UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

DESING AND PRODUCTION OF CLOTHS FOR BUILSA NORTH DISTRICT DRESSMAKERS' ASSOCIATION

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1056100

A Thesis in the Department of Fashion Design and Textiles Education, submitted to the school of Graduate Studies in Partial Fulfillment of the requirement for the award of Master of Technology (Fashion Design and Textile) degree

JUNE, 2022

DECLARATION

STUDENT'S DECLARATION

I, ANYAMASAH MATILDA AYAAMI, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is part or whole, for another degree elsewhere.

SIGNATURE:……

DATE:……

SUPERVISOR'S DECLARATION

I/We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis/dissertation/project as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: MR. ISAAC ABRAHAM

SIGNATURE:……..

DATE:……..

DEDICATION

I dedicate this work to my supportive husband Mr. Agaabil Henry Adeenze and two lovely children Atabadek Adeenze and Aboka Adeenze.

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Thank you to my family, program coordinator Dr. Josephine Ntiri, the Head of Department and staff of Fashion and Textiles Design, my abled supervisor Mr. Isaac Abraham, the Head of Department for Visual Art, Sandema Senior High School, friends and course mates of Master of Technology 2020-year group. Also, I thank all dressmakers in the Builsa North District for their support during his project.

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ABSTRACT

This study aimed to design and produce a textile cloth for the dressmakers' association in the Builsa North District in the Upper East Region of Ghana. Consequently, the study was rooted in the interpretive qualitative research approach, which entombed arts-based research design to interview, observe, produce and interact with twenty participants to evaluate the methodological preference. The research delved deeply into the knowledge of dressmakers in the Builsa North District, designed and produced a textile cloth for the association. The study revealed that the dressmakers employed thumbnail sketches, designed their motifs with Corel Draw application software before producing their fabric. Also, it showed that the design process involved idea development, thumbnail sketches, motif development and pattern arrangement. The pattern arrangement employed the full drop repeat and side repeat pattern arrangements. The study highlighted that the production stage included screen developing, fabric dyeing and printing on the fabric. The study employed mesh, squeegee, printing paste, photo emulsion, stencil, fabric, screen, stapler and kerosene as some of the tools and materials in the production of the textile cloth for the association. Judgment sample, or Expert sample, is a type of non-random sample that is selected based on the opinion of an expert. Results obtained from a judgment sample are subject to some degree of bias, due to the frame and population not being identical. The frame is a list of all the units, items, people, etc., that define the population to be studied. Judgement sampling is the noble to provide detailed information about the difficulties in obtaining the distinction. A random sample would provide less bias, but potentially less raw information. The downfalls of this system are significant as any non-random sample brings bias into question, which limits the

types of statistical analyses that you may reasonably perform, and there are considerable limits to an expert.

Similar studies should be conducted on the design and production techniques of other dressmakers' associations in different geographical locations to understand their design and production process as the study recommended. A manageable sample size of twenty (20) individual was used in the study, five (5) Sandema, Wiaga, Chuchliga, Siniensi and Fiisa.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Ghanaians are ardent fashion enthusiasts. Their dress, however, is based on more than simply bright colours and flowing frocks, with ancestry and culture playing a vital role in style decisions. Fashion is an elusive hitherto important form of self-expression. The patterns, styles, materials, and colours of our garments, as well as the manner we wear them, express our history and culture, as well as our current dispositions and attitudes. Fashion is as significant in Ghanaian culture as any other aspect of life. Each ethnic group, with their different culture spread across the country, expresses themselves distinctively via their clothing.

Since the Prehistoric Age, one of the most basic human needs has been to conceal and shield one's body from the elements of cold and/or severe weather (Norch & Harlow, 2014). Many anthropological and archaeological investigations have shown the practical and symbolic value of textiles throughout human history, particularly in rituals, events, and celebrations. Textile manufacturing is continually expanding by catering to fashion, style, and marketing requirements, as well as increasingly competitive technological hurdles. The prospect of innovation and progress contrasts with the extremely polluting impact of this industrial activity on the environment (Scholarly Community Encyclopedia, 2022).

The use of textile cloth is on the ascendency as brand identity and uniqueness have been the hallmark of most establishments or associations. Some associations use linen, silk, wool, and cotton to create their brand identity. These textiles products are

designed to build a solid brand for the establishment (Ninja, 2022). The brand identity through designs enables the association to stand apart from its competitors. Designing textiles is the process of planning and producing fabric to have an aesthetic appearance and structure. This involves woven or knitted cloth or printing cloth on fabric. Textile design enables fashion to have unique brands through their patterns or prints.

The use of textile cloth among dressmakers in Ghana is on the increase as most of them believe in brand identity and uniqueness. Textile fabrics are woven or bonded together using either natural or synthetic yards or threads (Stewart, 2022). The fabrics include gold, cotton, and leather. The use of these fabrics is to produce textiles products for aesthetic purposes. The fabrics are made from animals, minerals, plants, and manmade synthetic materials. Plant-based fabrics include cotton, linen. Jute, and hemp. Cotton is used in producing clothing and bedding, linen used for clothing, curtains, and tablecloths; hemp used in making durable clothing, shoes, home furnishings, and furniture and jute used to make rugs, carpets, twine, sacks, and linoleum. The animal fabric comprises silk, wool, and leather (fibre2fashion, 2022). Silk is used in producing sarees, nightwear, bed linen, underwear, and home finishings. Wool is used in producing fashionable winter apparel due to its soft touch and warm nature. Leather is used in making shoes, bags, and garments.

Textile cloths are used to provide shelter and clothing, dental and medical devices, protective firefighting, military clothing, and gear to humankind. This is the reason much attention should be given to the design and production processes of textile cloths.

1.2 Statement of the Problem

The use of textile cloth to shield humankind is enormous and sacrosanct to the development of any nation. The textile industry plays an enormous role in transforming the economy. In Ghana, textile exports are a major source of foreign exchange and revenue for manufacturing industries (Quartey, 2006). For instance, in 1992 and 1994 textile exports generated $27.2 and $179.7 million dollars respectively Adu-Boahene, K (2008) . This shows that the textile industry indeed is a major financier to the Ghanaian economy but less scholarly work exists in the field.

The study by Gbetodeme et al., (2016) which employed a descriptive survey assessed basic design, a needed foundation for designing a successful garment: A case study of dressmakers in Ho Municipality, Volta Region, Ghana. The study revealed that dressmakers have a deficit in design elements and principles hence are not able to produce high quality garments for the competitive market. However, the study failed to investigate the preference of dressmakers in designing textile cloth for their association.

Therefore, the necessity to design and produce a textile cloth for the dressmaker's association was under-explored through an arts-based research design. This has prompted in-depth research into the phenomenon and finding out the knowledge of dressmakers in the Builsa North District on Textile cloth designing and production. Also, describe the design process used in chronological order and produce the textile cloth for the dressmaker's association employing an arts-based research design informed by the interpretative qualitative research approach.

1.3 Purpose of the Study

The purpose of this study was to produce fabric for the dressmaker's association in Builsa North District.

1.4 Specific Objectives

The research sought to:

1. Investigate dressmakers' knowledge on the design and production of textile cloth in the Builsa North District;
2. Describe the design process employed in producing the textile cloth in chronological order;
3. Produce the textile cloth for the dressmaker's association in the Builsa North District.

1.5 Research Questions

1. What knowledge do dressmakers have in designing and producing a textile cloth for an association?
2. What is the procedure for producing textile cloth?
3. How can textile cloth be produced for the dressmaker's association?

1.6 Delimitation of the Study

The research focused on designing and producing a textile cloth for a dressmaker's association in the Builsa North District. It included the design knowledge of the dressmakers in the Bulsa south district. Also, to reflect the complex and concise design processes coupled with the production stages, the researcher divided the dressmakers into five clusters. The research participants originated from the Builsa

North District of Sandema, Wiaga, Fiisa, Sinyensi, and Chuchlliga traditional areas that were included in the study.

1.7 Significance of the Study

Some investigations have been done in different areas on textile cloth, but there is little empirical information on the design and production processes employed in producing a textile cloth for a dressmaker's association in the Builsa North District. As a resource for establishing the art program for schools and Universities, the results of this study were of immense contribution to fashion tutors, fashion students, fashion designers, tailors, dressmakers, and the national boards for small-scale industries. The outcome of this study enabled fashion tutors to identify gaps in the practical applications of the design elements and principles in the field of dressmaking and the appropriate method of teaching to employ to achieve the expected result. The study empowered fashion students with the opportunity to understand the existing realities in the field of dressmaking in the application of the design principles and elements.

Also, since accurate facts were accessible for reference, they served as the method of teaching and learning to dressmakers in the Builsa North District. Again, it served as the basis for studying the designing of textile cloth for fashion designers.

The study gave policymakers enough information to develop policies and strategies to employ in the fashion industry. To educate the students and the alien world, the study results were published in the University of Education, Kumasi repository, providing open access to fashion educators, fashion designers, fashion students, tailors, dressmakers, and the general public.

The results of this study finally provided relevant information that expanded and enhanced existing knowledge on designing and production of fashion cloth for industrial players.

1.8 Operational Definition of Key Terms

A Tailor: This is a person who alters or produces a garment for a person.

Apparel: This is a person's attire used to cloth oneself.

Custom-made: This is a garment produced by a dressmaker, tailor, or fashion designer for an individual client.

Dressmaker: This is a person who sewn women's clothing and possesses the potential of a fashion designer or pattern maker.

Established dressmaker: This is a seamstress formally or informally trained who owns a dressmaking workshop.

Seamstress: This is a woman who earns her living by sewing clothes.

1.9 Abbreviations Used in the Study

AfDB: African Development Bank

BND: Builsa North District

CBT: Competency-Based Training

COTVET: Council for Technical and Vocational Education and Training

DSIP: Development of Skills for Industry Project

FDI: Fashion Design Instructors

NBSS: National Board for Small Scale Business

TVET: Technical and Vocational Education and Training

1.10 Organization of the study

The study consisted of five chapters. Chapter Two discussed the literature which was divided into theoretical and empirical frameworks. The empirical framework included a brief history of fashion design, history of dressmaking in Ghana, pattern making, the meaning of textile, meaning of clothing, designing and production.

Chapter Three provided the technique and contained ongoing research, study design, and tools used in data collection. The population, the sample and sampling method used in the data collection, and researchers' ontological and epistemological viewpoints. It covered access concerns, ethical considerations, processes for data collection, research admissibility criteria, trustworthiness in the obtained data, and the data analysis strategy employed.

The recording, presentation, description, designing, and production of the textile cloth were presented in Chapter Four. In addition, the quality analysis of the information obtained during the interview was discussed and their many interpretations given in this chapter. The report closed with Chapter Five, which summarised the empirical investigation results, conclusions drawn, and recommendations made.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Overview

Deductively, the study's related literature was evaluated. This included the theoretical and empirical frameworks. The Fashion Adoption Theories were employed. The empirical framework included Builsa North District profile, a brief history of fashion design, history of dressmaking in Ghana, pattern making, textile, clothing, designing, and production.

2.1 Theoretical Framework

2.1.1 Fashion Adoption Theories

Fashion adoption or distribution theories were concerned with how fashion passes across society's various socioeconomic strata. There were three major fashion adoption theories: trickle-down, trickle-across, and trickle-up. No one theory, however, can adequately analyse fashion theory or explain how fashion progresses across society. In addition to these ideas, there was a populist model of fashion adoption that applied to specific scenarios in which fashion distribution was seen as going through social groupings rather than socioeconomic strata.

2.1.1.1 Trickle-Down Theory

The trickle-down hypothesis of fashion acceptance, coined by economist Thorstein Veblen in 1889, held that fashion originated in the top echelons of society. Styles worn by the rich change, and the middle and lower classes progressively embrace those changes. When the lower classes adopt such styles, the affluent, in turn, adapt their

style and clothes. This is the earliest hypothesis of fashion adoption, and it was believed that the lower classes aspire to resemble the upper ones. It was historically relevant, particularly prior to World War II. Upper-class fashions ranged from the white blouses of the Gibson Girl era to the lower hemlines of the 1920s.

2.1.1.2 Trickle-Across Theory

From the 1960s shifted dress through the 1980s shoulder pad, these items were available at around the same price at a discount, department, and designer stores. The trickle-through idea, which was created in the late 1950s, implied that fashion flows rather quickly across socioeconomic levels. Clothing trends do not trickle down, but rather arrive at all price points at roughly the same time. The presence of this notion was supported by mass communications and popular media, which provided images and details about new fashions, as does the present retail sector. Many designers exhibit similar trends throughout multiple lines, ranging from high-end designer apparel to lower-end inexpensive products. Following the appearance of a design on the runway, a number of firms made comparable clothing, providing for wider access to fashion. Clothing was accessible at the same time at bargain, department, and designer stores.

2.1.1.3 Trickle-Up Theory

The trickle-up hypothesis of fashion adoption reflected evolving fashion styles and behaviours. Styles, according to the hypothesis, started with the youth or street fashion and ascended up the fashion ladder until they were preferred and worn by older and wealthier customers. Following World War II, Coco Chanel was the first to use military textiles and gear in fashion. The basic T-shirt originated as a working-class

undergarment and has now evolved into an essential element of the everyday wardrobe. Once more conventional customers have absorbed the trends, the street or young culture may adopt a new style.

2.2 Empirical Review

2.2.1 Builsa North District Profile

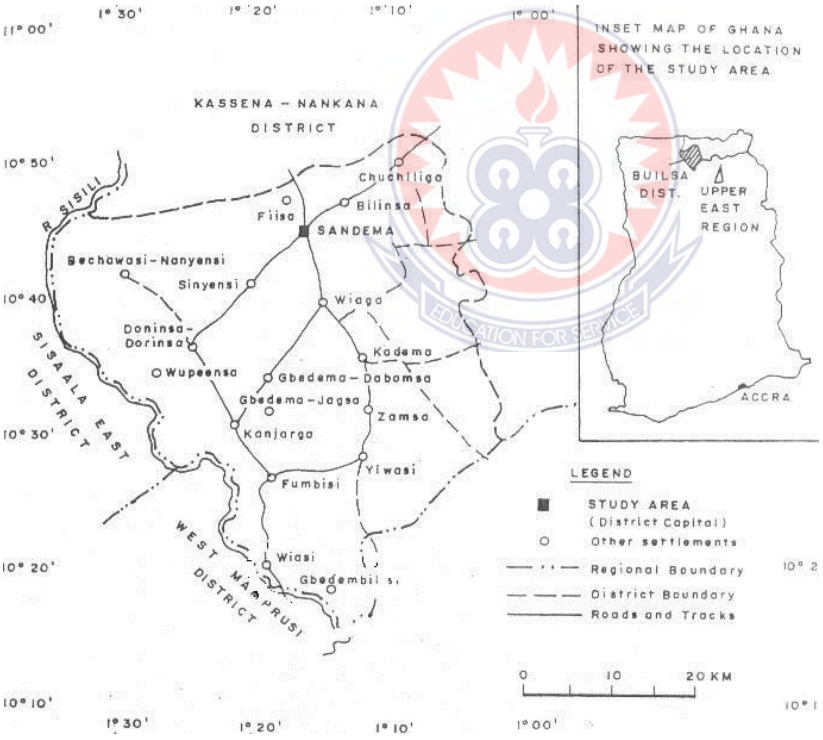
The Bulsa people dwell in the north-central region of Ghana, in the Bulsa North and South districts of the Upper East Region, covering an area of 2,000 square kilometres (Joshua Project, 2020). According to the Joshua Project, they have a total population of 205, 000 people (2020). The majority of the people were farmers who grew millet, beans, and groundnuts. They also made ceramics, wooden stools, ornamental hoe and axe handles, and woven grass baskets and caps (Joshua Project, 2020).

They were proud of their culture and spoke Buli as their ethnic language. Every year before Christmas, Sandema celebrates the Feok festival to commemorate their triumph over the slave raiders Babatu in the nineteenth century. Various villages conduct war dances during this event, and the durbar of chiefs in their regalia is shown to represent the Bulsa people's rich traditions.

Their original shelter consisted of a series of circular and rectangular chambers interspersed with courtyards and animal enclosures (Joshua Project, 2020). These compounds were composed of mud, clay, and sand. The roof is either flat and built of the same material as the walls, or conical and made of grass. These chambers only endured a few years and frequently collapse during strong storms. Outside the compound walls, they have an open-sided grass-roofed structure that was utilised for social activities like burials and marriage rituals.

Bulsas' live in big compounds that were led by a common father or grandpa. A compound normally had at least three compound units, each of which had seven (7) to ten (10) persons (Joshua Project, 2020). Some compounds were quite big, housing more than forty (40) individuals, while others were relatively modest. Typically, compounds were three-quarters of a mile apart. Chiefs were chosen in a rigorous election according to the Bulsa tradition. Depending on the number of persons nominated to be chiefs, the election might take weeks or months.

Figure 2.1 **:** *Map of Builsa Districts*



(Source: Ghana District Maps, 2015)

2.2.3 History of Fashion Design in Ghana

Ghana's textile and apparel history dated back to pre-colonial periods, when yards of fabric were spun from raw materials like cotton and raffia on ancient wooden looms. Even today, traditional looms were utilised to make fabrics like kente and Gonja cloth. Furthermore, commercial operations within the subregion allowed other West African clothing patterns, such as mud cloth from Burkina Faso and wax printing from Niger, to influence Ghanaians' clothing designs. Nonetheless, kente from Ashanti, Kete from Ewe, and Gonja fabric from Northern Ghana are among the most recognisable and well-known textiles that symbolised traditional Ghanaian attire.

Kente was a world-renowned handwoven cloth created by the Akans in Ghana's Ashanti, Eastern, and Brong-Ahafo regions. Its particular patterned design and brilliant colours can only be accurately duplicated by weavers who have learned the technique over centuries. The thick texture of the strips of cloth that made it, as well as the symmetrical geometric forms of colour, distinguished genuine kente cloth. Each colour block represented something different and was coupled with the pattern to be worn on various occasions such as festivals, funerals, and weddings. Kente had become a symbol of Ghanaian culture due to its popularity, although the mythology of its birth was a cause of contention between the Akan, Ewe, and the Yoruba.

The Anlo, a large ethnic group in Ghana's Volta area, also manufactured kete, a handwoven cloth similar to Kente. The Anlo, unlike the Akan, do not claim to have invented the textile, as the weaving method was popular among other Western African citizens. Kete was also distinguished for its vibrant colours and symmetrical layout.

Although their origins were unknown, these fabrics were extremely valuable to Ghana's traditional legacy.

Gonja cloth was a blue woven fabric used to produce a thick plaid shirt known as Fugu or Batakari in Northern Ghana. This dense fabric was available in different colours besides blue, but it followed a specific production design that can be identified by the cuts and patterns, as well as the embroidery along the hem, and was frequently worn with a matching cap.

All of these indigenous traditional fabrics were still utilised and appreciated in modern-day Ghana. However, colonialism and Western culture have also had an impact on Ghanaian fashion. Most Ghanaian fashion trends now combine traditional designs with Western influences to create attire that meets the needs of both worlds. Furthermore, cultural borrowing from neighboring nations such as Nigeria, Ivory Coast, and Niger has influenced Ghanaian fashion trends. Most Ghanaian wedding traditions, for example, adopt the Gele, Agbada, and Ankara motifs used in Yoruba and Igbo wedding rites. In Ghanaian society, the roles of clothes extend beyond simply looking beautiful and sheltering the wearer from the elements. Various symbolic and thematic connotations were found in their fabrics and patterns, indicating the social position or paying homage.

2.2.4 History of Dressmaking in Ghana

Ghana was located on Africa's west coast and divided into sixteen areas, one of which being the Upper East Region, which was where the study was conducted. Ghanaians had a very rich clothing culture (textiles, colours, and styles), and the development of dressmaking in Ghana was thought to have begun during the colonial

period with the introduction of wax prints and 'dress' (Turlings, 2002). The women of European merchants and missionaries who arrived at the area brought clothing construction to the Gold Coast during the time (Adu-Boahen, 2008). Harriet Jarvis, Grant, and Schindler were names that were included while discussing history. In 1821, they began teaching sewing to young girls as part of a course curriculum that was now known as home economics. Home Economics (Clothing and Textiles, Food and Nutrition, and Management in Living) had been classified as a subject for females since then, as seen by the gender enrolment in our various educational institutions. According to Fianu and Acquaah-Harrison (1999), garment creation had historically been a key sector of women's labour around the world, particularly in Ghana as part of homemaking.

According to Sarpong, Howard, and Osei-Ntiri (2011), before the colonial era, Ghanaian men and women wore very little clothes called "Kyenkyen" (a "cloth" derived by beating and drying the back of a tree called kyenkyen) for everyday life, while indigenous cloths such as the kente cloth and smock were reserved for special occasions due to their laborious production process. The kente cloth and smock were made through a difficult procedure done entirely by hand on archaic looms. According to Sarpong et al. (2011), clothing for daily and occasional wear was simply draped over the body without regard for shifting fashions. These fabrics were not trimmed and sewed into clothing that fit the curve of the human body. However, from Ghanaians' initial encounter with Europeans to the present day, garment building, namely cutting out pattern pieces from cloth and stitching them to fit or conform to body shape, has been an integral component of every Ghanaian community. Women bring fabric to their local dressmakers to have clothing fashioned for them for any occasion.

Styles were becoming more intricate by the day; from Kente cloth stitched into bridal dresses to African wax print cloths used to construct anything for all walks of life, dressmakers were quite aware of the variables that impacted the dynamism of fashion.

2.2.4.1 Classification of Dressmakers in Ghana

Acquah- Harrison (1997) divided Ghanaian dressmakers into three separate divisions depending on the customer. The high-class dressmaker, middle-class dressmaker, and low-class dressmaker all used different ways to cut out outfits for their customers.

2.2.4.1.1 High-Class Dressmakers

The elite dressmakers according to Acquah- Harrison (1997) were a class of dressmakers who created fashionable, high-quality clothing for society's elites, including the first lady of Ghana, spouses of ministers and diplomats, female TV stars, and female heads of organisations. The majority of these dressmakers have had professional dressmaking instruction, either locally or overseas.

2.2.4.1.2 Middle-Class Dressmakers

Dressmakers in this category manufactured clothing for people in the middle and lower classes. Customers often included teachers, nurses, business women, caterers, hairdressers, and market women. Dressmakers in this group almost often cut out their outfits free-hand and seldom utilise printed patterns.

2.2.4.1.3 Low-Class Dressmakers

Dressmakers in this category frequently start out as nomadic seamstresses. They stitched and repaired ripped clothing. Furthermore, they solely utilised free-hand cutting and rarely use measuring or marking instruments such as a tape measure and chalk.

Ghanaian dressmakers may achieve more in garment design if they pay attention to several essential features that distinguish clothing pieces. Although the bulk of Ghanaian dressmakers was middle-class, Ghanaians from other countries frequently request that clothing be stitched and shipped to them. This suggested a potentially large market for Ghanaian dressmakers. if attention is made to several key aspects that distinguish clothing goods. This conclusion was supported by research done by Sarpong et al. (2011). According to their proposal, Ghanaian dressmakers prioritised vocational training and practice in order to achieve peak performance and production. They went on to say that people in the business (dressmaking) sought training to help them enhance their abilities and match the criteria established by the fashion industry.

2.2.4.2 Forms of Vocational Training for Dressmakers

According to Amedoeme and Fiagbe (2013), vocational training was the process of teaching or being taught the skills for a certain job or activity.

Prior to 2006, the National Board for Professional and Technician Tests (NABPTEX) was in charge of developing and conducting examinations, accreditation, and standards for skills and curriculum competencies for the vast majority of non-university schools. The Council for Technical and Vocational Education and Training (COTVET) now oversees all aspects of technical and vocational education and training in Ghana.

According to Boateng (2012), technical and vocational education provided an opportunity for an individual to get practical knowledge and the necessary skill training required in the labour market or for immediate self-employment. According to Amedoeme and Fiagbe (2013), no country was able to progress without a quality Technical and Vocational Education and Training (TVET) sector. Despite these facts concerning Technical and Vocational training, many people in Ghana had a negative opinion of TVET; they assumed that those who seek this type of training are superficial.

In Ghana, three distinct types of TVET have emerged throughout time (Bortei-Doku, Doh & Andoh, 2011). There were three types of systems: formal, non-formal, and informal. Individuals interested in this type of training choose from any of these methods based on their objectives and desires, as well as the costs involved, among other variables.

2.2.4.2.1 Formal System

The formal system of vocational and technical training, according to Bortei-Doku et al. (2011), consisted largely of time-bound, institution-based, graded, and certified training. It was provided by organisations such as the National Vocational Training Institute (NVTI), Ghana Education Service (GES) Technical Institutes, Youth Training Institutions, and a number of private Vocational Training Schools. Motor vehicle mechanics, electrical works, welding and fabrication, carpentry, and joinery, block laying, and concreting or masonry were some of the courses offered at technical colleges. For the best outcomes, the institution satisfied a number of standards. Plumbing, tailoring, and dressmaking were among the skills required, according to Bortei-Doku et al. (2011). For this type of training to be successful, Instructors were qualified and had an

extensive understanding (both theoretical and practical) of the subject they thought. Adequate facilities and tools for student training were required, in the learning environment. A comfortable training atmosphere was required, as well as pupils who were disciplined and eager to learn.

2.2.4.2.2 Non-formal System

This type of TVET system usually contained planned learning objectives, learning periods, and learning assistance, but it was not usually leading to certification.

Non-formal learning included workshops, short courses, and seminars (Bortei-Doku et el., 2011). Under this system, both non-governmental organisations and the Ghanaian government had established a variety of programmes to assist in the training, improvement, and support of individuals and associations in the technical and vocational sectors. These were some of the programmes: The Local Enterprises and Skills Development Programme (LESDEP) was a joint private-public initiative of the Ministries of Local Government and Rural Development and Employment and Social Welfare. This initiative attempted to alleviate poverty, particularly among the young, by teaching and equipping them to start their own enterprises.

The Skills Training and Entrepreneurship Programme (STEP), which aimed to reduce poverty by providing employable skills, and other components of the STEP included skills training delivered by vocational training providers, skills enhancement for mastercraftsmen, and skills training delivered through apprenticeship placements. The Development of Abilities for Industry Project (DSIP) was a project financed by the African Development Bank (AfDB) that aimed to provide apprentices with standardised

training standards and to develop their knowledge and skills in Competency-Based Training (CBT) technique. The Project Support Unit of the Council for Technical and Vocational Education and Training was in charge of carrying out this project (COTVET).

2.2.4.2.3 Informal System

This system contained a wide range of adaptable programmes and procedures through which individuals gained skills and information from authorised training locations outside of the house and, in some situations, at home. Traditional apprenticeships constituted the bulk of the informal sector in Ghana, and apprenticeships, according to Uwameiye and Iyamu (2010), gave a chance to persons who cannot afford to pursue their formal education to learn employable skills.

According to Abban and Quarshie (1993), apprenticeship training proceeded in stages. Most apprentices, according to them, began with an introduction period in which the novice was instructed and forced to perform menial tasks such as cleaning the workplace or running errands. The next step was to become acquainted with all of the instruments of the trade, as well as the materials, ingredients, and spare parts, where applicable. Meanwhile, the trainee anticipated that you will observe and learn about the work. Gradually, the apprentice was exposed to more sophisticated duties and given more responsibility, such as overseeing other apprentices, interacting directly with clients, and occasionally running the store in the absence of the professional dressmaker.

Observation, imitation, and on-the-job experience were therefore used to convey skills, information, and attitudes. With the current apprenticeship system, veteran dressmakers teach their pupils what they were taught, with minimal infusion of new

technology and new designs (Ng'ethe & Ndua, 1992). As a result, masters generally pass on their skills and information to their apprentices, but they seldom develop new knowledge.

Even if there were no formal instructions in this system, which limits apprentices' theoretical background and had a detrimental influence on productivity, a degree of education on the part of master craftsmen and apprentices was necessary for knowledge transmission to be improved (Biney-Aidoo et al., 2013).

2.2.6 Textiles

Textile refers to any filament, fiber, or yarn that may be manufactured into fabric or cloth, as well as the finished product. The name comes from the Latin textiles and the French texere, both of which meant "to weave," and are traditionally applied solely to woven materials. It has, however, expanded to encompass textiles made in different ways. Textiles included threads, cords, ropes, braids, lace, embroidery, nets, and materials created by weaving, knitting, bonding, felting, or tufting. Some definitions of textile included items generated using the papermaking concept that had many of the qualities associated with traditional textiles.

Textile structures had two origins: old handicrafts and modern scientific development. The oldest were nets, which were made from a single thread and formed loops with a single repetitive movement, and basketry, which was made by interlacing flexible reeds, cane, or other appropriate materials. Many peoples, notably in Africa and Peru, have done net manufacture, also known as restricted thread work. Because of the perishability of fabrics, examples of ancient textiles were exceedingly uncommon. The

oldest evidence of weaving, which was closely connected to basketry, comes from around 5000 BCE in Neolithic societies.

Weaving appeared to have predated yarn spinning; woven fabrics were most likely descended from basket weaving. Cotton, silk, wool, and flax fibres were used as textile materials in ancient Egypt; cotton was utilised in India by 3000 BCE, and silk manufacture was documented in Chinese records about the same time. The history of spinning technology will be discussed in the section Production of yarn: Spinning, and the history of weaving technology will be discussed in the section Production of fabric.

Many textiles made by simple early weaving techniques were stunningly beautiful and sophisticated. Design and art forms were popular, and the variety of patterns and colours was extensive, with designs made in different areas of the world displaying distinct regional characteristics. Yarns and fabric were coloured and printed since ancient times. Specimens of coloured fabrics had been discovered in Roman ruins from the second century BCE; tie-and-dye effects adorned Chinese silks during the Tang dynasty (618–907 CE), and there was evidence of printed textile manufacture in India from the fourth century BCE. Textiles discovered in Egypt showed a highly developed weaving art by the 4th century CE, with various tapestries made of linen and wool. Persian textiles dated back thousands of years and encompassed anything from basic fabrics to exquisite carpets and tapestries.

Certain Turkish tribes were proficient in the production of carpets, felted linens, towels, and rugs by the early Middle Ages. Fine muslins manufactured in Dhaka, Bengal, were sometimes printed or painted in Mughal India (16th–18th century), and maybe

earlier. Despite the Muslim taboo on depicting living things, beautifully patterned textiles were produced in Islamic countries.

Following the Arab invasion of Sicily in 827 CE, exquisite textiles were manufactured in Palermo's royal workshops. Around 1130, experienced weavers from Greece and Turkey arrived in Palermo and created exquisite silk interlaced with gold textiles. Following the French invasion of Sicily in 1266, the weavers fled to Italy, with many settling in Lucca, which quickly became widely renowned for silk textiles with designs that used inventive floral motifs. The Florentines seized Lucca in 1315, transporting the Sicilian weavers to Florence, which had been a center for quality woven woolens from around 1100 and was also said to be creating velvet at the time. At the end of the 15th century, there were 16,000 employees in the silk business and 30,000 in the wool sector, indicating a high level of creative and technical expertise. By the middle of the 16th century, Genoa and Venice had created a thriving business in velvets and brocades.

Weaving and dyeing were developed in the New World before Europeans arrived. During prehistoric times, weaving was advanced in North and South America; both the Peruvians and the Mexicans possessed exquisite woven garments. Although communication between the two civilizations was thought to be uncommon, Peruvian textiles were similar to those of ancient Egypt. Inca cotton and wool garments were brightly coloured, with geometric and conventionalized human figures designs. The Navajos of Arizona and New Mexico produced fabrics of outstanding close texture and vibrant colour.

Throughout the nineteenth century, advances in textile machines significantly boosted output, cutting the cost of finished cloth and clothes. The tendency continued throughout the twentieth century, with a concentration on completely automatic or virtually fully automatic industrial systems.

The many different forms of contemporary textile textiles, made from both natural and synthetic materials, were sometimes classed according to their structure. Interlacing textiles included woven and knitted types, lace, nets, and braid; fabrics manufactured from fibre masses included bonded types, wool felt, and needle-woven types, and composite fabrics were made by joining layers of various types. Traditional weaving and knitting methods were currently the most common textile manufacturing techniques, but newer construction methods were gaining acceptance and may eventually replace certain long-established products as the costs of conventional textiles continued to rise and rapid technological advances develop new materials.

2.2.7 Textile Designing

One of the most durable and utilitarian aspects of decorative arts was the creation of beautiful designs on cloth. Fabrics with appealing patterns had become an essential component of daily life. The art of developing designs for knitted, woven, and non-woven materials was known as textile design. It also has fabric decorations. This procedure entailed creating designed fabrics for household uses such as towels and rugs.

Fabrics were created by weaving or knitting and adorned with printing. The textile design involved both the surface and structural design of the fabric. It was necessary to have a solid understanding of fibres, weaving, knitting, dyeing, and other

finishing operations. Beautiful colours, prints, and patterns abound in the field of textile design. However, producing an eye-catching design was a more difficult and time-consuming undertaking. A thorough understanding of the many aspects of textile production, market demands, and current developments was required. Three abilities were fundamental for textile design: innovative design, working with a proper colour palette and doing repetitions. It was both tough and profitable.

The textile design process began on paper as a simple concept continued on its journey, and culminated in printed fabric. Stripes, floral, geometric, checks, paisley, tropical, and many other designs were included. The procedure consisted of four steps: new design conceptualization, making design samples, experimenting with different colours to find complementary colours, and designing the cloth in accordance with current fashion trends.

The primary part of the textile design was the creation of cloth via the use of various methods such as printing, weaving, trace embroidery, and colour details. Once the method had been developed, virtual samples were generated, followed by prototypes.

2.2.8 The Design Process

According to Chicago Architectural Centre (CAC) (2022), the design process involved the breaking down of bigger projects into smaller manageable units. The design process was used by graphic designers, painters, textile designers, architects, and other creative thinkers in solving a variety of problems. This process was well-defined steps that enabled creative thinkers to tackle projects and remember to hold on to their ideas and sketches throughout the design period. They were six major steps involved in any

design process (CAC, 2022). This included; problem definition, collection of information, brainstorming and analysing ideas, developing solutions, gathering feedback, and improving or reflecting on the work.

2.2.8.1 Problem Definition

The designer had a clear and concise definition of the problem he intended to solve. The problem should include the aim of the design and what the design intends to solve (CAC, 2022).

2.2.8.2 Collection of Information

This was the stage the designer began to collect data on the field with the purpose of the study in mind. The data collected included thumbnail sketches, drawings, illustrations, and photographs.

2.2.8.3 Brainstorming and Analysing Ideas

This was the stage the designer began to sketch or draw thumbnails to make the information collected synchronize with the data collected.

2.2.8.4 Develop Solutions

This was where the thumbnail sketches were composed to make a complete design. This design should solve the problem the designer intended to address.

2.2.8.5 Gather Feedback

At this stage, the design ideas were presented to friends, teachers, professionals, and other people to make insightful comments. These comments enabled the designer to know whether the design solved the problem identified.

2.2.8.6 Reflect and Improve

This was where the designer reflected on all the insightful comments or feedback provided to decide whether to incorporate them or not. It was helpful for the designer to take the solutions through the design process to refine and clarify them. The design process was shown below.

Figure 2.2: *The Design Process*

(Source: Chicago Architecture Center, 2022)

2.2.8 Textiles Production

The many activities that began with fibre production and proceeded to fabric realisation are as follows: fibre production, yarn production, fabric manufacturing, pre-treatment, dyeing, and printing, and finishing treatment. Figure 2.2 depicted the standard flow chart of textile production from the fibre to the completed cloth.

***Figure 2. 3**: Textile Production Progression*

(Source: Scholarly Community Encyclopedia, 2022)

As stated above, the environmental effect of these processes involved a number of interconnected factors, including the use of hazardous chemicals, water and energy consumption, air pollution, transportation, and packaging.

The raw materials used in textile manufacturing were classified into two categories: natural fibres derived from vegetables and plants (cotton, flax, sisal, hemp, ramie, jute, banana, pineapple, coir, and oil palm), animals (wool, angora, cashmere, and silk), and minerals (asbestos); and synthetic or regenerated fibres derived from petroleum-based resources (polyester, nylon,) (Fisher, 1981). Depending on their nature, these fundamental materials were treated with various chemical agents.

For example, in the case of cellulose or natural fibres, pesticides, insecticides, and fertilisers were used to allow and facilitate plant growth and development, whereas, for protein fibres, parasites were used for the animal, and after the fibres were shredded, chemicals were used for cleaning operations (Pensupa, et al., 2017). In the case of synthetic fibres, the production of the agents, polymerization, polymer recovery and extrusion, and spinning for the filaments all required the use of monomers and catalysts, which produced a number of byproducts (Stone et al., 2020).

Then, during yarn manufacture, particularly spinning, oil was necessary to reduce friction between the components, and again, in fabric production, the sizing species, in

conjunction with the lubricants, were employed to minimise fibre breakage throughout the process. Once collected, and before dyeing, the cloth was adequately prepared with a variety of pre-treatments using the following methods: de-sizing, which consisted of the removal of the starch (sizing chemical), and the improvement of the absorbent capability, because the starch inhibited the diffusion of the dye molecule into the yarn/fabric; the starch was transformed into water soluble constituents via enzymatic, or dilute mineral acid hydrolysis, or oxidation. Scouring, in which wax, fats, pectin, and lubricant oil were removed by using aqueous sodium hydroxide in conjunction with the surfactant; bleaching, in which oxidant agents such as sodium hypochlorite, sodium chlorite, and hydrogen peroxide were always used; and mercerizing, in which fabric features were improved by immersion in a high concentration of sodium hydroxide solution

In reality, the wetted fibres underwent longitudinal shrinkage during the mercerizing process that was prevented by elongation and retaining the fibres under applied uniaxial tension. To give colour to the fabric or yarns, the surplus caustic soda was removed by water washing, dyeing, and printing. All chromophore agents, including azo (-N=N-), carbonyl (-C=O), nitro (-N=O), an amine, carboxyl, sulfonate, and hydroxyl groups, were considered water pollutants because they provided undesirable colour to wash water (Pensupa et al., 2017; Holker et al., 2015).

Depending on the chemical composition of the fibres, several different chemicals were involved in dyeing and printing: reactive dyes, direct dyes, naphthol dyes, and indigo dyes in the case of cellulose fibres, for example. In the case of protein fibres, acid dyes and Lancet dyes were used, followed by dispersion dyes, basic dyes, and direct dyes for synthetic fibres. Binder and polymeric resins were used to improve the bond between

fibres and colours, while surplus pigments were removed by washing with detergents such as alkyl aryl-sulfonates, and sulfated alkyl phenol polyglycol, alkylphenol ethoxylates, sodium palmitate, and sodium stearate (Pensupa et al., 2017).

Finally, unique finishing processes were developed to give certain characteristics to the latest products: Water and oil repellency were achieved with paraffin (waxes), silicones, fluorocarbon, and stearic-acid melamine; antibacterial activity was achieved with metallic salts (Ag+ and Cu2+), triclorosan (2,4,4-hydrophenyl trichloro (II) ether), quaternary ammonium compounds, chitosan, and cyclodextrin most prevalent antiseptic preparations (Shahidi & Wiener, 2012) yet again, silicone-based species were frequently inferred for flame retardancy halogen-based formulations, phosphor, or nitrogen-based coating systems (Neisius et al., 2015).

2.3 Summary

This chapter discussed the design and production stages employed in producing a textile cloth for a dressmaker's association in the Builsa North district. The study revealed that designing a textile cloth involved the use of a computer and computer-assisted design software. The study discovered that the production of the textile cloth included producing the cloth either through screen printing or digital printing.

This chapter further conversed on the demographical, history, and meaning of dressmaking and economic prospects of dressmakers which naked details such as having three types of dressmakers. Also, the review revealed that the formal, non-formal, and informal were the vocational training that dressmakers underwent to enable them to practice as such.

Also, in this chapter, pattern making was discussed. The review showed that pattern-making is essential in every design process. The review also failed to detail the dressmaker's knowledge, skills, and styles employed in designing and producing a textiles fabric. The design processes employed in producing textile cloths were also limited in scope and context as the literature showed. This study espoused the design process employed in producing a textile cloth.

Again, the production of textile cloth was deliberated into details. This included the process, types, styles and techniques employed in producing textile cloths. However, production of textile cloth for a dressmaking association in Builsa North district was scarce in the review. Therefore, this current study produces a textile cloth for a dressmaking association in the Builsa North district.

The next chapter discussed the methodological choices and their justification for this study.

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter described how the study was carried out. It provided information on data gathering and analysis methods used in the field. It also highlighted the various strategies used to collect research data in order to answer the research questions. The following topics were covered: research design, library research, study population, sampling and sampling strategy, data collecting instruments, data collection processes, tools and materials, and data analysis plan.

3.1 Research Design

In this study, the researcher used an arts-based research design influenced by a qualitative research technique to evaluate the study's instructional content. The application of creative techniques in expressing various types of art is referred to as arts-based research design. Processes of discovery and innovation were included in arts-based research design. The arts-based research design was a type of social research that employed creative arts activities as a tool for data collecting and analysis (Vaart et al, 2018). This research design incorporated the researcher's creativity as well as how his knowledge, skills, and talents were applied in the investigation. Arts-based research was undertaken in a variety of methods on art genres such as performances, writing, painting, photography, collage, mosaic, body art, installation art, and packaging. This design was used as a technique, communication element, or aesthetic aspect (Vaart et al., 2018).

According to Dunn and Meller (2017), this study strategy gave a novel approach with multiple views that questioned the researcher's personal values and disciplinary procedures as an artist (Vaart et al., 2018). Furthermore, this methodology allowed the researcher to answer study questions that could not be answered by interviews and questionnaires alone (Dunn & Meller 2017; Vaart et al, 2018).

Again, the arts-based study design allowed for the exhibition of people's emotional and symbolic experiences, which would not have been possible using standard research techniques that rely primarily on people's verbal or written ability (Dunn & Meller, 2017). This research approach allowed people's senses to be involved in the arts to significantly arouse people's sentiments and emotions, which influenced the responses of the artist and bystanders (Lawrence, 2008). Through the creation of innovative art pieces, the researcher was able to effect changes in society, transform, and empower them (Desyllas, 2014).

In this study, an arts-based research design was used to design and construct a textile fabric for a dressmaker association in the Builsa North Area. This included the number of dressmaker associations in the district, their styles, designs, and manufacturing processes. The researcher was able to investigate in depth the abilities and styles of the dressmaker's association in the Builsa North District of Ghana's Upper East Region by using this study approach for in-depth understanding and comprehension. The use of this study design enabled the researcher to delve deeply into the dressmakers' understanding of the application of design components and principles in the production of their garments.

3.2 Library Records

Libraries, museums, national and personal archives were visited in search of relevant empirical data, concepts, theories, and academic resources pertinent to addressing the study topics. These included:

- University of Education, Kumasi library;
- Sandema dressmakers' workshops
- Bolgatanga National Cultural Centre
- Sandema Archives.
- Internet Access.

3.3 Population

In research, population referred to the total number of individuals belonging to the same species residing in a specific location. These people frequently relied on the same resources, were dependent on one another, and faced the same environmental constraints. The study's population comprised all indigenes from the Builsa North District in Ghana's Upper East Region. Dressmakers in the Builsa South District were included.

3.3.1 Target Population

A target population was a group of persons to whom the researcher applies generalisations. The target population included the total number of people from whom the study sample was collected (Mcleod, 2019). This target population also included the persons the researcher wanted to investigate. This study's target demographic included dressmakers from the communities of Sandema, Wiaga, Chuchlliga, Sinyensi, and Fiisa.

3.3.2 Accessible Population

The accessible population in research referred to people who were willing and ready to engage in the study. The accessible population was taken from the target group to whom the researcher's findings were applied. Again, the research sample was recruited from the available population. The dressmakers in the Builsa North district were the study's accessible population.

3.4 Sample Size

A sample in research referred to the people who take part in a study. They are the people with whom the researcher expects to engage during data collection. A manageable sample size of twenty (20) individuals was used in this study, with five (5) from Sandema, Wiaga, Chuchlliga, Sinyensi, and Fiisa. This sample was chosen owing to its manageability during the course of the investigation. Furthermore, this sample was a realistic representation of the Builsa south population that the researcher wanted to analyse. This sample group was also rich in information about the design and manufacture of textile materials. Finally, because this sample was a realistic representative of the target demographic, the findings were relatable.

3.5 Sampling Technique

The study employed a non-probability judgemental sampling approach. The judgmental sampling approach was a type of purposive sampling that employed the researcher's subjective judgment in selecting study subjects. In addition, judgemental sampling was utilised when the researcher chose research subjects based on his or her own personal judgement in order to achieve the study's goal (Showkat & Parvean, 2017). Again, this strategy employed the expert judgement approach in case of selection in order

to answer research questions and achieve study objectives. Judgmental sampling, also known as authoritative sampling, included the researcher selecting people to be sampled based on his or her prior knowledge and professional judgement (Alchemer, 2022).

The researcher was able to directly contact dressmakers from Sandema, Wiaga, Chuchlliga, Sinyensi, and Fiisa in the Builsa North traditional area using this sample approach. It also gave the researcher less time to conduct the interviews with the research participants. Finally, because the participants were information-rich, this method allowed the researcher to get the necessary information from them.

3.6 Data Collection Instruments

Data were gathered from both primary and secondary sources. Semi-structured interview guides, observation, and audiovisual aids were used as data collecting devices.

3.6.1 Participant Observation

Observation was the methodical collection of qualitative data. Before critical qualitative data were acquired, observations normally entailed a longer stay incorporating all of the participants' senses in their social situation. The researcher visited all twenty dressmakers in the five traditional regions of Bulsa North. The researcher was there throughout the visit to examine the method, styles, techniques, and thoughts of dressmakers in creating and making their textile cloth. The purpose of participating in the dressmakers' cutting, stitching, and manufacturing process was to confirm the participants' opinions with the visual presentation generated.

3.6.2 Semi-Structured Interview

An interview was a data collection strategy that involved verbal dialogue between the researcher and the participants. In addition, an interview was conducted face to face or through verbal communication to acquire information from participants (Kusi, 2012). The interview involved both the interviewer and the interviewee. The interviewer coordinated the entire discussion process by asking questions, and the interviewee responded accordingly. There were three sorts of interviews: organised, semi-structured, and unstructured. The semi-structured interview was chosen for this investigation.

A semi-structured interview was a qualitative data collecting tool that used open and closed-ended questions (Kusi, 2012). Furthermore, semi-structured interviews included closed and open-ended questions that were frequently accompanied by follow-ups and probes to gain a thorough understanding of the phenomenon (Adams, 2015). The semi-structured interview guide used in this study allowed the researcher to ask open-ended questions and delve further into the participants' opinions. Furthermore, this device allowed the researcher to collect in-depth data on the dressmakers' design process in order to study and comprehend how textile clothes were manufactured. This data-gathering technique allowed the researcher to deviate from the timetable in order to seek clarity on issues concerning the design and manufacture of the textile fabric. Furthermore, this instrument was best suited since it allowed the researcher to examine the views of participants in answering the research questions and fulfilling the study's objectives.

3.6.3 Audio-Visual Aids

Audio visual aids were the teaching items that helped people communicate more efficiently. This assistance was both auditory and visual. The audio-visual aids used by the researcher during data collection for this study were a digital camera and a tape recorder. Still-life images illustrating the key design steps involved in the creation of textile cloths were taken using the digital camera. During the interview sessions, the tape recorder was also utilised to record the participants' verbatim voices. These tools enabled the researcher to capture data visually and verbally.

3.7 Data Collection Procedures

The researcher individually interviewed twenty (20) participants to assist in resolving any issues that may have arisen during the interview session. To avoid aimless rumbling, each person was free to explain themselves in detail. The ambiance during the interview sessions was devoid of obstructions and interruptions, and it was convenient for the participants because it was close to their homes and locations of choice. These measures were taken to guarantee that human subjects and research protocols were followed. The first interview session was held on March 30, 2022, at 9:00 a.m. Dressmakers in Sandema were the first to be interviewed, and they were followed by dressmakers in Wiaga on the same day.

On the following days, Sinyensi, Fiisa, and Chulchlliga dressmakers were interviewed in this sequence. Each interview session lasted no more than 45 minutes per person and not more than three weeks for all twenty participants. The pattern and textile materials generated piqued the attendees' curiosity. The researcher told them that the textile cloth would be distributed and used by their superiors.

3.8 Tools and Materials used for the Project

The researcher employed the following tools and materials for the execution of the project.

Table 3.1 : Tools and materials

Tool	Use
Laptop 	For designing the pattern for the cloth
Stapler 	This was a handled machine used to driver heavy metal staples onto the mesh on the wooden frame.
A Squeegee 	For pushing ink or paint through the screen and onto the printing surface

Printing Table 	It was the manual process used to print a roll of cloth with the help of manpower on the wax table.
Camera 	For capturing images of the design and production process.
Materials	
Screen 	These were the patterns or cut-outs used to design the surface underneath.
Stencil material 	The stencil was a thin sheet of A4 paper with the motifs of the Builsa North Dressmakers Association transferred onto the screen for printing

Mesh 	The mesh was made of a woven knotted material of open textile with evenly spaced holes.
Printing Paste 	This was a liquid or paste containing dyes and pigments used to write on a screen.
Fabric 	This was the support that received the work of art.
Kerosene 	The kerosene was applied to the stencil to make the colour milky and able to stick on the screen
photo Emulsion 	This was a light-sensitive liquid substance used by the researcher to create an ink-resistant border around the image. This process was done in a dark room since this liquid was sensitive to light.

3.9 Data Analysis Procedure

Thematic analysis was performed on the data supplied by the twenty (20) participants using the semi-structured interview method. To begin, the data was arranged with the study questions as a reference. Secondly, utilising both preset and emergent themes, themes were generated from the data. Thirdly, to help them, codes were developed using brief statements and words stated by participants. Fourthly, the primary design steps involved in making a textile fabric arose, and ultimately, the textile cloth was made for the Builsa North District dressmaker's association.

3.10 Ethical Considerations

Most research writers, including Creswell (2014), Yin (2003), Lincoln, and Guba (1994), advised researchers to seek and obtain permission from study website administrators before beginning a study since it involved a lengthy and complete collection of research data. The researcher met with the dressmakers in the five villages to explain the purpose of the study and sent them letters requesting permission to conduct the study in their respective communities (Appendix 2). The permission came two (2) weeks after the letters were sent.

All twenty (20) participants, including heads of the dressmakers and apprentices, were also issued personal letters seeking their informed consent, time, and convenience (Appendix 3). Before, during, and after the data collection, these individuals' identities, secrecy, and confidentiality were maintained. Participants agreed that their participation in the study was entirely voluntary and would have no negative consequences.

3.11 Trustworthiness and Authenticity

Qualitative researchers used criteria to assess the validity of their research based on the subjects, methodology, audiences, and artists of their study (Gall et al., 2007; Kusi, 2012). The purpose of confidence was to support the argument that the study findings were important enough to pay attention to (Lincoln & Guba, 1985). As advised by Lincoln and Guba, four alternatives for gauging study confidence were used: credibility, dependability, conformity, and transferability (1994).

The data collected utilising multiple tools were compared and contrasted to support the study's findings. Respondent triangulation also entailed the use of a single instrument to collect data from persons with varying characteristics and traits. Member verification was another strategy used to ensure the study's legitimacy. Regarding this method, two colleagues were given the preliminary findings to analyse and comment on utilising raw data. Comments bolstered the researchers' trust in the investigation's findings.

Transferability referred to the ability to generalise or transfer the study's findings to the settings of other groups. This involved not just reporting the behaviour and sentiments, but also the surroundings, in order to deliver meaningful findings and experiences to an external individual. According to Denscombe (2003), the different contexts comparable to the study environment were able to generalise the results. While the design and production processes of the Builsa North Dressmakers association resembled that of numerous Ghanaian associations, the study's findings were not generalise the findings. Outsiders who saw enough parallels between the study settings and the context may be able to realistically communicate the results to their situations.

The audit trail was corroborated by the replies to the extent that other researchers corroborated the findings of this investigation. The audit trail was built by providing a clear explanation of the activities taken from the data from the start of this inquiry through the development and reporting of the findings (Korstjens & Moser, 2018). The records were consistent throughout the investigation.

The dependability or consistency of qualitative research findings indicated that the data were consistent across time and in a variety of contexts. Participants were requested to analyse the findings, interpret, and suggest the study offered by study participants in order to achieve this goal (Korstjens & Moser, 2018). Unambiguous questions, data triangulation, bias reduction and subjectivity reduction throughout the data collection process, peer review, locus explanation, audits path (Schwandt & Halpin 1988; Merriam et al., 2002), transparent reporting of the research process, and conclusions all contributed to the confidence.

3.12 Summary

This chapter went into the study design, methodology, technique selection, and direction in detail. The researcher observed that various studies on fashion design and textiles conducted in and outside Ghana mostly used descriptive and survey study designs. Nonetheless, the current study designed and produced a textile cloth for a dressmaker's association in the Builsa North district employing an arts-based research design to evaluate the study's pedagogical option. Data analysis approaches were also considered. Furthermore, the ethical problems and trustworthiness of the data acquired in this study were thoroughly investigated. The raw replies, analysis, and conversations of the participants were discussed in the next chapter.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Overview

This chapter is concerned with the presentation of the semi-structured interview findings, analysis, discussions, design, and production process of the textile cloth. A massive amount of data was gathered through the interviews on the knowledge of dressmakers in the design and production of textile cloth. At this stage of the analysis, some of the themes in the interview data were refined based on the fieldwork data. In addition, the data were critically discussed linking to the relevant literature in an attempt to explore the deeper meanings of the responses and unpick the issues and understand the phenomenon. As noted earlier, the purpose of this particular study was to design and produce a textile cloth for a dressmaking association in Builsa North District.

Moreover, some new themes emerged, but they were linked to the research questions. The interview findings and analyses were divided into three parts. Part one discussed dressmakers' knowledge of the design and production of a textile cloth for a dressmaking association in Builsa North District, part two described the design and production processes in chronological order while part three produced the textile cloth for the dressmaker's association in the Builsa North District.

4.1 Part One: Dressmakers' Knowledge of the Design and Production of Textile Cloth

As already noted, the data highlighted some knowledge of dressmakers' knowledge in the design and production of textile cloth in the Builsa North District. These are presented employing the ensuing themes below:

a. Thumbnail sketches
b. Designing the work using computer software
c. Producing the cloth

4.1.1 Thumbnail Sketches

The responses of the interviewees emphasized that dressmakers in the Builsa North District start the design of a textile cloth with thumbnail sketches. They added that the thumbnail sketches are conceptualized ideas put together to form a composition. The participants further agreed that the thumbnail sketches enable the dressmaker to get a concise idea of what is to be designed. This was revealed by participant four as she stated that:

I usually begin the design of my textile cloth with thumbnail sketches. These sketches are made of small illustrations showing how the design will look. I start with this to enable me to put all my thought processes and ideas into a composition. I mainly employ the elements and principles of design during this stage to achieve a well-composed idea (Dressmaker 4, Personal Communication, 30th March 2022).

It was evident from the interview findings that dressmakers in the Builsa North District employed thumbnail sketches in the design of their textile cloth as the study expressed several concerns. The data highlighted the use of elements and principles of design in the composition of the textile cloth. The responses of the twenty participants representing 100% of the study agreed to the above findings as indicated in the study. This current study is consistent with the work of the Chicago Architecture Center (2022) as it argued that, the first design process is the gathering of information that includes

thumbnails, drawings, and photographs. They added that this stage is followed by brainstorming and analyzing ideas that included thumbnail sketches or drawings. This argument suggested that thumbnail sketches were important in the design process.

4.1.2 Designing Motifs using Computer Software

Some of the responses of the dressmakers regarding the design work using computer software were elicited. For example, participant ten said:

In this era of technology, immediately after sketching the work, it must be transferred onto the computer using computer software such as Corel draw, or Adobe Illustrator. This stage is what makes the design work unique and aesthetically pleasing. Also, it is at this stage that all details are added to the work (Dressmaker ten, Personal Communication, 1st April 2022).

Fifteen (15) participants representing seventy-five percent (75%) agreed that the computer is used to develop thumbnails with details. They further suggested that at this stage, the designer focuses more on elements and principles of design to make the design aesthetically appealing. Twenty-five percent (25%) of the participants argued the transfer of the design onto the computer was the next stage of the design process. Also, they added that it is after the thumbnails were transferred onto the computer that the design stage can commerce. The suggestions of the fifteen participants were similar to the work of the Chicago Architectural Centre (2022) on the design processes. They agreed that the design of the sketches with the use of the computer was the next stage of the design process. Further, they added that this was the stage the elements and principles of design were employed in the design. These arguments highlighted that the design of the thumbnails using the computer was the next stage after thumbnail sketches.

4.1.3 Producing the Cloth

The design process ended after the cloth was produced by the designer. This was argued by participant fifteen as he suggested that:

Before a cloth would be considered complete, the cloth must be produced. This is the last stage of the production process. I usually end my cloth production after I have produced my cloth. Though this stage of the design process is laborious and intensive, it determines the outcome of the problem addressed (Dressmaker fifteen, Personal Communication, 20th May. 2022).

It is apparent from the response above that, all the twenty (20) participants representing a hundred percent (100%) agreed that the production of the cloth was the final stage of the design process. Also, they added that this is the stage that answers the problem the researcher intended to solve. The Chicago Architecture Centre's (2022) findings revealed that the production stage was the final stage of the design stage. In addition, they highlighted that this was the stage the designer answers the problem he envisaged to solve. The study findings as suggested by participants and other findings agreed that the production stage was the final stage of the design process in dressmaking in the Builsa North District.

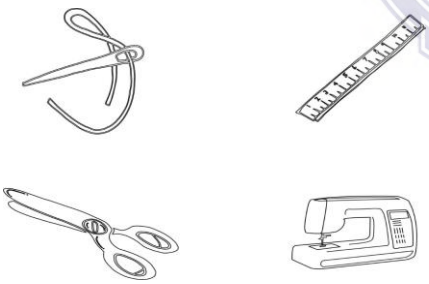
4.2 Part Two: The Design Process

This was the stage the researcher designed the dressmakers in the Builsa North district textile cloth using Corel draw computer application software. This stage was categorized into four stages; idea development, thumbnail development, motif development, and pattern arrangement.

4.2.1 Idea Development

This was the first stage the researcher employed during the design stage. At this stage, ideas were developed employing some tools and materials as revealed by the participants of the study. These elements of design or tools included tape measure, needle, thread, sewing machine, tailor's chalk, pencil, ruler, rotary cutter, sharp scissors, paper scissors, and shears. The researcher employed these tools in developing the ideas for the dressmaker's textile cloth using Corel draw computer application software. Also, the elements of design employed for the idea development were scissors, tape measure, sewing machine, thread and needle. These tools were selected due to their regular usage by dressmakers in the Builsa North District as the study revealed. These tools or elements of design employed were illustrated below in figure 4.1.

Figure 4.1: Elements used in Idea development



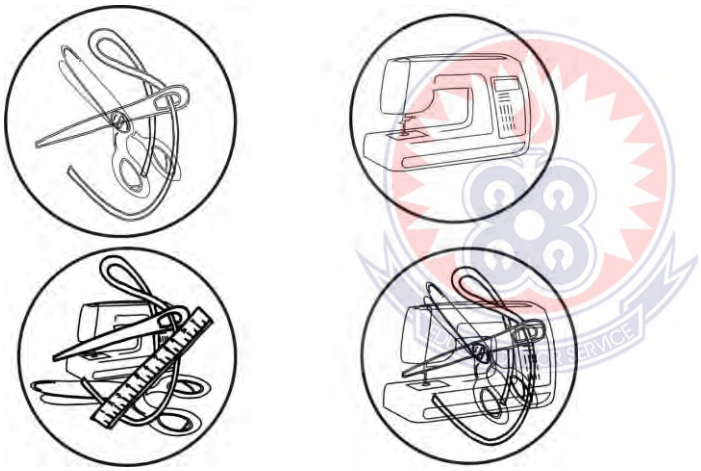
4.2.2 Thumbnail Development

This was the second stage the researcher employed to develop the idea into thumbnail sketches using Corel draw computer application software. Also, during this stage, the tools were used in conjunction with other elements of design ensuing the principles of design. These were explained in figure 4.1.

4.2.2.1 Thumbnail Sketch One

This was the first thumbnail sketch developed by the researcher. The first thumbnail employed scissors, needles, and thread symmetrically composed in a circle. The second thumbnail was composed of a sewing machine composed in a circle. The third thumbnail sketch included a sewing machine, scissors, tape measure, thread, and needle composed in a circle. The fourth sketch was made of a sewing machine, scissors, needle, and thread encased in a circle. These thumbnail sketches were illustrated in figure 4.2

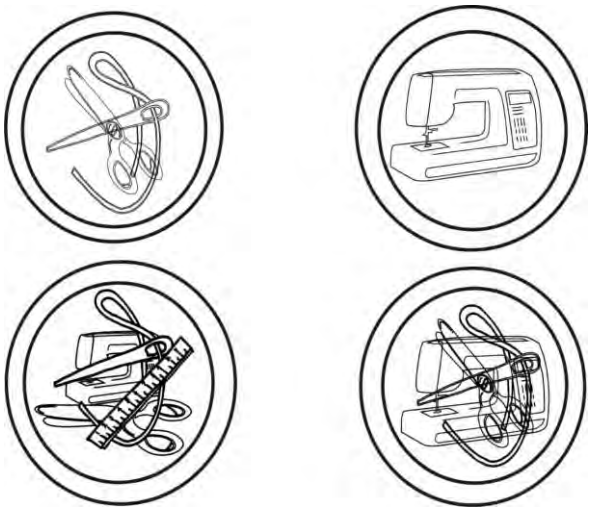
Figure 4.2: *Thumbnail sketch One*



4.2.2.2 Thumbnail Sketch Two

The researcher added another circle to all the four thumbnails during this stage of the thumbnail sketch development. The additional circles were added to enable the fonts to fit into the design. These were illustrated in figure 4.3.

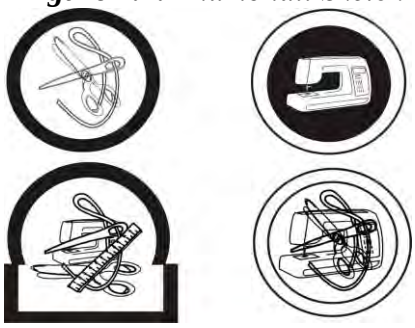
Figure 4.3: *Thumbnail Sketch Two*



4.2.2.3 Thumbnail Sketch Three

This stage in the thumbnail development enabled the researcher to fill the circles with black. This was done to enable the researcher to assess how feasible colour can be added to the sketches. These are shown in figure 4.4

Figure 4.4: *Thumbnail Sketch Three*



4.2.2. 4 Thumbnail Sketch Four

This was the final stage of the thumbnail development stage. At this stage details such as Builsa North Dress Makers Association were added to all the four thumbnails to make the design complete. This was done to enable the researchers to determine what the final work will look like. This was shown in figure 4.5.

Figure 4.5: *Thumbnail Sketch Four*

4.2.3 Motif Development

This was the stage the thumbnail sketches were developed into motifs. The motifs were designed and produced to show the look and function or work of the textile cloth. Also, the design showed the plan or specification of the thumbnails and textile cloth. During this stage, the name of the dressmaker's association known as Builsa North Dress Makers Association and full-color were incorporated into the work to form motifs. These are illustrated in figure 4.6.

4.2.3.1 Design of Motif One

The researcher developed motif one using scissors, thread, and a needle encased in a circle. These tools were coloured red, the circle blue, and the fonts, Builsa North Dressmakers association white. The two dressmakers' tools were used to create variety in the design. The colours used for the fonts, tools, and their backgrounds created harmony, unity, and contrast in the design. This was illustrated below.

Figure 4.6: *Motif One*

4.2.3.2 Design of Motif Two

In this design, a sewing machine on a blue circle background was used for the design. Red was used for the name of the dressmaker's association on a white background with a blue outline. These colours were used to create harmony and contrast in the motif designed.

Figure 4.7: *Motif Two*

4.2.3.3 Design of Motif Three

The design of this motif included a harmonious combination of the sewing machine, scissors, tape measure, thread, and needle composed on a white background. The name "Builsa North Dressmakers Association " was encased in a circle in blue on a red background. The use of blue, white, and red for the tools, shapes, fonts, and background created harmony and contrast among the elements of design used. This motif was illustrated in figure 4.8.

Figure 4.8: *Motif Three*

4.2.3.4 Design of Motif Four

This design was composed of the sewing machine, scissors, thread, and needle in blue on a white background. The name "Builsa North Dress Makers Association" was encased in a circle with a red outline on a white background. The choice of these colors was to create harmony, unity, and contrast among the elements of design used. This design are shown in figure 4.9.

Figure 4.9: *Motif Four*

4.2.4 Development of Patterns

After designing the textile cloth, the design was put into a motif. The motif consisted of repeated designs to form a pattern. The pattern was the regular repetition of the motif to create rhythm and balance with the aid of the tools as revealed by the participants of the study. In this study, the full drop and side by side motif arrangements were used. The motifs arrangements are demonstrated below from figures 4.9 to 4.12.

4.2.4.1 Full Drop Repeat

This was where the researcher arranged the repeated motifs beside each other on each row both vertically and horizontally. The motifs were repeated perfectly along the vertical and horizontal lines of the fabric. These are shown below from figures 4.10 to 4.12.

Figure 4.10: *Full Drop Repeat Pattern One*

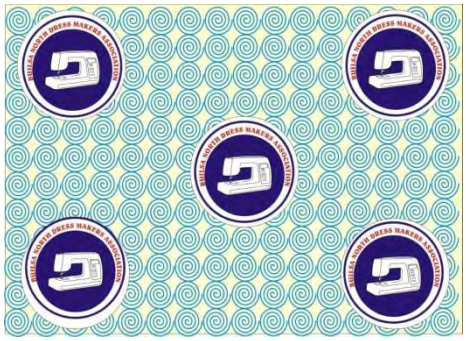


Figure 4.11 : Full Drop Repeat Pattern Two

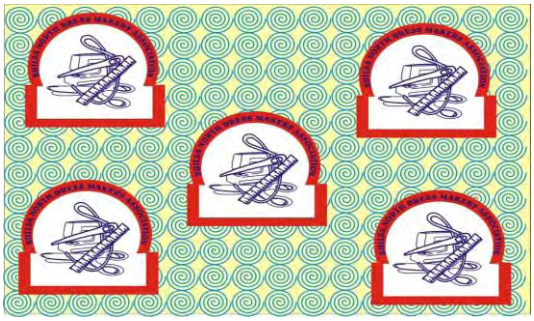


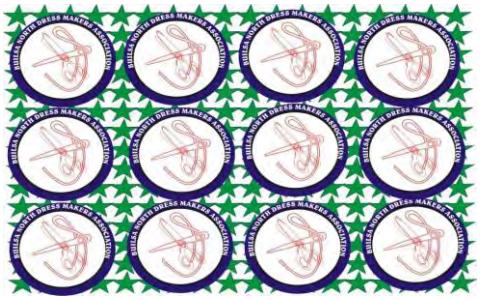
Figure 4.12: *Full Drop Repeat Pattern Three*

4.2.4.2 Side Repeat Pattern

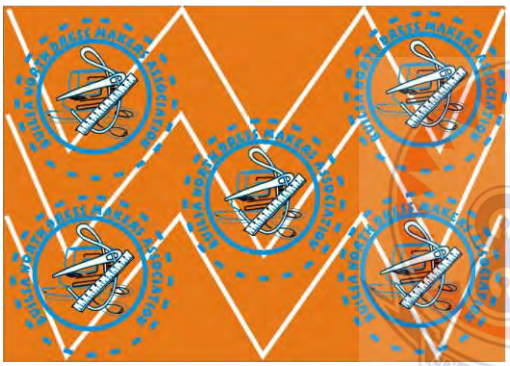
During this stage, the Builsa North District Dress Makers Association motif was repeated horizontally across the fabric to create a side repeat pattern. This motif arrangement is illustrated in figure 4.13.

Figure 4.13: *Side Repeat Pattern*

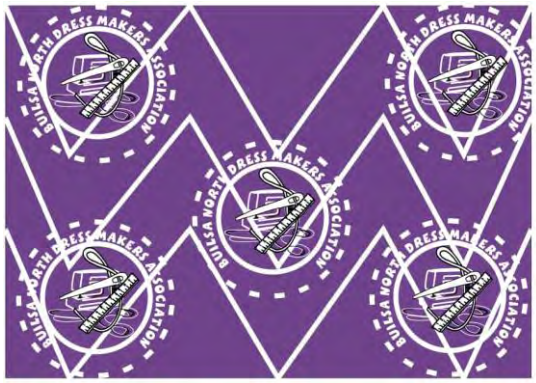
Fabric One



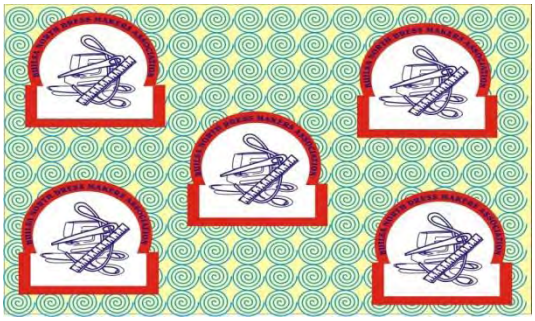
Fabric Two



Fabric Three

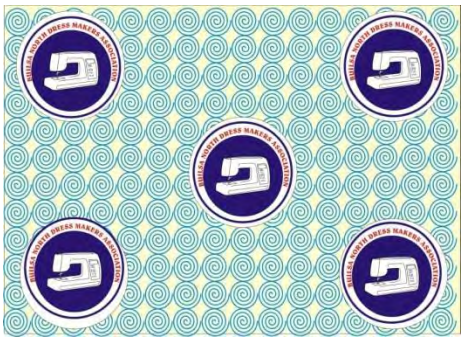


Fabric Four



Fabric Five

Fabric Six



4.3 Part Three: The Production Process

The next step after the design of the textile cloth was its production. The cloth was produced using the following steps. Developing the screen, dyeing the fabric, printing the motif onto the fabric and finished fabric.

4.3.1 Developing the Screen

Screen printing was the preferred method the researcher employed in producing the textile cloth. The first step of the production stage was developing the screen. The researcher used mesh, squeegee, light box, oil, staple machine, photo emulsion, wooden frame, and stencil paper. These tools and materials are illustrated in plate 4.1 to 4.6.

Plate 4.1 - **Step 1: The design was created using Corel Draw application software.**

Plate 4.2 - Step Two: The screen was stretched on a wooden frame.

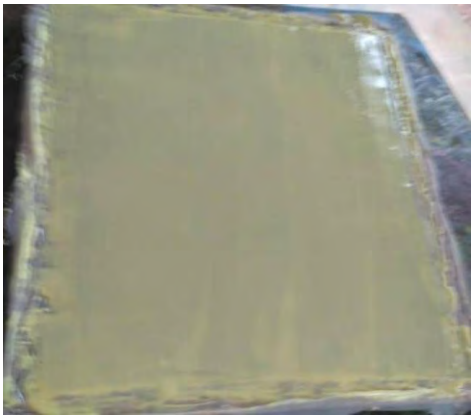


Plate 4.3 - Step Three : The emulsion was coated on the screen

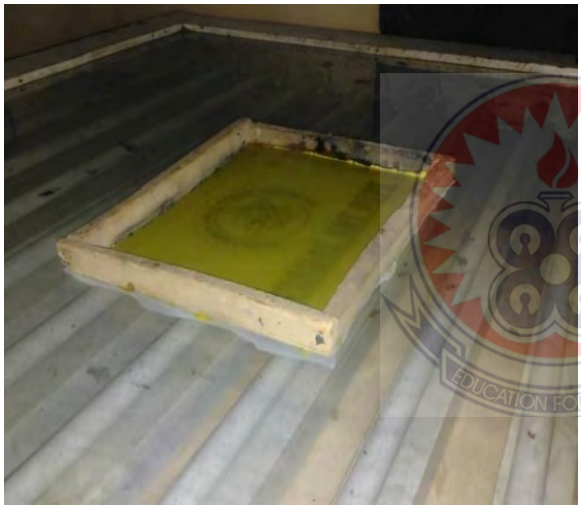


Plate 4.4 - Step Four: The coated screen was kept in a dark room to dry

Plate 4.5 - Step 5: The coated screen was placed on the design.

Plate 4.6 - Step 6: Load was placed on the screen and covered with blanket

Plate 4.7 - Step 7: The lightbox was switched on for 10 minutes

Plate 4.8 -Step 8: The screen was washed.

Plate 4.9 - Step 9: The washed screen was allowed to dry.

Plate 4.10 -Step 10: The screen was ready to be used.

4.3.4 Dyeing the Fabric

The following tools and materials were used in dyeing the fabric. Dye bath, white fabric, needle, thread, pen, and container. The following steps were used in dyeing the fabric.

4.3.4.1 Steps in Dyeing the Fabric

Plate 4.11 - Step 1: Demarcating lines on the fabric for stitching

Plate 4.12 - Step 2: Stitching the fabric using the running stitches method

Plate 4.13- Step 3: Tying the fabric

Plate 4.14- Step 4: Preparing the dye bath

Plate 4.15 - Step 5: Immersing the tied fabric into the dye bath

Plate 4.16 - Step 6: Wait for about 10 minutes

Plate 4.17- Step 7: Removed fabric from dye bath.

Plate 4.18- Step 8: Dyed fabric dried for oxidation to take place

Plate 4.19 - Step 9: Dyed fabric spread on a printing table

4.3.5 Printing the Fabric

The developed screen, dyed fabric, printing paste, squeegee, and electric iron were the tools and materials employed during the printing of the fabric.

4.3.5.1 Steps in Printing the Fabric

Plate 4.20- Step 1: Place the developed screen on the dyed fabric

Plate 4.21- Step 2: Transfer the image on the developed screen onto the fabric using the squeegee

Plate 4.22 - Step 3: Ironing of the printed fabric

4.3.6 Finished Fabric

The final stage of the production stage was finishing the fabric for use. At the end three different fabrics were produced employing the same steps as indicated above. This was shown in Plate 4.19.

Plate 4.23: Fabrics

Final Printed Fabric One

Final Printed Fabric Two

4.4 Summary

The study was divided into three parts. Part one revealed that dressmakers in Builsa North district employ thumbnail sketches, design their work using computer software and produce their cloth. The study showed that dressmakers' ideas and concepts were put into thumbnails first, and transferred onto the computer using a Corel Draw application software before being printed on a piece of fabric.

Part two showed that idea development, thumbnail sketches, motif development, and pattern development were the four major stages involved in designing and producing a textile cloth. The idea development stage involved conceptualizing the idea for the design which included scissors, measuring tape, sewing machine, thread, and needle. The thumbnail development stage designed four ideas using scissors, measuring tape, a sewing machine, thread, and a needle. During the motif development stage, colour and more details were added to the designs at the thumbnail stage. The final stage, the pattern arrangement employed full drop repeat and side repeat patterns during this stage.

The final part was the production stage. This stage involved the tools and materials, and steps used in producing the textile cloth for the Builsa North district dressmakers' association fabric. The tools and materials included squeegee, mesh, stapler, wooden frame, stencil, screen, printing paste, kerosine, photo emulsion, lightbox, dye bath, white fabric, needle, thread, pen, and container. Also, the study revealed developing the screen, dyeing the fabric, and printing the fabric as the major stages involved in producing a textile fabric for The Builsa North dressmakers' association.

The next stage concluded the study with a summary of the major findings, recommendations, and suggestions for further studies.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Overview

This was the final chapter that provided a brief overview of the study, highlighting major findings to draw conclusions and suggesting a way forward. This chapter was categorised into four sections. The first section demonstrated how the original research questions and objectives set out in chapter one were answered. The main findings were summarised under the research questions. The second section concluded the findings. This was followed by the third section which provided recommendations for professional practice. The fourth section highlighted new areas open for further research.

As already noted, the purpose of this study was to produce a textile cloth for the Dressmakers association in the Builsa North District in the Upper East Region of Ghana. Therefore, three objectives were set out and these were to: investigate dressmakers' knowledge of the design and production of textile cloth in the Builsa North District, design the textile cloth and produce the textile cloth. To achieve these objectives, art-based researched design informed by the interpretive paradigm was designed around the following three research questions:

1. What knowledge do dressmakers have in designing and producing a textile cloth for an association?
2. How was the textile cloth designed?
3. How was the textile cloth produced for the dressmaker's association?

In chapter two, the theoretical framework revealed the fashion theories employed by dressmakers. The empirical review identified the history of fashion design in Ghana, the history of dressmakers in Ghana, types of dressmakers, forms of vocational training for dressmakers, the meaning of textiles, textiles designing, and design processes. The knowledge acquired from the theoretical and empirical frameworks guided and influenced the process of data collection. It also steered the development of themes from the data collected. The conclusions were drawn to answer the three key research questions restated above.

5.1 Summary of Findings

The first research question investigated dressmakers' knowledge of the design and production of textile cloth in the Builsa North District of the Upper East Region. The study showed that dressmakers in the Builsa North district employed three major stages in producing textiles cloth. The stages were thumbnail sketches, designing the work using computer software, and producing the cloth.

The second research question described the design process employed in producing textile cloth in chronological order. The study showed that they were four stages in the design process including idea development, thumbnail development, motif development and pattern arrangement. The study added that the idea development stage consisted of the development of concepts using dressmakers' tools such as sewing machines, scissors, tape measure, thread, and needles. Also, the thumbnail stage encompassed the development of the ideas into designs employing the principles of design. At this stage, four different thumbnail sketches were developed. The third stage involved the design or motif stage. This was the stage details such as colour, fonts, and shapes were added to the

thumbnails to become complete designs. The study showed that this stage developed four motifs. The final stage of the design process was the pattern arrangement. This stage was where the motifs were arranged in a full drop repeat or side repeat pattern on the computer. The study revealed that the full drop pattern arrangements were three and the side repeat pattern one.

The final research question described the tools, materials, processes, and steps involved in producing the textile cloth. The tools and materials employed were mesh, squeegee, lightbox, kerosene, stapler, photo emulsion, wooden frame, fabric, printing paste, dye, and stencil. The processes included developing the screen, dyeing the fabric and printing the fabric. Developing the screen involved designing the motif using Corel Draw application software, stretching the screen on a wooden frame, coating the screen with photo emulsion, keeping the coated screen in a dark room to dry, applying kerosine to the stencil, placing the coated screen on the stencil, putting a load on the screen, switching off the lightbox for 10 minutes, washing the screen and allowing it to dry. Also, the study revealed that dyeing the fabric included line demarcation on the fabric, using the running stitching method to stitch the fabric, tying the fabric, preparing the dye bath, immersing the tied fabric into the dye bath, and waiting for 10 minutes, removing fabric from dye bath, drying the fabric to allow for oxidation and preparing the dyed fabric on a table for printing. The final stage of this process was printing. The study highlighted that, the developed screen was placed on the dyed fabric, the image was transferred onto the fabric using the squeegee, and the printed fabric was ironed for quick drying.

5.2 Conclusions

The succeeding conclusions were reached as an upshot of the findings:

Grounded on the findings of the study, dressmakers in the Builsa North District employed thumbnail sketches, CorelDraw application software in designing their motifs and produce their fabrics using a screen-printing method.

It was apparent from the findings that the study employed idea development, thumbnail sketches, motif development, and pattern development during the design stage of producing the textile cloth for the dressmaker's association in the Builsa North District of the Upper East Region of Ghana.

Also, the study established three major production stages employed in producing the textile cloth for dressmakers in the Builsa North District. The stages included the screen developing stage, dyeing the fabric stage and printing the fabric stage.

5.3 Recommendations

Informed of the findings and conclusions, the ensuing recommendations were made:

It emerged from the findings that dressmakers in the Builsa North District employed the thumbnail sketches, design stage, and production stage in producing their fabrics. Researchers should investigate other dressmakers' associations in other districts of Ghana to unearth the design and production stages they employ in producing their textile cloths.

The study revealed that idea development, thumbnail development, motif development, and pattern development were employed in producing the textile cloth for the Builsa north dressmakers' association. Researchers should conduct more studies

using different developmental stages to produce textile fabrics for other dressmaker associations in Ghana.

It was realized from the study that screen developing, fabric dyeing, and fabric printing were the three major stages employed. Other studies should employ different production stages in producing their textile cloths for dressmakers or other associations to compare and contrast the results.

5.4 Suggestions for Further Research

It was important that the findings of this study were not generalized to all dressmakers' associations in Ghana. The sample for the study though small was taken twenty participants from five traditional areas and one district in the Upper East Region of Ghana. Further studies should be conducted in different metropolitans, municipals, or districts throughout the sixteen regions of Ghana. Other design and production techniques that may be used in producing textile fabric for dressmakers or other associations should be considered for further research in different geographical locations of the country.

REFERENCES

Abban, C. K., & Quashie, S. O. (1993). *Report on upgrading the technical and managerial skills of master mechanics and apprentices.* Accra. University of Ghana.

Abrahart, E. N. & Whewell, C. S. (2021, November 15). Textile. *Encyclopedia Britannica*. https://www.britannica.com/topic/textile

Adam, H. (2022, May 12). An introduction to the eye-catching world of Ghanaian traditional dress. *Culture trip.* https://theculturetrip.com/africa/ghana/articles/an-introduction-to-the-eye-catching-world-of-ghanaian-traditional-dress/

Adams, W.C. (2015.) Conducting Semi-Structured Interviews. In: Wholey, J.S., Harty, H.P. and Newcomer, K.E., Eds., *Handbook of Practical Program Evaluation*, Jossey-Bass,(pp.492-505). https://doi.org/10.1002/9781119171386.ch19

Adu-Boahen, K. (2008). Mediating the poverty of girls' education: nineteenth-century ghanaian women's responses to the subordinating impact of western education. *Journal of African culture and civilization, 1*, 91-93.

Alchemer, L.L.C. (2022, May 24). An introduction to judgement sampling. *Alchemer.* https://www.alchemer.com/resources/blog/introduction-to-judgment-sampling/

Amedorme, S. K., & Fiagbe, Y. A. K. (2013). Challenges facing technical and vocational education in ghana. *International journal of scientific & technology research, 2,* 253-254. http://www.ijstr.org.

Anadurada, P. (2022) What is the difference between a tailor and a fashion designer? *PEDIA.* https://pediaa.com/what-is-the-difference-between-tailor-and-fashion-

designer/#:~:text=A%20tailor%20is%20a%20person,clients%20by%20considering%20their%20wishes. Retrieved May 12, 2022.

Biney- Aidoo, V.Antiaye, E. & Oppong, J. A. (2006). *An assessment of the apprenticeship system as a means of acquiring sewing skills.* http://www.iiste.org.

Boateng, C. (2012). Restructuring vocational and technical education in Ghana: The role of leadership development. *International journal of humanities and social science, 2*, 4 – 20.

Bortei-Doku, A. E., Doh, D. & Andoh, P. (2011). *Study of attitudes towards technical and vocational education and training in Ghana.* Centre for social policy studies, University of Ghana.

CES Institute of Fashion Technology (2022, May 12). Theories of Fashion Adoption. *CES Institute of Fashion Technology.* https://studyatces.com/theories-of-fashion-adoption/

Chicago Architecture Centre (2022, May 20). Why the design process? Why is it helpful? *Discover design*. https://discoverdesign.org/handbook

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approach (4th ed.)*. SAGE Publications.

Denscombe, M. (2003). *A good research guide for small-scale social research projects*. Open University Press.

Desyllas, C. M. (2014). Using photovoice with sex workers: The power of art, agency and resistance. *Qualitative Social Work*, *13*(4), 477-501.

Dunn, V. & Mellor, T, (2017). Creative, participatory projects with young people: Reflections over five years. *Research for All, 1*(2), 284-299, https://doi.org/10.18546/RFA.01.2.05

Fianu, D. A. G. & Acquaah-Harrison, P. (1999), The apprenticeship system of "wayside" seamstress from selected neighborhoods in Accra. *Asian regional journal of home economics (ARAHE), 6*, 3-8.

Fibre2fashion (2022, May 9). Plant and animal fibres. *Fibe2fashion.* https://www.fibre2fashion.com/industry-article/2943/plant-and-animal-fibres

Fisher, C.H. (1981). History of natural fibers. *J. Macromol. Sci. Part A - Chem., 15*, 1345–1375, doi:10.1080/00222338108056788.

Gall, M., Gall, J., & Borg, R. (2007). *Educational research: An introduction (8th ed.).* Pearson Education.

Gbetodeme, S., Amankwa, J. & Dzegblor, N. K. (2016). Basic Design, a Needed Foundation for Designing a Successful Garment: A Case Study of Dressmakers in the Ho Municipality, Volta Region, Ghana. *Journal of Education and Practice, 7*(3), 55-61. www.iiste.org.

Guba, E. G. & Lincoln, Y. S. (1987). The countenances of fourth generation evaluation: description, judgment, and negotiation. *Evaluation studies review annual*, *11*,70-88.

Holkar et al., (2016). A critical review on textile wastewater treatments: Possible approaches. *J. Environ. Manage, 182, 351–366.*

Joshua Project (2020). *Bulsa, Buli in Ghana*. https://joshuaproject.net/people-groups/11005/Glt

Korstjens, I. & Moser. A. (2018). Practical guidance to qualitative research: Trustworthiness and publishing. *European journal of general practice, 24* (1), 120-124. DOI: 10.1080/13814788.2017.1375092

Kusi, H. (2012). *Doing qualitative research: a guide for researchers*. Emmpong Press.

Lawrence, R. L. (2008). Powerful feelings: Exploring the affective domain of informal and arts-based learning. In John M. Dirkx (Ed.), *Adult learning and the emotional self. New directions for adult and continuing education,* Number 120 (pp.65-77). Jossey-Bass.

McLeod, S. (2022, 23rd May). Sampling Methods. *Simply psychology.* https://www.simplypsychology.org/sampling.html

McNiff, S. (2008). Arts-based research. In Knowles, J. D. & Cole, A. L. (Eds.), *Handbook of the arts in qualitative research: Perspectives, methodologies, examples, and issues (pp.29-40).* SAGE Publication. https://dx.doi.org/10.4135/9781452226545.n3

Merriam, S. B. & Associates (2002). *Qualitative research in practice: Examples for discussion and analysis.* Jossey-Bass.

Neisius, M., Stelzig, T., Liang, S. & Gaan, S. (2015). Flame retardant finishes for textiles. In Functional Finishes for Textiles: Improving Comfort, Performance and Protection. *Elsevier Inc.,* 429–461.

Ng'ethe, N. & Ndua, G. (1992). *Jua Kali education, training and welfare: A study of carpentry and metal-work in the Eastlands of Nairobi.* Masters' thesis, University of Nairobi.

Ninja, B. (2022, May 9). The importance of design. *Blackninja*. https://www.black.ninja/the-importance-of-design/#:~:text=Design%20is%20one%20of%20the,emotion%20or%20feeling%20from%20customers.

Pensupa et al., (2017). Recent trends in sustainable textile waste recycling methods: Current situation and future prospects. *Springer, Cham*, 189–228.

Quartey, P. (2006). *The textiles and clothing industry in Ghana.* https://library.fes.de/pdf-files/iez/03796/10ghana.pdf

Sarpong, G. D., Howard, E. K, & Osei-Ntiri, K. (2011). Globalization of the fashion industry and its Effects on Ghanaian independent fashion Designers. *Journal of Science and Technology,3*, 97 – 106.

Shahidi, S. & Wiener, J. (2012). *Antibacterial Agents in Textile Industry: In Antimicrobial Agents*. InTech.

Showkat, N. & Parveen, H. (2017). *Non-Probability and Probability Sampling*. https://www.researchgate.net/publication/319066480

Stewart, S. (2022, May 9*).* Textile fabrics: Definition and types. *Study.com.* https://study.com/academy/lesson/textile-fabrics-definition-types.html

Stone, C. Windsor, F.M., Munday, M., & Durance, I. (2020). Natural or synthetic – how global trends in textile usage threaten freshwater environments. *Sci. Total Environ.,* 718, doi:10.1016/j.scitotenv.2019.134689.

Thompson, L. (2022, May 12), Job description for a fashion design instructor. *CHRON*. https://work.chron.com/job-description-fashion-design-instructor-21373.html

Turlings, Y. (2002). Ghana investment profile. *Textile's news.* http://www.ghana.textileenews.org

Uwameiye, R. & Iyamu, O. S. (2010). *Training methodology used by the Nigerian indigenous apprenticeship system.* http://www.iizdvv.de/index.php

Vaart, G. V. D., Hoven, B. V. & Huigen, P.P.P. (2018). Creative and art-based research methods in Academic research. *Qualitative social research, 19*(2), 1-30. http://www.qualitative-research.net/

Yin, R. K. (2003). *Case study research: design and methods.* Sage Publication.

INTERVIEW GUIDE

TOPIC: ***Designing and producing a textile fabric for Builsa North District Dressmakers Association.***

Any information provided during this interview session is solely for academic purposes in partial fulfillment of a Master of Science degree in Fashion design and textiles.

Introduction

This study investigated the dressmakers' association in the Builsa North District's knowledge of their designs and production of textile fabric. The confidentiality and anonymity of all informants and participants are greatly assured.

A. PERSONAL DETAILS

1. How many years have you worked as a dressmaker?

2. How many apprentices do you have?

3 . What is your age range?

- 20- 30
- 31-40
- 41-50
- 51-60
- 60- above

4. Educational background

- Formal
- Informal
- Non-formal

5. If Q4 is formal education indicate level.

- Basic
- Secondary
- NVTI
- Diploma
- Degree
- Masters
- PhD

6. How do you develop concepts for your textile designs?

7. Do you make sketches?

8. If yes, what steps do you follow in making your sketches?

9. Do you design your motifs with the computer?

10. If yes, which computer application software do you use?

11. Are you conversant with the computer application software?

12. What steps do you follow in producing your textile clothes?

Thank you for your participation