respondents were drawn from the marketing and sales department.

**Table 3.1: Sample size for the research**

<b>Description</b>	<b>Sample size</b>	<b>Percentage (%)</b>
Traditional Rulers	5	10
Opinion leaders (clan heads, assembly men and educationists)	5	10
Weavers of the fugu fabrics	20	40
Consumers of smocks and fugu fabrics	15	30
Sellers of smocks and the fugu fabrics	5	10
<b>TOTAL</b>	<b>50</b>	<b>100</b>

**Source: Field Study of Researcher (2021)**

### **3.6. Sources of Data**

Data to this research were coalated out of two main sources which are primary and secondary information sources. The method employed for the primary source of data consisted of questionnaire and interviews (structured and unstructured). Whereas the secondary data which is literature written by others which is relevant to the research work were sourced and due acknowledgements were made.

#### **3.6.1 Primary Data**

The term primary information refers to statistical information which an investigator commences for the sake of enquiry and uses it for the specific purpose for which it was collected (Bush 2000). For the sake of this enquiry, the researcher employed the following:

## **Questionnaire**

Saul, (2018), describes questionnaire by saying that it is a data collection instrument which consist of a set of queries used to gather data from stakeholders. It can also be considered as a type of documented interview which is conducted either by talking directly to the person or via e-mail or posting..

Questionnaire is usually designed for statistical analysis of the responses yet it is not usually the issue. They have merits which includes: it is less expensive, questions that are a bit sensitive can be asked, it does not encourage biasness of the interviewer and data coding and analysis is easy.

The questionnaires for this research work were transformed into google forms and sent to respondents via whatsapp. It was also administered face to face by the researcher on the fugu fabric weavers.

Respondents of this questionnaire included the fugu fabric weavers, sewers of smocks, consumers and sales persons of the fugu fabrics as well as the items made from fugu.

## **Interview**

An interview refers to a form of personal conversation between two or more persons (the interviewee and the interviewer) where the interviewer poses questions and obtains answers from the respondent (Harnett & Murphy, 1986).

The interview technique paves way for the interviewer to clarify issues that are not clear, determine the wording of the questions and also probe the interviewee for additional information which may or may not be available in the interview guide. The disadvantage of this is that, it is time consuming and has lower coverage.

The interviews were conducted through the use of an interview guide. This was carried out by the researcher by scheduling and meeting sessions with the interviewees in which they were asked the questions in the interview guide and they responded. These responses were recorded by the use of the android phone.

Ten persons were interviewed. They were drawn from traditional rulers, opinion leaders, clan heads, assembly men and educationists in various communities.

### **3.6.2 Secondary Information**

Secondary information is data which is already available and gathered for other purposes but which can be used for the current purpose (Bush 2000). The secondary sources of information of this research were taken from marketing journals, books, internet, and newsletters among others.

### **3.7 Procedure for Analysing the Data**


A descriptive technique in analysing the data. Cudjoe (2006), expatiates descriptive method as a way of colating, contracting as well as showing numerical information. The rearscher drew tables with percentages and charts that conform to information gathered. The researcher drew the tables after he edited and tallied questionnaires for the work. I used the charts and percentages and presented my findings of this research projet.

### **3.8 Tools, Equipment and Materials used to conduct the Research Project**

The main tool for Weaving Smock Cloth According to Agnes (personal communication, 2020), a weaver at Bolgatanga indicates that, it is the locally made or traditional loom made in Bolgatanga by metal fabricators known as welders. The accessories used for smock weaving are local reed, which is either made of broom

sticks or tiny sheets of metal, local harnesses, bobbin winder (also called pirn winder), shuttles, warping mills, spool racks, sword sticks and broom sticks which help to push the warp form the dents of the reed in the process of reading. The broom sticks serve other important function. To check the colour blends of the yarn, they are wound round the broom stick alternatively to see if they blend instead of designing on paper (Adu-Akwaboa, 1994). The main material used for constructing the fabric is yarn, usually made from cotton. Yet yarns from other fibres are sometimes utilized as combinations. Therefore, the major tools that were employed in this research project are outlined in a table as follows.

**Table 3.2: Tools materials and equipment used in producing the new fugu fabric.**

S/n	Name of Tool/Material/Equipment	Function
1	Loom and its accessories 	The loom was used to weave the smock fabric

2. Warping mill



The warp yarns were obtained from the warping mill

3. Pirning machine



This was employed in the winding of the filling yarns on to pirns. The pirns are hollow sticks that is inserted on the machine and the handle turned which winds the thread onto the sticks.

4. Laptop computer with Photoshop software



This is used in sourcing for data, typing and designing the smock fabric



- 
5. Digital camera



It aids in taking photos of the processes followed

6. Mobile phone



This is the equipment I used and administered the questionnaire, made calls and scheduled interviews and also did the recording of the interviews.

7. Weaving yarns



The yarns form the fabric by performing the processes outlined in the methodology

8. Digital embroidery machine



This machine was used to transfer the symbols on to the woven fabric.

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**Source: Researcher's Field Study (2021)**

### **3. 9 Methodology of the design and manufacture of the fugu fabrics**

The methodology entails the step-by-step processes the researcher went through and came up with the woven fabric that contains all the specifications as envisaged in the objectives. The steps that the researcher followed in the designing and production of the project works are:

- i. Designing of the fabrics on the computer.
- ii. Production of woven fugu fabrics
- iii. Embroidering of the traditional symbols on to the fugu fabrics.
- iv. Finishing by trimming loose threads and pressing.

These stages are elaborated in chapter four.

### **3.10. Study Area**

The study was conducted in the Upper East Region of Ghana between January 2020 and July 2022 due to the fact that fugu fabrics are highly produced there and the fabric are critical in their culture. Historically, the Upper East Region is part of what used to be the Upper Region (Upper East and Upper West), which was itself carved out of what used to be the Northern Region on 1st July, 1960. From 1902 the old Northern Territory was a British protectorate until 1960 when it was separated into the Northern and Upper Region. The Upper Region was later apportioned into Upper East and Upper West in 1983.

Upper East is located in the north-eastern corner of the country. It is bordered to the north by Burkina Faso, the east by the Republic of Togo, the west by Sissala in Upper West and the south by West Mamprusi in North East Region. The land is relatively flat with a few hills to the East and southeast. The total land area is about 8,842 sq km, which translates into 2.7 per cent of the total land area of the country.

The region has a population of about one million three hundred and one thousand two hundred and twenty-six (Ghana Statistical service, 2021).

The region is administered politically from Bolgatanga. It has 15 administrative districts, namely Builsa South, Builsa North, Kassena-Nankana, Chiana paga, Bongo, Bolgatanga Central Bolgatanga East, Talensi, Nabdam, Bawku West, Bawku Central, Pusiga, Binduri, Garu and Tempane. The main occupations in the region is agriculture. Fig 1 displays the map of Ghana showing Upper East Region and fig 2 shows the map of Upper East Region



**Figure 3.1: Map of Ghana showing UpperEast Region.**  
 Source: (<https://www.google.com/search?q=map+upper+east>)



**Figure 3.2: Map of Upper East Region.** Source  
 (<https://www.google.com/search?q=map+upper+east>)

## CHAPTER FOUR

### PRESENTATION OF RESULTS/FINDINGS

#### 4.1. Introduction

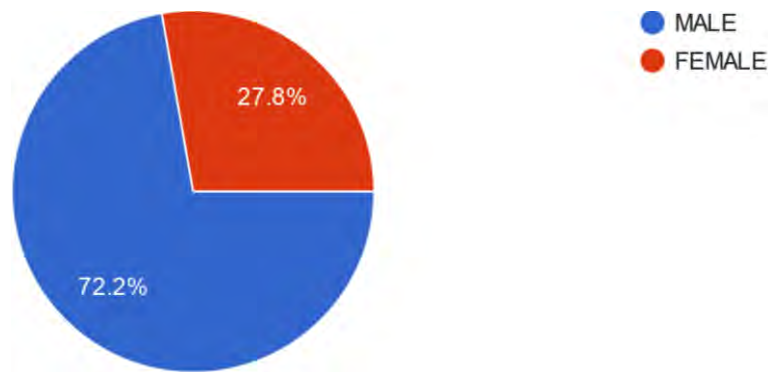
This stage deals with the information that the researcher obtained during the research period. It involves written data, pie charts, histograms as well as other relevant discoveries that were uncovered as a result of the study. The data were categorized and presented in percentages in pie charts and histograms. Each of these were accompanied by their descriptions regarding the tables and their interpretations.

#### 4.2 Rate of Responses to The Questionnaires

The questionnaire was prepared and distributed to respondents via a social media platform known as 'whatsapp' to individuals and groups. I also went out personally to weavers and smock manufacturers and administered some. With the sample size of fifty (50) respondents, thirty-six responses were received. The response rate was therefore seventy-two percent (72%).

##### 4.2.1 Demographic Data

Responses on the gender indicated that 10 of the respondents representing 25% were females. Majority of the fugu fabric weavers within Upper East Region are females. whereas, 26 of the respondents which is a representation of 65% are males. They are mostly opinion leaders and those engaged in the sewing, sales and wearing of the smock. Figure 4.1 shows the percentages of the responses by gender.

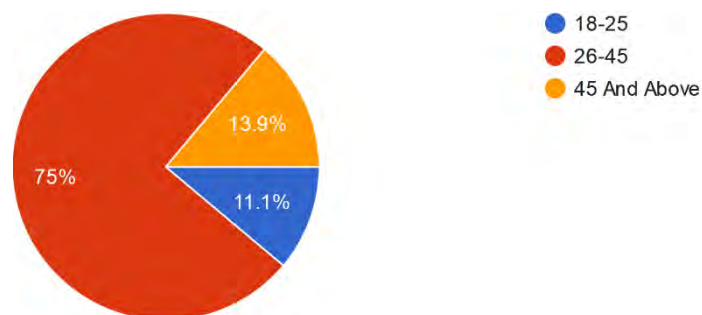


**Figure 4.1. Pie chart of gender of respondents.**

**Source: Researcher’s field work, Date: 23/07/2021.**

#### **4.2.2 Responses on age distribution**

With regards to the ages of the respondents, those that are above age forty-five years are five (5). This represents 13.9% of the total number of respondents. But those that are between twenty-six (26) to forty-five (45) years are twenty-seven (27). It is represented as 75% of the respondents. This means that majority of the respondents are in this age bracket. The third category is those who are from eighteen to twenty-five years. They are four (4), which represents 11.1% of the respondents. These are displayed in Figure 4.2.

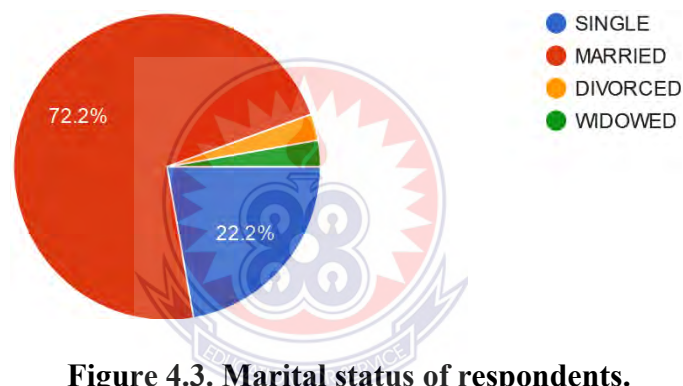


**Figure 4.2: Age distribution of respondents.**

**Source: Researcher’s field work. (2021).**

### 4.2.3 Responses of marital status

The responses of marriage showed that a great number of the respondents are married. This reveals that twenty- six (26) of them are married which represents 72.2% of the thirty-six (36) respondents. Eight of the respondents indicated that they were not married. And that represented 22.2% of all respondents. The remaining parameters are whether the respondents are divorced or widowed. And the result showed that one (1) person divorced and another one (1) person was also widowed. These represented 2.8% each. (Figure 4.3).



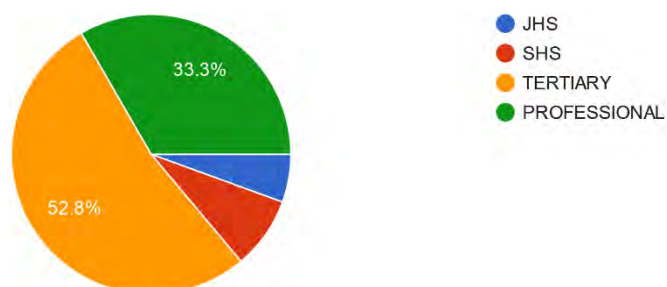
**Figure 4.3. Marital status of respondents.**

**Source: Researcher's field work. (2021).**

### 4. 2.4 Respondents Education Level

Responses on education level indicated that two of them representing 5.6% had JHS education. While three (3) which represents 5.8% had SHS education. But most of them who are nineteen (19) being 52.8% had tertiary education. The second largest group is those that did not have formal education. They are mainly those engaged in the weaving of the smock fabric. They are twelve (12) that represents 33.3% of the

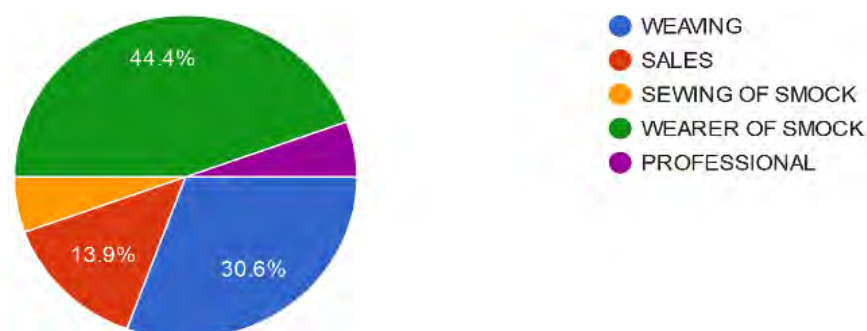
respondents. In Figure 4.4 is a chart depicting the respondents' background of educational.



**Figure 4. 4. Respondents education background.**  
Source: Researcher's field work, (2021).

#### 4.2.5 Responses on the role of individuals in the smock business

The major stake holders in the production of the smock fabric are the weavers who are representing 30.6% of the respondents. Those who do the selling are two (5), which is 13.9% of the respondents. They also play quite a significant role as they ensure that the finished fabrics get to the consumers at the right time and at the appropriate location. The consumers who are the wearers of smock fabric constituted the major respondents of the questionnaire as they are sixteen, which is 44.4%. the last category of the respondents is professionals that are two (2) representing 5.6% in the business. (Figure 4.5).



**Figure 4.5. The role of respondents in smock business.**

Source: Researcher's field work, (2021).



#### **4.2.6 The Kinds of Fabrics produced in the Upper East Region**

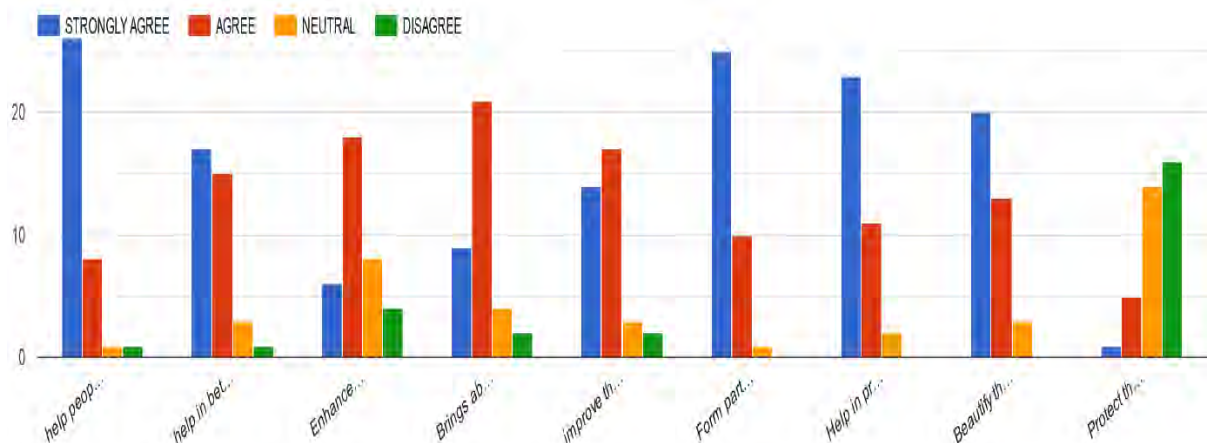
In consideration of the responses given on the kinds of fabrics manufactured in the Upper East Region, all the thirty-six respondents gave varied names. Some of them coincide with each other. These names include: hand woven fabric, lines fabric, plain colour fabric, striped fabric, pure cotton fabric, synthetic fabric, Bawku and Bolga made fabrics, cloth for women, Kusaasi's fabric, Fulani's fabric, Dagombas' fabric, Daboya fabric, all weather fabric and one weather fabrics. This indicates that the names given above are as according to the material used, where it is produced, the colour combination as well as the people who produce it.

#### **4.2.7 Socio-Economic and Cultural Relevance of Fugu Fabrics Produced in Upper East Region.**

This was made in the form of a table where respondents indicated their level of agreement in the accompanying statements. With this, those with the longest bars showed that most of the respondents chose those options. So, the first one is about the contribution of the smock fabric towards earning a living. and most of them strongly agreed that it really helps people earn a living. the next assertion was help in better identification of wearers' status, in which majority also strongly agreed. On the idea that the smock fabric enables wearers to expresses mood, most of them agreed. Other statements saying that the smock fabric brings about foreign exchange and improves the standard of living of people, respondents were positive about them.

Moreover, with the fabric forming part of items used for the performance of cultural activities, helping in preservation of cultural heritage and beautification the wearer, they strongly agreed to those assertions.

However, the last assertion that the fabric protects the wearer from evil spirits was kicked against unanimously by the respondents. The histogram below is a display of the responses.



**Figure 4.6 A chart of responses on socio-economic contributions of the smock fabric to the people of Upper East Region, source: Researcher's field work. (2021)**

#### 4.2.8 Traditional Symbols of Upper East Region

The idea of stating the traditional symbols of Upper East Region saw respondents enumerating names of animals like the *gbigim* (lion), *na'ab dansaar* (chief's walking stick), *su'ong* (rabbit), the python, *tunnug* (a type of fish), *yugudir* (Hedgehog), *zambaad* (Fish), *naaf zuur* (cow's tail), *wief zuur* (horse tail), *waang* (Monkey), *kuur* (Hoe), *zun* (type of wild dog), *dendeog* (the chameleon), *na'ab gbang* (the skin for the chief), *ponna* (frog), *uug* (monitor lizard), *bandaug* (crocodile), *iil* (horn), *te'eg* (baobab tree), *susom* (grass hopper) and *kpaung* (guinea fowl) among others.

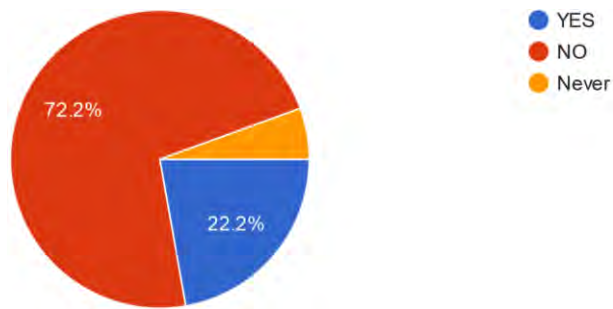
#### 4.2.9 Symbolic Meaning and Philosophical Background

In consideration of the symbolic meaning and philosophical background of traditional symbols of Upper East Region, there were twenty-four (24) Responses. These are as follows. The hedgehog helped the people and they won a battle. It is therefore

considered as a symbol of victory. Another response also indicated that the lion is a symbol of strength and power. In another perspective, the skin symbolizes kingship. Again, Awini, (07/07/2021, personal communication), stated that their fore fathers held the tail of a cow that was crossing a river and sailed safely across a river and were saved from being killed by their enemies. The hoe as mentioned is a symbol of hard work as it is used in weeding to produce food stuff for their consumption. The guinea fowl is a signifier of wealth, because it is not everyone that possess guinea fowls and those that have them are deemed to be wealthy in the society. In general terms most of the responses pointed to the fact that the items identified as totems were those that saved their fore fathers in various ways. These symbols foster unity and togetherness among the people of Upper East Region.

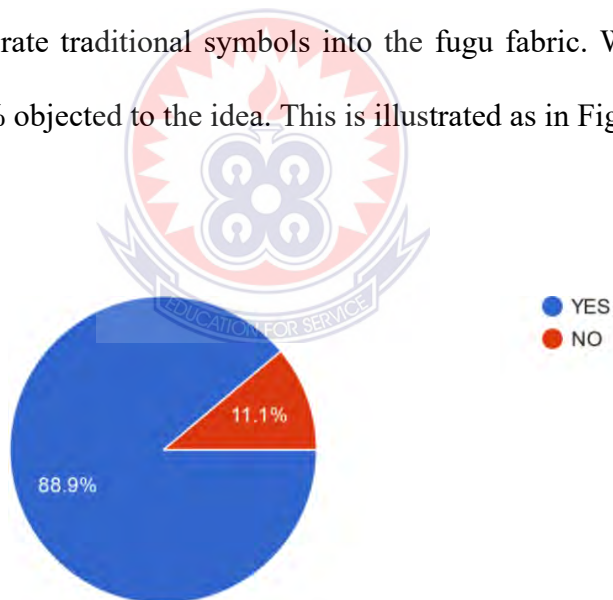
#### **4.2.10 Extent of The Incorporation Traditional Symbols of Upper East Region in Fugu Fabrics.**

With the question have you ever provided fugu fabrics with or seen traditional symbols of Upper East Region in them before? There were thirty-six (36) responses that. Eight of them answered yes, representing 22.2%. whereas twenty-six ( ) answered no. two of them also answered never, being 5.8%, which clearly indicates that the use of traditional symbols on the fugu fabric is not common in the Upper East Region. The chart below depicts the responses.



**Figure 4.7: A chart depicting the responses on whether they have ever seen or provided fugu fabric with traditional symbols. Source: Researcher’s field work. (2021).**

About the question of whether respondents would accept that traditional symbols of the Upper East Region be incorporated in fugu fabrics, thirty-six (36) responses were received. These indicated that 32 of them which is 88.9% accepted that it will be prudent to incorporate traditional symbols into the fugu fabric. While four of them, representing 11.1% objected to the idea. This is illustrated as in Figure 4.8.



**Figure 4.8. A chart showing responses on the design and incorporation of a new fugu fabric with traditional symbols, 23/07/2021.**

### 4.3 Demographic data of interviewees

#### Gender of Respondents

As stated in the sample size ten persons who comprised traditional rulers, opinion leaders, clan heads and assembly men were interviewed by the researcher in this research work. Table 4.1. contains demographic data of respondents.

**Table 4.1 Respondents' gender**

Remarks	Number of respondents	Percentage (%)
Males	10	100
Females	00	00
<b>Total</b>	<b>10</b>	<b>100</b>

**Source: Field Study (2021)**

From Table 4.1, it can be deduced that all the ten respondents, who represent 100% were males. This is due to the fact that males are the custodians of the tradition and culture.

#### 4.3.1 Distribution of Ages of Respondents

The data that followed was the age distribution and the ranges were from 18-25 years, 26-45 years and 45 years and above. See table 4.2.

**Table 4.2 Respondents Age Distribution**

<b>Remarks</b>	<b>Respondents</b>	<b>Percentage (%)</b>
18-25 years	0	00
26-45 years	3	30
45 years and above	7	70
<b>Total</b>	<b>10</b>	<b>100</b>

**Source: Field study of researcher (2021)**

The information presented in Table 4.2 reveals that none of the respondents is between the years of eighteen and twenty-five. Only three of them that represent thirty percent are in the twenty-six and forty-five age bracket. And seven of them being seventy percent of the respondents formed the majority.

#### **4.3.2 Status of marriage**

The interviewees' status of marriage were coalated in Table 4.3. this sought to find out whether respondents were single, married or divorced.

**Table 4.3 Marital Status**

<b>Remarks</b>	<b>Number of respondents</b>	<b>Percentage (%)</b>
Single	0	00
Married	10	100
Divorced	0	00
<b>Total</b>	<b>10</b>	<b>100</b>

**Source; Field Study (2021)**

The data presented in Table 4.3 indicated that all interviewees had married at the time of giving their responses to the interview. This represents 100%.

### 4.3.3 Educational Background

This section of the interview seeks to find out about the education level of the respondents. The data gathered was presented in Table 4.4.

**Table 4.4 Educational Background**

Remarks	Number of respondents	Percentage (%)
J H S	1	10
Secondary	1	10
Tertiary	7	70
Professional	1	10
<b>Total</b>	<b>10</b>	<b>100</b>

**Source: Researcher's Field Work. (2021)**

The information presented in Table 4.4 showed that one person had Junior High School education representing 10%. One of them also acquired Senior Secondary qualification which is 10%. Most of them being a representation of 70% had tertiary education. Whereas one respondent did not have any formal education but had farming as his profession. This formed 10% of the respondents.

### 4.4. Responses to the Interview Questions

A set of areas of focus, questions and probes were designed as in appendix 'B', and administered to chiefs and opinion leaders. When the interview guide was



administered to the respondents, the outcomes were as elaborated below. On the question of the role of the smock fabric in the performance of cultural activities, Aboya Anambotodta. (personal communication, 10/07/2021,) stated that the smock fabric has been used for various occasions such as the enskinment of a chief, festivals and marriage ceremonies. Mbilla Samuel, (personal communication, 14/09/2021), an educationist,

in his view also indicated that the use of the smock depends on the type of cultural activity they want to perform. For example, white is used for performing elderly person's funeral or marriage ceremonies. Awini Adam. (personal communication, 12/07/2021), pointed out further that the smock is used for performing traditional dances, fabric is also used to cover deceased persons and a strip of the fabric (especially white) is used to cover its mouth.

The use of the smock fabric is mostly during festivals and funerals, but it has now become a common dress and people wear it for their day to activities (Aboya, personal communication, 10/07/2021 and Mbilla, personal communication, 14/09/2021,). Aboya pointed further that wearing of the smock commands respect and everybody likes it. Again, Naba Agetwin (personal communication, 12/07/2021,) pointed out that it is not only used in funerals and festivals but it is used in parties, naming ceremonies and of late in in churches as well as in most congregations where people are found.

Mbilla readily admitted that the people of Upper East Region earn a living from the smock fabric as they are engaged in the weaving, they cater for their children in school and some of them even built houses form that. Still on that Aboya emphasized that the demand for the smock is very high and a lot of people are engaged in weaving the fabric. It therefore creates an employment avenue for young girls and those who

sew the smock. Naba Alhaji Adam and Naba Agetwin (personal communication 12/07/2021,) also confirmed this by adding that a lot of people in the five northern regions are engaged in the smock business in weaving sewing and sales of the finished products. And earn their livelihoods from it.

When asked about the traditional symbols used in your locality, Mbilla stated that symbols are not very common with us. But said that a chief's staff is sometimes used as a symbol of authority. However, Aboya agreed that there are a lot of traditional symbols, in that some people have made them in the form of statues and kept in their homes whilst the chief made them on his walking stick and on his dress sometimes. In the same vein, Naba Agetwini observed some of the traditional symbols as crocodile, leopard, fish, snake, scorpion and hedgehog.

The use of totems is very synonymous with the people of Upper East Region. One of them is the monitor lizard which was said to have drawn their fore fathers' attention to save their child when the child was laid under a tree whilst they were in the bush, a snake went to harm the child and the monitor lizard run to them and they chased it and it run towards the child. They got there and saw the snake on the child and killed it. So, they decided that the monitor lizard is their totem (Mbilla, Personal communication, 14/09/2021.). Aboya also mentioned the *zun* which is a wild dog as their totem because it is that animal that showed their fore fathers a particular herb. He also mentioned the lion, crocodile, *zansirig* (a squirrel-like animal) and the frog but could not explain how they came about. Naba Agetwin explained that in the olden days their fore fathers were in the battle ground and all their spears finished such that they started retreating. They got somewhere along the way and saw a dead hedgehog.

They picked it and used its thorns, fought and won the battle. With this, they decided that they will never eat the flesh of the hedgehog again, since then it became their totem.

Mbilla suggested that our totems can be made known to the general by documenting them. Naba Agetwin on his part lamented that if not because of covid-19, people could always come together to say the things that could identify them for others to know how they started and all that they have achieved in life.

These totems are beneficial as they guide in terms of morals to us and help to protect us (Mbilla, personal communication, 14/09/2021). To that effect, Aboya added that they have drawn their *zun* in the chief's palace but when you go elsewhere you have to ask for them to tell you. They also serve as a means of identifying the various tribes (Naba Agetwin, personal communication, 12/07/2021).

On the designs on the smock fabric there are *abibe* (stripes of certain colours) and *kpaungkobug* (guinea fowl colour). The guinea fowl colour has some healing properties. For example, when a child is always falling sick, they use the guinea fowl feather colour and sew for the child and the sickness will stop. This guinea fowl colour was used by only chiefs and very powerful persons like herbalists and fetish priests (Anambototta, 10/07/2021, Ayaabila and Mbilla, 14/09/2021. Personal communications). There is some spirit associated with that and ordinary people cannot wear it.

They accepted that there is a need for an improvement. There should be designs to help identify chiefs from the ordinary people.

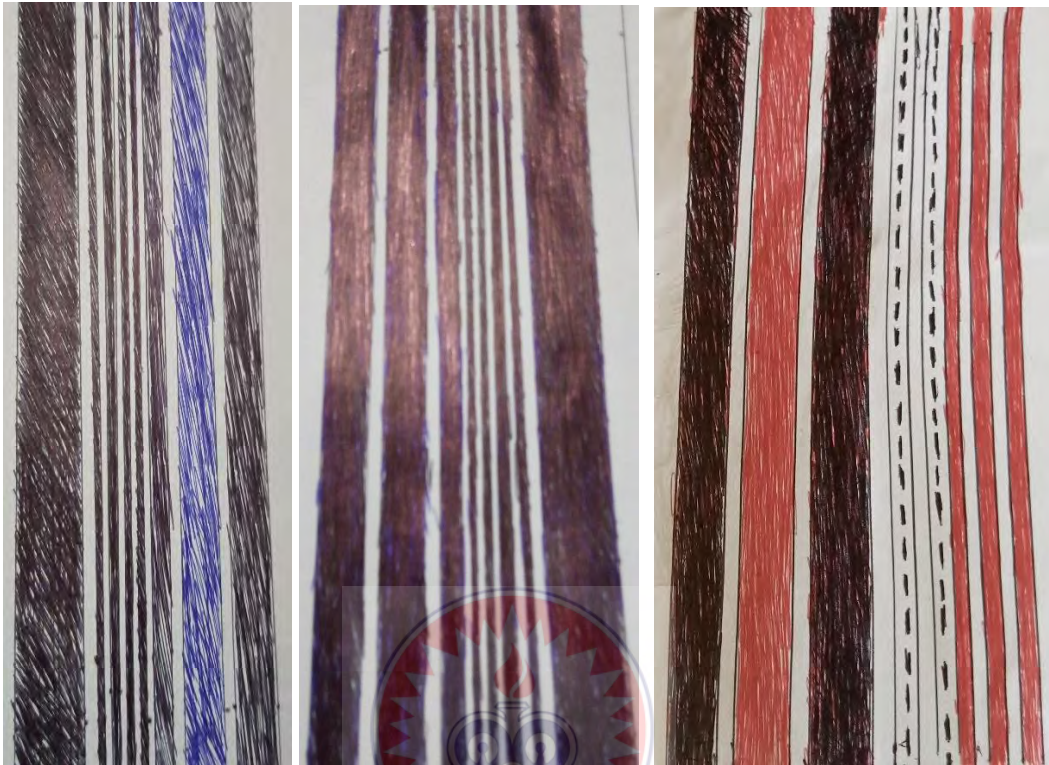
On the other uses of the fabric, Mbilla said that it is used to tie around trees as a means of worship or a request made by the tree through South Sayers. Ayaabila, (personal communication, 13/09/2021), also reiterated that the use of smock has gone national and international. It should be infused into our church activities in their casocks, it also be accepted in the court instead of using only the suit. The smock should also be accepted as a formal dress so that when one wears a suit to an interview and another person puts on a smock, they should be given the same mark for their dressing (Ayabilla, personal communication, 13/09/2021).

They suggested that apart from the traditional ceremonies, the smock fabric can also be used for making curtains, table cloths, chair backs and many others. Naba Agetwin hoped that the fabric could have been used as a uniform for some people in the five northern regions or adopted as a Friday wear which will help market the fabric.

#### **4.5 Designing of the Symbolic Fabrics**

The fabric was designed through the use of hand sketches and the laptop computer with a software known as photoshop. In this process, the strip fabrics and the some traditional were sketched on pieces of paper (Figs. 4.9 & 4.10). They were then developed through the use of the photoshop that was launched and a template was opened. Settings were made on it in terms of the size of the design, the resolutions as well as the colour scheme. The researcher then made the stripes first as the traditional smock fabric. Motifs were selected and superimposed on the striped design to give it a new look. These motifs are the totems associated with some of the various clans in Upper East Region, which includes: a lion, a hedgehog, a fish, the tail of a cow, a coiled snake, tortoise, crocodile and chameleon. After the production of the strips of

fugu fabrics and the traditional symbols being incorporated on them, several repeats were made and larger pieces of cloth were obtained.

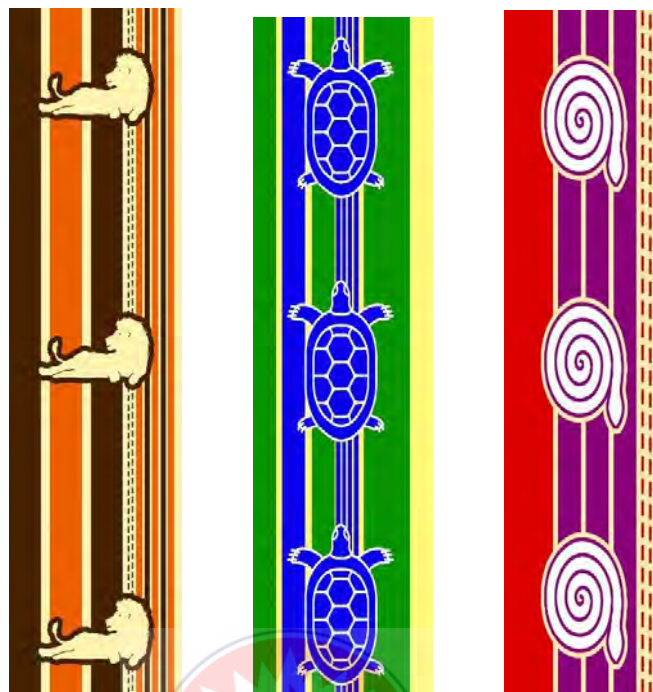


**Figure 4.9. sketches of striped fabrics. Source: Researcher's field study. (2022)**



**Figure 4.10. Sketches of tortoise, fish and lion. Source: Researcher's field study. (2022)**





**Plate 4.1 Sample designs of strips of fugu with lion, tortoise and coiled snake.**

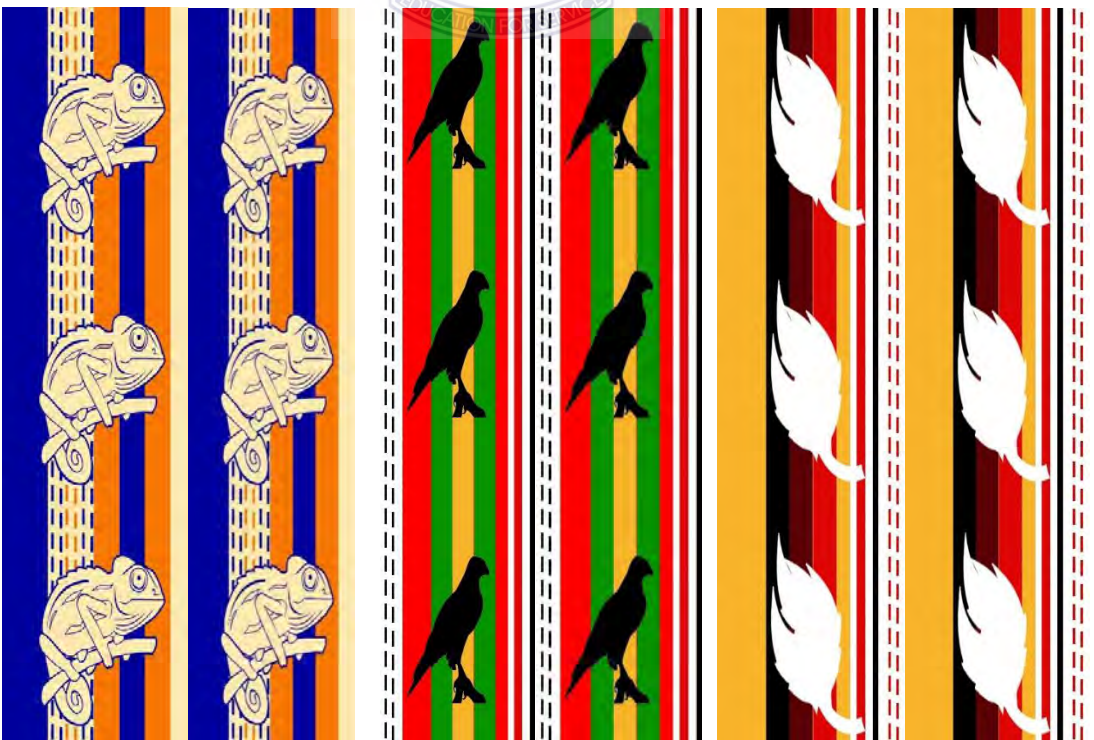
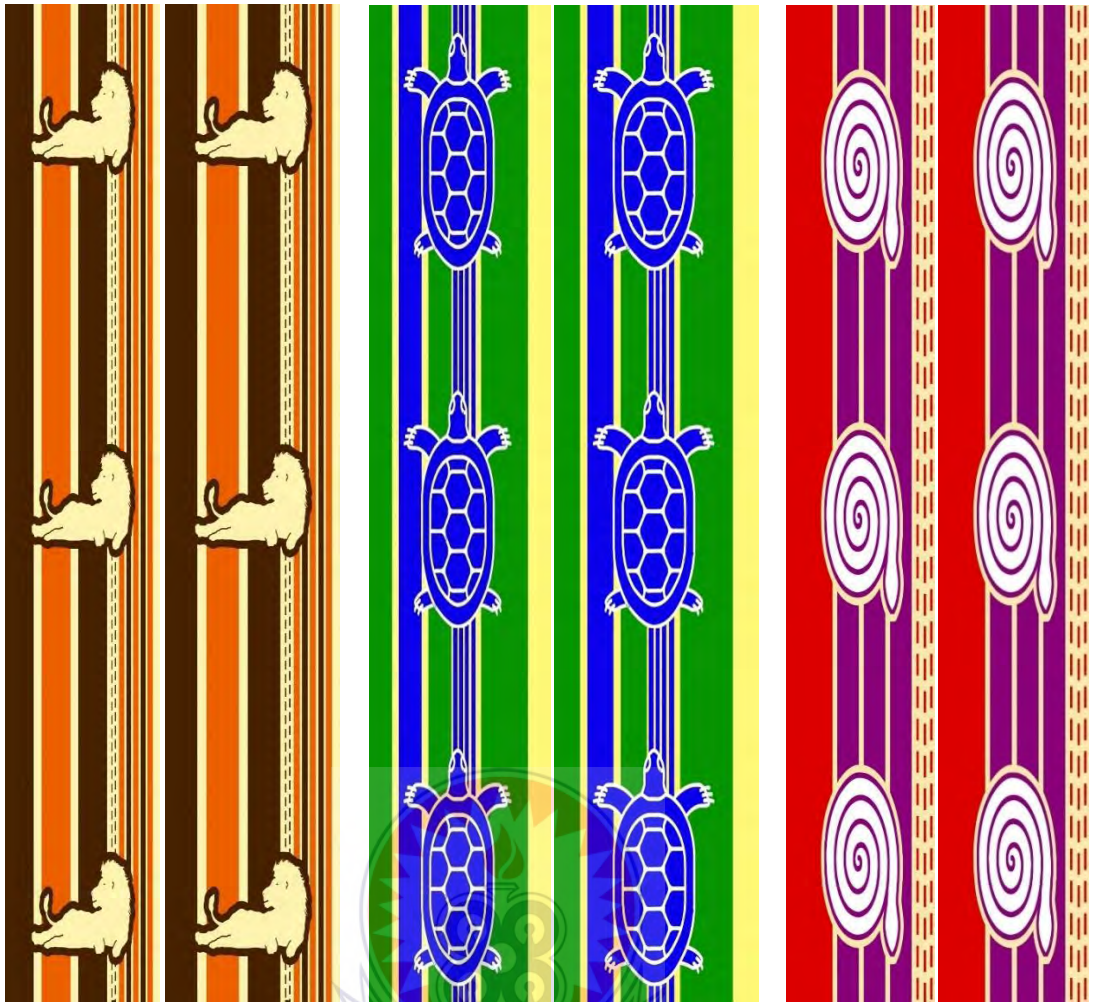
**Source: Researcher,s field work. (2021)**

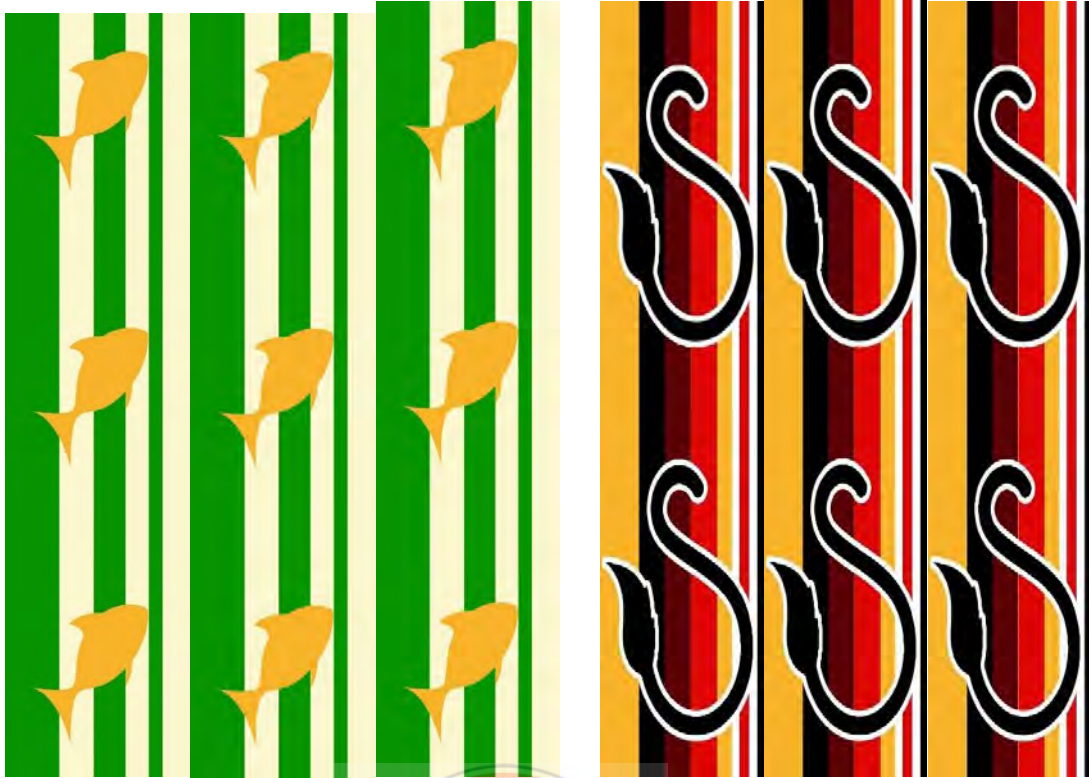


**Plate 4.2 Sample of strips designs of fugu with cameleon, cow's tail and a fish.**

**Source: Researcher's field study. (2021).**







**Plate 4.3: Sample repeats of the fugu fabric designs with totems as motifs.**

**Source: Researcher's field work, (2021).**

Two of them which are the one with the lion and the tortoise were chosen for the final design.

#### **4.5 The step-by-step processes of weaving the symbolic Fugu Fabric**

Just as any woven textile material, the *fugu* fabric goes through almost the same stages of construction. These stages are warping, pirning, heddling, reeding and weaving. The stages the researcher went through in weaving the fabric are as outlined below.

##### **Warping**

The warping was done by using the warping mill which is a metal frame. The researcher wound the warp yarns on to the warping mill starting from the base round

to the top and back to the bottom for the required length. The number of rounds depends on the size of the size of the warping mill. This was removed from it and sent to the loom for the heddling. Plate is a picture of the warping process.



**Plate 4.4: Researcher warping on the warping mill.**

**Source: Researcher's field work. (2021).**

### **Heddling**

In the heddling process the researcher passed the warp yarns through the eyes of the helds. The individual warp yarns were taken through the helds. In order for the *fugu* to be thick and strong the yarns were doubled. This made it heavy which is a characteristic of the smock fabric. Those that are very thick are called 'all weather' and the lighter ones are known in the local setting as "one weather". This is achieved through the heddling before weaving was done. This process is illustrated in plate 4.5.





**Plate 4.5: Researcher heddling.**

**Source: Researcher's field work. (2021)**

### **Reeding**

After heddling, reeding was the process that followed. This was done by passing the threads from the eyes of the holds out of the dents of the reed. The reed is part of the loom that is used in drawing the filling yarns to the fell of the fugu. It aligns the weft straight and perpendicular to one another, thereby making the yarns lie closer to each other. The process that followed was stretching tying the warp yarns on to the cloth beam.

### **Pirninig**

The process that followed the reeding was piring. In this process the researcher prepared the the filling yarns by winding the thread from the cones onto pirns that will fit on to the shuttle for interlacing. When the pirns were ready, the actual weaving commenced.

## Weaving

Weaving was done on the loom. The loom that was used by the researcher for the weaving was made of metal. The mechanisms involved in this process are shedding, picking and beating-up. The heddles were used in the process as it was done by pressing one down so as to divide the warp yarns in to two halves, one down and the other up thereby creating a shed. This process is referred to as Shedding.

The weft yarn on the pirn in the shuttle was then passed through the shed, the process known as picking. This is done from one side to the other. When this was completed, the thread was pulled through to align horizontally within the warp yarns.

The reed was then pulled to drive the interlaced weft yarn to the fell of the fabric. This is what is known as beating-up in the weaving process. This brings to an end one interlacing. A repetition of this process was continued that led to a completion of the weaving process. The *fugu* fabric was removed from the loom by cutting on the remaining short warp yarns from both ends. The picture below shows the weaving process.



**Plate 4.6: Researcher in the process of weaving the fabric.**

**Source: Researcher's field work. (2021).**

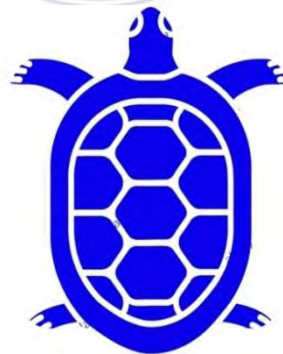
#### 4.6 Incorporation of the traditional symbols into the *fugu* fabrics

There are quite a lot of traditional symbols used in the Upper East Region. These are however, not so popular as some of them are only displayed at the palaces of chiefs. Yet some of the symbols are found in wise sayings and totems. These totems are in the form of animals adopted by the people. Two of the totems were chosen for incorporation into the smock fabric. See figures 4.1 and 4.2.



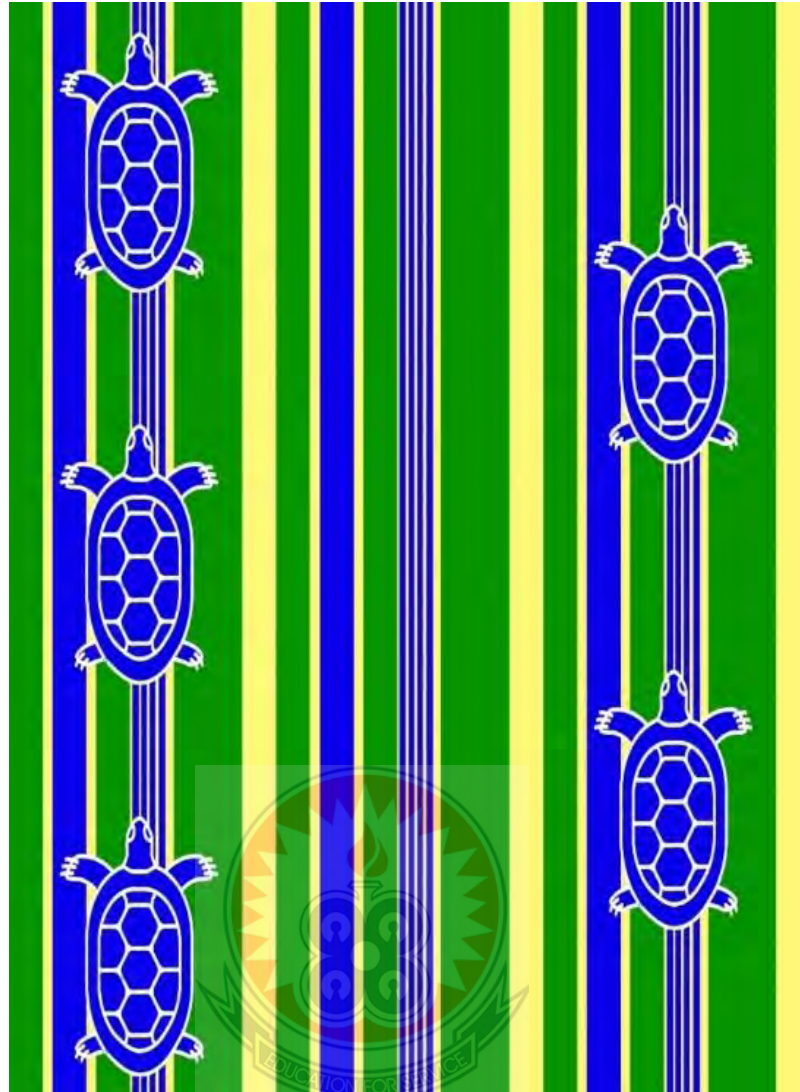
**Figure 4.11. selected lion totem for the new smock fabric.**

**Source: Reseacher's field work, (2021).**



**Figure 4.12. selected tortoise for the new smock fabric.**

**Source: Reseacher's field work (2021).**



**Plate 4.7. Selected sample of designed fabrics with the tortoise for the final new smock fabric. Source: Researcher's field work. (2021).**





**Plate 4.8: Selected sample of designed fabrics with the lion for the final new smock fabric. Source. Researcher's field work. (2021).**

After the striped fabric was woven, the chosen symbols were then transformed into the embroidery state through the use of the laptop computer and a software known as

Corel draw. The software aided in the separation of colours of the thread to be used. It also indicated the thickness of the stitches required for the designs. This was then inserted into the digital embroidery machine and saved into it. The next step was that the position of each symbol was marked on the fabric and that around that particular spot was stretched with an embroidery hook. The stretched area was placed on the embroidery machine and the needles set properly on it. After the fabric was appropriately set on the machine, I turned the machine on and made the embroidery stitches onto the fabric. This process was repeated until all the marked areas were embroidered. The other two fabrics were subjected through the same process and were done. (Plate 4.9)



**Plate 4.9. Incorporation of the traditional symbols onto the fugu fabrics.**

**Source: Researcher's field work. (2021).**

This brought about the smock fabric with the symbols on them. The finished fugu fabrics are displayed in Plates 4.10 and 4.11.



**Plate 4.10. New fugu fabric with tortoise incorporated on it.**

**Source: Researcher's field work. (2021).**





**Plate 4.11: New fugu fabric with lion incorporated on it.**

**Source: Researcher's field work. (2021).**

#### **4.7. Appreciation of the new symbolic *fugu* fabrics.**

With the questions seeking respondents views on their level of acceptance of the fabric, there were thirty-six responses. Twenty-six of them representing 72.2% strongly agreed that it will project the culture of the people, bring about unity and create job opportunities. Whilst five of them representing 14% agreed, four (10.2%) remained neutral and only one (2.8%) disagreed

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.1 Introduction

Findings and discussion is is dealt with here. It involves vivid discussion of the novel findings of this research work. It is quite interesting to reveal that the fugu fabric means more to the People of Upper East Region than just a piece of fabric. The extent of the use of traditional symbols and totems are also discussed here. These revelations are discussed as follows.

#### 5.2 Traditional Symbols of Upper East Region

The research reveals that the people of Upper East Region have no recorded images that they use as their symbols. This is evident in the searches that were made in the related literature which indicates that there was no trace of any documented traditional symbols of the people. It is however prudent to note that the region has a great deal of objects that could be studied carefully and documented as traditional symbols. Such items include: the chief's skin, and the staff. Others are names of things always mentioned in proverbs and wise sayings, their totems, the images portrayed in the Sirigu murals as well as geometric shapes used in embellishing earthen ware bowls and pots.

#### 5.3 Contribution of the *Fugu* Fabrics to the Performance of Cultural Activities

Another intriguing discovery that is worth discussing is the smock fabric being part and parcel of the culture of the people. In consideration of the responses gathered, it

showed clearly that the fugu fabric is one of the main items used in the performance of cultural activities. This found where the fugu is used; to cover the deceased's body and mouth and for burial, to perform the traditional dances of Upper East Region, for consummation customary marriages, as part of the regalia for enskinment of a chief as well as sacrifices to trees and shrines.

#### **5.4 Totems of the People of Upper East Region**

One other thing to be noted well in the findings is the essence of totems. Almost all tribes and clans in the Upper East Region have a totem. These totems were said to have played very significant roles in their lives that made them develop great love and respect for them. They will never eat its flesh neither will they bear to see it being molested by anyone. The respondents disclosed that some of the totems sometimes ago do visit their homes and they receive them cordially by giving them flour water and they never harmed anybody. But currently, due to urbanization these animals are becoming endangered. They no longer come closer to their homes. They reiterated that these totems unite them as a people anytime they are reminded about the role played by these totems towards the survival of their fore fathers.

#### **5.5 Economic Importance of the Smock Fabric in Upper East Region**

Another discovery that is of great significance is the unanimous admission of the fact that the fugu fabric has a great economic impact on the people of Upper East Region. All the respondents whole heartedly pointed out that all of them (weavers) engaged in the smock business earn good living from it. They are able to fend for themselves, their children and even their husbands, in the case of the women who are mostly the

weavers. Those who do the sewing and sales have also attested to the fact that they make good living out of that. Bernard A. (2017) also found out in his research on Smock Weaving in Bolgatanga that the smock fabric contributes a lot in improving the economic conditions of the people. Therefore, the fugu fabric is of enormous economic importance to the people of Upper East Region.

### **5.6 Kinds of Fugu Fabrics**

This research work has gathered that the fugu fabrics are of two main categories. That is ‘all weather and one weather’. The ‘all weather’ fabric is a thickly woven fabric made with doubled and plied yarns that is suitable for all weather conditions. Whereas the ‘one weather’ is a lighter fabric that loose and soft which is mostly used for the females’ garments, other names were also given to the fabric based on the colours of yarns used in weaving them. For example, the *kpaunkobug* (guinea fowl feathers), *abibe* (blue, black and white yarns) fabric, *adaaliya* (red, black and white) yarns fabric, *mulunzia* (red and white) yarns fabric and *palnaab* (blue, cream and black) yarns fabric.

### **5.7 Wearing of Smock with the Hat**

The study also revealed that the hat which is usually made of the same fabric as the smock and sometimes with a different fabric, is the item that complements the wearing of smock. It has the right way of wearing it, depending the status of the wearer. It showed that it only a chief who can wear a hat and leave it standing upright. The common man wears it by skewing it to either the right or left that means you are for peace. When it is skewed towards the front it connotes that the wearer has stronger



people ahead to protect him. But skewing it towards the back indicates that one has followers backing him. It is therefore imperative for one to bear in mind the implications of positioning the smock when wearing it in order to avoid landing himself into trouble in the mist of chiefs or spiritually strong persons.

### **5.8 Incorporation of Traditional Symbols into the Fugu Fabric**

The incorporation of traditional symbols into the fugu fabric was the main idea that prompted the study. Even though the Upper East Region is no developed symbols that could be incorporated into the smock fabric, it is imperative to bring to the fore that the totems are handy which the researcher substituted as the traditional symbols and designed the new fugu fabric with them as the motifs. This brought about fabrics with the lion and the tortoise as the symbols which were put on the fabric through the use of the digital embroidery machine. These fabrics were highly appreciated by the people upon seeing them. It has in effect made the fabric more attractive, added value and gave meaning to it. These new fabrics will always remind the people of their beginning and foster a sense of unity among the people.

## CHATER SIX

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Summarized Findings

The discoveries made as a result of this research work have great deal of impact as additional knowledge that was unearthed.

First among them is having known that the people of Upper East Region did not have documented traditional symbols that symbolizes ideas and certain philosophical background. They however, have a very rich culture packed as objects and wise sayings that could be transformed into traditional symbols to be used as representations of ideas and concepts.

Another significant contribution of this research work to knowledge is that it has brought to bear the improvement in the lives of the people economically. Readers are well informed about how the smock business helped people earn a living in the Upper East Region.

One other contribution of this study to added knowledge is the unveiling of the totems of the people of Upper East Region. We are now more informed about the history behind some of the totems of the people of Upper East Region which indicated that these totems are the animals that saved our fore fathers in various ways. So, they adopted them as part and parcel of their lives.

Moreover, the role of the smock fabric in the performance of cultural activities was brought to light by this research. It was made known that the fugu fabric is one of the main items used in performing cultural activities such as customary marriages, traditional dances, covering the dead, tying round trees and the performance of

spiritual activities. This has therefore shown that the fabric is a tool for cultural performances and traditional rites.

Last but not least, the incorporation of the traditional symbols on the fugu fabric was the major discovery that can not be over emphasized. It has informed the people that the incorporation of other symbols onto the fabric instead of the lines only has added a lot of aesthetic value to it. The symbols being incorporated have made the fugu fabric more attractive and suitable for the performance of cultural activities. This has rendered it possible to assign names (not done yet) to the various designs of the symbols instead of calling it fugu.

## **6.2 Conclusions**

This research work which was a probe in to the fugu fabric, Upper East Region's traditional symbols and totems of the Upper East Region as well as the cultural and socio-economic contribution of the fugu fabric to the people of Upper East Region, saw that the fugu fabric is used in the performance of socio- cultural activities like marriage ceremonies, funeral rites and traditional worship.

Again, the fugu fabric serves as an economic booster to the people as they earn a good living from the weaving, sewing and sales of fugu garments, bags, accessories and the smock itself. However, the northern traditional symbols were not yet developed and documented. But with the zeal to come up with a new fugu fabric, some of the people's totems such as the lion, the tortoise, the cow's tail, the hedgehog, the python, the crocodile and many others that they use as representations in their chiefs' palaces were adopted as symbols and used in designing and weaving the fugu fabric. This came out as an attractive fabric highly cherished by the people. This study has

therefore revealed that the fugu fabric has a great deal of economic potential and could be harnessed to reach its full potential so as to better the lives of the people by investing in to the people to render them more skillful so that they can improve upon the aesthetic qualities of fugu fabric.

### **6.3 Recommendations**

Notwithstanding the fact that the main objective of the research which is to design and produce fugu fabric with northern traditional symbols have been achieved, the researcher recommends that further research can be conducted to identify totems of the various clans, develop and document northern traditional symbols that could be readily available for any purpose.

Again, the smock fabric weaving is a very lucrative area that requires utmost attention from the government and well-meaning Ghanaians in order to create more jobs and reap the full benefits from it through export that can generate very substantial amount of foreign exchange for the nation.

### **6.4. Recommendations for futher studies**

Based on the findings of this research, the researcher recommends that further research be made on documentation of the traditional symbols of Upper East region. This will help preserve them for future generations.

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**APPENDICES**

**APPENDIX A**

**UNIVERSITY OF EDUCATION, WINNEBA**

**COLLEGE OF TECHNOLOGY EDUCATION-KUMASI**

**SCHOOL OF GRADUATE STUDIES**

**DEPARTMENT OF FASHION DESIGN AND TEXTILES EDUCATION**

**QUESTIONNAIRE FOR THE FABRIC MANUFACTURERS**

**TOPIC: INCORPORATION OF GHANA’S NORTHERN TRADITIONAL  
SYMBOLS INTO *FUGU* FABRIC**

**SECTION A; Demographic Data of Respondents**

Please tick (✓) in the spaces provided where appropriate

1. Gender: Male [ ] Female [ ]
2. Age 18-25 [ ] 26-45 [ ] 45 and above [ ]
3. Marital status. Single: [ ] married: [ ] divorced: [ ]
4. Educational Background: JHS [ ] SHS [ ] Tertiary [ ] Professional [ ]
5. Occupation: weaving [ ] sales [ ] sewing of smock [ ]

**SECTION B: Cultural and Socio-economic Relevance of *fugu* fabrics.**

6. What are the kinds of *fugu* fabrics produced in the Upper East Region of Ghana?

.....

.....

.....

.....

.....

7. Socio-economic and cultural Relevance of *fugu* fabrics produced in Upper East Region. Please tick (✓) in the appropriate box to indicate your level of agreement or disagreement with the statements blow. The *fugu* fabric:

Sn	Statement	Strongly agree	Agreed	Neutral	disagree
1.	Help people earn a living	[ ]	[ ]	[ ]	[ ]
2	Help in better identification of wearer	[ ]	[ ]	[ ]	[ ]

	and their status.				
3.	Expresses mood of people wearing them.	[ ]	[ ]	[ ]	[ ]
4.	Brings about foreign exchange.	[ ]	[ ]	[ ]	[ ]
5.	Improve the standard of living of people.	[ ]	[ ]	[ ]	[ ]
6.		[ ]	[ ]	[ ]	[ ]
7.	Form part of items used for the performance of cultural activities	[ ]	[ ]	[ ]	[ ]
8.	Help in preservation of cultural heritage	[ ]	[ ]	[ ]	[ ]
9.	Beautify the wearer	[ ]	[ ]	[ ]	[ ]
	Protect the wearer from evil spirits				

**SECTION C.**

8. What are the traditional symbols of the Upper East Region of Ghana and their symbolic significance?

Sn. Name of Traditional Symbol	Symbolic Meaning And Philosophical Background
1.	
2.	
3.	

4.	
5.	
6.	
7.	
8.	

**SECTION D: EXTENT TO WHICH TRADITIONAL SYMBOLS OF UPPER EAST REGION ARE INCORPORATED IN *FUGU* FABRICS**

9. Have you ever provided *fugu* fabrics with traditional symbols of Upper East Region in them before? Yes [ ] No [ ]
10. If yes, to what extent do you use the traditional symbols of the Upper East Region? Always [ ] Occasionally [ ]

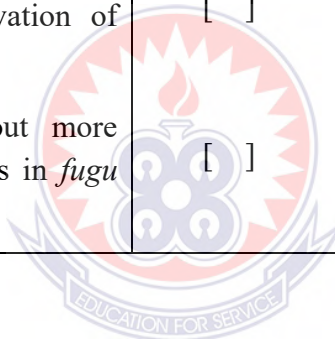
**SECTION E: PRODUCTION OF *FUGU* FABRICS WITH THE INCORPORATION OF TRADITIONAL SYMBOLS OF UPPER EAST REGION.**

11. Would you accept that traditional symbols of the Upper East Region be incorporated in *fugu* fabrics? Yes [ ] No [ ]
12. Give reasons for your answer to question 11 above;  
 .....  
 .....  
 .....
13. If yes to question 11, what are your suggestions for the designing and production of the new *fugu* fabrics?  
 :.....  
 .....  
 .....  
 .....
14. Any other suggestions:  
 .....  
 .....  
 .....  
 .....

**SECTION E: APPRECIATION OF THE NEW SYMBOLIC *FUGU* FABRICS**

15. Please tick (✓) in the appropriate box to indicate your level of agreement or disagreement with the statements blow. The new *fugu* fabric:

Sn	Statement	Strongly agree	Agree	Neutral	disagree
1.	Will help project the traditional symbols of Upper East Region.	[ ]	[ ]	[ ]	[ ]
2.	Will promote unity and a sense of belonging.	[ ]	[ ]	[ ]	[ ]
3.	Is more attractive than the one with only stripes.	[ ]	[ ]	[ ]	[ ]
4.	Has symbolic meanings.	[ ]	[ ]	[ ]	[ ]
5.	Help in preservation of cultural heritage	[ ]	[ ]	[ ]	[ ]
6.	Will bring about more job opportunities in <i>fugu</i> fabric weaving.	[ ]	[ ]	[ ]	[ ]





**APPENDIX B**

**UNIVERSITY OF EDUCATION, WINNEBA**

**COLLEGE OF TECHNOLOGY EDUCATION-KUMASI**

**SCHOOL OF GRADUATE STUDIES**

**DEPARTMENT OF FASHION DESIGN AND TEXTILES EDUCATION**

**INTERVIEW GUIDE**

<b>FOCUS AREAS</b>	<b>QUESTIONS AND PROBES</b>
1. Cultural and socio-economic contribution of the smock fabric.	<ol style="list-style-type: none"> <li>1. What is the role of the smock fabric in the performance of cultural activities?</li> <li>2. Which occasions do people use the smock fabric?</li> <li>3. In which way do the people of Upper East earn a living from the smock fabric?</li> </ol>
2. Traditional symbols and their meanings	<ol style="list-style-type: none"> <li>1. Which traditional symbols are used in your locality?</li> <li>2. How were they obtained?</li> <li>3. What do the traditional symbols stand for?</li> <li>4. How beneficial are they to the people of your community?</li> </ol>
3. Totems and their meanings	<ol style="list-style-type: none"> <li>1. Can you identify some of the totems revered by the various clans in your community?</li> <li>2. Which role do totems play in the lives of the people in your community?</li> <li>3. How did some the totems in your community come about?</li> <li>4. How can we make our totems known to the general public?</li> <li>5. What benefit do you derive from these totems?</li> </ol>
4. Designs and motifs on the fabric	<ol style="list-style-type: none"> <li>1. What shapes are used as motifs in designing the smock fabric?</li> <li>2. What is your impression about the designs on the fabric?</li> <li>3. Is there a need for an improvement on the design of the fabric?</li> </ol>
5. Other uses of the fabric	<ol style="list-style-type: none"> <li>1. Are there other uses of the fabric apart from traditional ceremonies?</li> <li>2. Apart from the smock and other traditional garments which way do you think smock fabric can be utilized?</li> </ol>