

**THE PROSPECTS OF INTRODUCING DESIGN THEORY TO MASTER
CRAFTSMEN IN DRESSMAKING WITHIN THE NEW JUABEN
MUNICIPALITY IN GHANA**

By

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DECLARATION

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

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DEDICATION

I dedicate this research work to my husband Eric Kofi-Nyarko Titiati, my parents, Mr. and Mrs. Harry Asimah, for their financial support throughout my education and my siblings, Courage and Saviour Asimah for their encouragement. I say God richly bless you.

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ABSTRACT

The study was conducted to introduce design theory to master craftsmen in dressmaking within the New Juaben Municipality. Consequently, the study focused on identifying the teaching and learning processes in the production of ladies' apparel, analysing the impact of design theory on the performance of master craftsmen in dressmaking, determining the readiness and preparedness of master craftsmen for the introduction of design theory into dressmaking industry within the New Juaben Municipality. Concurrently, the study reviewed literature related to the Concept of Design and Designing, elements and principles of design, design theory, concepts of clothing, theories of cloth wearing, concept of figure types, sewing equipment's and tools, teaching and learning techniques in dressmaking, concepts of craftsmanship and master craftsmen and concept of apprenticeship and apprentice. A mixed research method was employed in the study where structured questionnaire and semi-structured interview were used to solicit information from the respondents. The questionnaire was designed and self-administered to 83 master craftsmen and zonal leaders and 12 were administered to apprentices totaling 95 respondents. Purposive sampling technique was employed in the selection of respondents for the study. Both quantitative and qualitative data were analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0 and the analysis were presented using simple descriptive statistics and thematic analysis. The study yielded some interesting results and provided deeper insight into the design theory. The study revealed that master craftsmen use no formal curriculum in training their apprentices and training is solely practical based while at the same time, teaching techniques are left to the discretion of the master craftsmen. The study again revealed that both master craftsmen and apprentices agree to a large extent inculcating the design theory in their activities will increase their dressmaking opportunities and also increase their effectiveness and efficiency. Finally, the study concludes that Design Theory would significantly improve the skills of master craftsmen in training apprentices. The study thus recommends that, a workshop should be organized by Ghana National Tailors and Dressmakers Association (GNTDA) for all master craftsmen within the municipality on the application of the design theory to keep them abreast with modern techniques in dressmaking.

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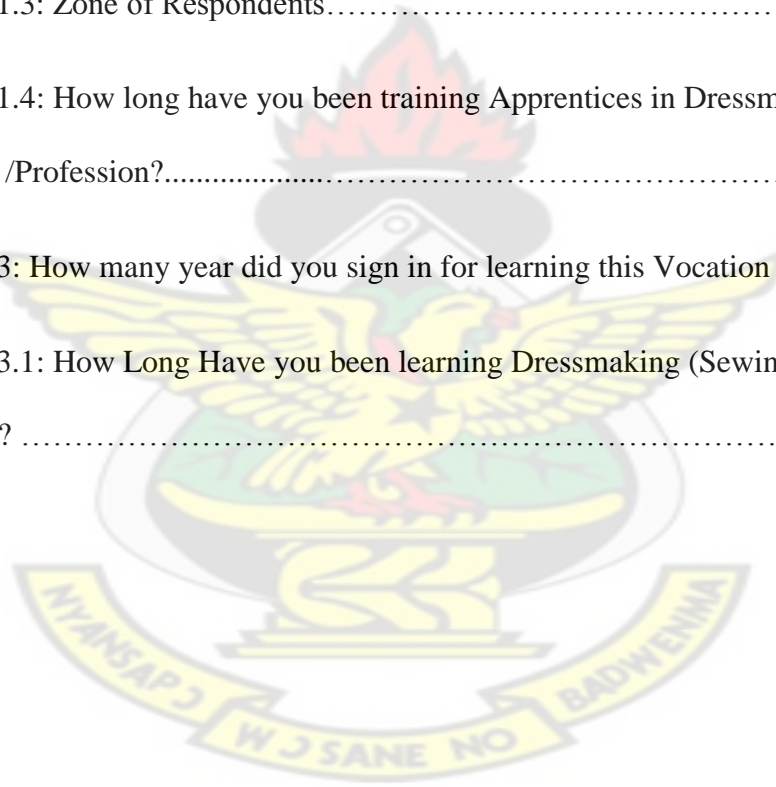


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CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter focuses attention on the introduction which covers the background to the study, the statement of the problem and the purpose of the study. It also includes objectives of the study, research questions, delimitation, definition of terms that were used in the study, abbreviations/acronyms used, significance of the study and lastly the organizations of the chapters.

1.1 Background to the Study

Throughout its long history, clothing also termed as clothes and attire has remained a significant means of the basic needs of human beings (Forster, 2014). Clothes are a kind of second skin, an extension worn on the body. The word “clothing” is fibre and textile materials, tatty or put on the body for covering, protecting or adorning the figure or physique, either permanent or temporarily that transform individual appearance and disclose many things about them (Gavor et al., 2014). Without clothing, one cannot come out of his or her chamber. One can decide to go without food and sleep in the open for days without facing any social rejection, but in the normal sense, one cannot live without clothing for just a day. Society will reject and keep one in the mental if he or she attempts it (Forster, 2014).

Cloth is a powerful means of communication that carry messages and convey meaning. Each outfit worn creates a visual image that utters something about the individual (Priests et al., 1990). Cloth or Clothing is a silent language which sends information about its user before one has the chance to speak. It is used in different ways and for different purposes and it is important to learn how to use it correctly in

order to benefit from its use (Foster, 2014). If individuals want more control over the messages one is sending, you need to learn to use the language of clothes. This language has different parts, just like the language of speech has parts. The parts of speech are nouns, verbs, adjectives, and pronouns. The basic terms used in clothing communication are design theory which are the elements and principles of design. Just as the parts of speech are put together to make sentences, the elements of clothing (dresses) should be put together to make clothing outfits (Priests et al., 1990).

Moreover, the language of clothing is visual. This means it consists mostly of what the eye observes. To learn to use the visual language of clothes, one needs to understand how the eyes receive and interpret messages about clothes. Clothes are also significant to the economy, and people are engaged in producing raw materials, designing and manufacturing and selling the garment people wear.

Dressmaking is the skill of clipping or bestowing objects using stiches made with a needle and thread. Dressmaking plays a significant role in Ghanaian culture. It portrays people's heritage and history and reminds them of their origin (Glamour magazine, 2016). Dressmakers are expert costume manufacturers, who cut, alterate (mend) and repair imperfect sewing in finished garments for individuals. They are also general garment makers or specialized line makers for women's clothing, including; blouses, dresses, suits, slit and kaba, evening wear, wedding and bridesmaids' gowns and sport wear, but master craftsmen mostly start on small scales from home premises or shops (Gavor et al., 2014).

However, the first step in making a garment is creating a design. In clothing or garment designing, someone comes up with a completely new idea for a garment. The impression is presented to others usually in a form of a sketch (Priest, 1990).

Designing makes it possible for ideas to be transformed into pictorial form. Thus, it makes it possible for what is imaginary and what is in the mind of one person to be made concrete for everybody to see and have access to. It guides a clothing manufacturer to produce exactly what is desired or what the client expects. A good design hides figure faults and highlights physical quality features on the body and it is also the basis of quality work. Work, which is not designed initially, does not progress smoothly, because the processes involved are easily forgotten (Forster, 2014).

Design theory shelters the methods, strategies, research and analysis of the term design. Design theory reinforces the concept of, and reflection upon creative works and also includes an understanding of a tangible element and by what means can one arrange them to achieve principles of design. It also merges with a purpose or problem to solve, results in effective design solution (Lundgren, 2016).

The process of making plans and guides for the attainment of desired properties in clothing production is designing. It is the transformation of ideas, perceptions or concepts into concrete plans (Gavor et al., 2014). Designing plays a very important role in clothes production. It is possible to design clothing to suit everyone for every occasion.

In order to understand anything well and use the information to one's benefit; one has to study it carefully. While some learn the skills in school, clothing producers also learn their skills through apprenticeship training (Forster, 2014). From time immemorial, people have been swapping skills from one period to the next in some type of apprenticeship training. To work efficiently as a dressmaker in the comfortable zone youngsters require a scope of knowledge and skills. The fundamental qualities of apprenticeship are its practical orientation, self-regulation

and self- financing, flexibility and non-formal nature which satisfies individuals who do not have the educational prerequisites for formal training (Osman-Gani, 2004). It may include an exchange of knowledge or skill inside of a family from mother to child. It might likewise exist as an arrangement between a master-craftsman and an apprentice in which the trainee goes into an agreement to acquire particular skills or trade by working under the guidance of a skilled master for a certain span of time, normally between three to five years and for a predefined collection of cash as a training outlay (Husted, Mason, & Adams, 2003).

Generally, a craftsman usually begins as an apprentice, working for and learning from a master craftsman, and after four to seven years is released from his master's service as a tradesman or a journeyman. Training in craft and trade within the European cultures has been a recognized tradition since the late Middle Ages (Williamson, 2007).

Apprenticeship carries meanings of quality training, leading to meaningful and reasonable well-rewarded work in what were traditionally seen as the "skilled trades" for dressmaking, engineering, carpentry, plumbing and so on (Keep & James). Apprenticeship is a system of acquiring knowledge and occupational skills through a combination of practical work experiences and theoretical component under the mentorship of a Master Craftsmen either in the classroom or at home (Chankseliani & Relly 2015).

1.2 Statement of the Problem

In spite of the fact that the master craftsmen in dressmaking provide vital skills acquisition in a lot of countries, it is observed that a greater number of dressmakers do not know the theory of design, let alone appreciate the need to incorporate them in

their works. Some of them also do not have the precise stuff needed to modify dressmaking in accordance with contemporary day styles or designs in the vocation. Besides, the huge majority of the master craftsmen in dressmaking do not understand the usage of some essential tools and materials in dressmaking which influence the quality and the appearance of a finishing product.

There was a brief discussion and interview with the Regional Secretary of Ghana National Tailors and Dressmakers Association (GNTDA), Mr. Alfred Yaw Kissi on how to introduce design theory to master craftsmen in the New Juaben Municipality. *He shared his fervent opinion and raised salient points that “when the theoretical aspect of designing is introduced to dressmakers, it will help them improve their designs and also enable them be creative and innovative in the scope of operation”.* He also clarified that *“it will aid the dressmakers meet the ever changing new trends in dressmaking”.* Further he finally made it clear that *“it will also help bridge the gap between school base and non-school base dressmakers”.*

This opinion corroborates the definition of apprenticeship which is believed to be a system of acquiring knowledge and occupational skills through merging of practical work experiences and theoretical component under the mentorship of a master craftsman (MC) either in the classroom or at home (Chankseliani & Relly, 2015). Clothing is using the principles and elements of design to create design to suit various figure types and different occasions (Forster et al., 2014). Dressmaking has a distinctive contribution to the development of a country's Gross Domestic Product since it creates job opportunities for the youth in the country. On the contrary, there is lack of dynamism in the face of dressmaking in the country.

The problem however is that, there is little understanding and involvement of design theory in the operations of dressmakers in the New Juaben Municipality which in most cases, make their end products obsolete and vague. Thus, the dressmakers are unable to offer professional advice to their customers with regard to what exactly they want and also how to create world standard designs as required of master craftsmen in dressmaking. This has deprived them of the beautiful transition in the Fashion World where great minds keep introducing incredible designs to meet all human status.

The research, therefore, seeks to introduce to Zonal leaders and master craftsmen in dressmaking in the New Juaben Municipality, design theory which would enable them acquire needed knowledge and skills that would thereby enhance their garment production, and also, fit them into the Fashion industry.

1.3 Objectives of the Study

The objectives of the study are:

1. To identify and document the teaching and learning processes used by master craftsmen in training their apprentices in dressmaking in the New Juaben Municipality.
2. To analyze the impact of design theory on the performance of master craftsmen in dressmaking within the New-Juaben Municipality.
3. To organize workshop to help with the introduction of Design Theories for training apprentices in the dressmaking industry in New-Juaben Municipality, Koforidua.

1.4 Research Questions

To be able to accomplish the stated objectives of this study the following are the ensuing research questions that guided and drove the study;

1. What identifiable teaching and learning processes do master craftsmen use in training their apprentices in dressmaking in the New-Juaben Municipality?
2. What are the significant impacts of the use of design theory on the performance of master craftsmen in the dressmaking production within the New-Juaben Municipality?
3. What significant contribution will the introduction of design theory add to the training of apprentices in the dressmaking industry in New-Juaben Municipality, Koforidua?

1.5 Delimitation

The research, by context and geographical location, is limited to the scope and delivery of the selected master craftsmen in dressmaking of the six zones in the New-Juaben Municipality. The zones are Adweso, Akwadum, Anlo Town, Asokore (Effiduase), Central (Market Area) and Old Estate (Nsukwao or Timber land).

1.6 Definition of Terms

The technical definitions of terms used in the context of the study have been clarified as follows:

Apprentice: one bound by indenture to serve another for a prescribed period with the aim of learning an art or trade.

Apprenticeship: is a kind of job training that involves following and learning a master of the trade on the job instead of in school.

Costumes: is the distinctive style of dress of an individual or group that reflects their class, gender, profession, ethnicity, nationality, activity or epoch.

Clothing: is a fiber or textile material worn on the body. The wearing of clothing is mostly restricted to human beings and is a feature of nearly all human societies.

Clothes: items that are worn to cover, protect or decorate the body such as dresses, shirt, and coats.

Craftsman: someone who makes things skillfully with his hands or practices an art or craft.

Design: a plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made.

Design Theory: Is a subfield of design study concerned with several theoretical methods towards understanding and describing design principles of design knowledge, and design practice.

Dressmaker: A person who makes custom clothing for women, such as dresses, blouses, and evening gown.

Flatter: To make an individual appearance thin or to make one's figure look better than it is.

Master craftsman: Someone who is very skilled at a particular job, especially a job that involves working with your hands. Master craftsman can also be called skilled teacher (sometimes called only master or grandmaster).

Prospect: The possibility or likelihood of some future event occurring.

Theory: Is a generalization about a phenomenon, an explanation of how or why something occurs.

Sewing: it is to join or fasten (cloth, leather, paper etc.) by stiches made with thread to make or mend especially pieces if fabric (clothing) with needle and thread.

1.7 Abbreviations/Acronyms Used

The contracted or shortened form of a word used to represent the whole in the context of the study have been clarified is as follows:

B A	Bachelor of Arts
B E C E	Basic Education Certificate Examination
GNTDA	Ghana National Tailors and Dressmakers Association
MSLC	Middle School Leaving Certificate
TLM	Teaching Learning materials
WAEC	West African Examinations Council
WASSCE	West African Senior School Certificate Examination

1.8 Significance of the Study

The results of the study would help master craftsmen to include design theory in apprenticeship training of dressmakers and also develop fashion to meet the ever changing new trends of dressmaking in the New Juaben Municipality.

Again, it would help society to appreciate creativity in dressmaking. It would also assist master craftsmen and apprentices in dressmaking, to enhance the scope of their knowledge and skills in order to produce adequate and interesting designs.

Furthermore, the study would benefit zonal leaders, master craftsmen and apprentices in dressmaking to gain an in depth knowledge that would help bridge the gap or fill the loopholes between formal training and apprenticeship in dressmaking, thereby achieving quality performance to meet costumers' needs.

Finally, the thesis is anticipated to add to the knowledge-base and serve as a reference material for potential researchers and also enlighten the public on some measurable impacts on master craftsmen in the fashion world in dressmaking production.

1.9 Organization of the Rest of the Text

Chapter Two reviews literature and information relevant and relate to the study. The literature is focused on the conceptual framework informing the study and areas involving master craftsmen in the dressmaking production. Chapter Three describes the methodology used for the study. Chapter Four, deals with the presentation of the results from the study along with the analysis and the discussion of the findings.

Chapter Five summarises the findings, draws conclusions from the study, and makes recommendations that would be beneficial to master craftsmen in dressmaking production. Finally, the references as well as appendices of the study have been provided.



CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0. Overview

The chapter reviews literature which are relevant and relate to the study to give the researcher some insight into what other scholars have done in relation to the areas of design theory for master craftsmen in dressmaking.

2.1 Concept of Design and Designing

The word “Design” has many meanings and that theoretical method will strip of all meanings to provide coherent and comprehensive view and it is also employed in almost all disciplines of art. The word Design can be viewed as an activity and its use can have a perspective meaning depending on the conceptual application of the word. A design can be described as a “drawing or outline from which something may be made” and this includes dressmaking or garment making (Mensah, 2002). However, the term is explained by other writers to understand its conceptual presentations. Design stimulation is anywhere and everywhere. Nature is another instance of a source of inspiration, from flora to fauna, from sky to wind to water (Burns & Bryant, 2007).

According to Forster (2014), a design in Clothing and Textiles is a sketch or plan of a garment which guides the production of that garment. Before production begins, the item to be produced is pre-imaged. In relation to Annor et al. (2015), philosophies, the designer’s ideas, perceptions and concepts about what is to be produced are transformed into concrete plans through designing and sketched to give a preview of what is to be produced. When a designer plans a work, one puts together certain qualities. Such qualities are called elements of design.

A design in clothing also refers to a pleasing or attractive amalgamation of the elements of design using the principles of design. The Design will reflect the ideas, interests and skills of the designer (Gavor et al., 2014). It provides a preview of the intended or expected product and reflects interests and skills of the designer. It also reflects one's values and self-image (Forster, 2014).

Design is the perception that forms a subconscious thought that leads to a deeper sense of knowing, often in the apparent absence of rational confirmation. Intuition is similar to an elongated insight that tells people they are on to something (Miller, 2009). Design can also be a conscious effort to create something that is both functional and aesthetically pleasing. For example, a fashion designer may design a dress. The designer's profession is to sew and to make it look good (aesthetically pleasing). A Design can be viewed as a more rigorous form of art, or art with a clearly defined purpose (Design and Art, 2009). It is also an organization, arrangement or composition of a work. This implies that a design can be considered as a process or as the result of a process (Asante & Nyarko-Hibson, 2008).

Forster (2014), expresses that design is classified into two: process and product, as a verb and noun. As design is a problem solving process, it is researching, setting the source of inspiration, planning, organizing to meet a goal, carrying out according to a particular purpose and creating. As product, it is the end result, an intended arrangement that is the outcome of the process or plan. Design as process is planning to meet a goal, and thus applies to everything intentionally fashioned for a purpose.

The steps and order of the process are essentially the same regardless of the end product. A design as a man-made product and service falls into two major categories: sensory and behavioural. Sensory design is perceived through the senses, and is classified as visual, auditory, olfactory, tactile and gustatory. Behavioural design is

planned action. Many products, however, include aspects of both, because design may be perceived through the senses and then interpreted behaviourally. For example, a fashion show, includes both sensory and behavioural designs (Fatma, 2006). Warr (2005) asserts that, to reach this kind of goal, creativity is certainly an essential ability that a designer must attain and definitely should be an area that has to be developed in order to come out with best results in any field of design.

According to Seymour (2002), a design does not have to be new, different or impressive to be successful in the market place, but it must fulfil a need. Seymour however, explains that, the processes of designing lead to innovative products and services. Design involves problem-solving and creativity. Again, Forster (2014) posit that designing is therefore the transformation of ideas or concepts into concrete plans. It provides a preview of the intended or expected product and reflects interests and skills of the designer. A designer ought to have an understanding of all the diverse aspects of creative designing and of the source of inspiration, and a complete knowledge of the different area of style. Instances are Ladies' wear, day and night wear etc. (Patrick, 1994). Cooklin (1991) adds that in practice, the designer begins by preparing some sketches of the ideas for the collection and choosing the best fabrics and trims to be used for each design. The designs themselves can be hand drawn and coloured.

The processes of producing a product begin with the 'working sketch', which is of course, produced by the designers (Taylor, 1990). Some designers rely on hand sketches of their garment ideas. The designer's sketches do not look like the finished artwork of a fashion illustration. Burns and Bryant (2007) note that some stylist's state that they are not good in drawing of time constraints, some use a body silhouette called a croquis or lay figure, as a base from which to develop their garment design

sketches. Burns and Bryant observes that, during the design stage of manufacture, some designers work with specific fabric ideas gathered at textiles shows or obtained directly from textile manufacturers as they start to sketch garment design ideas. Less frequently, designers might develop a design sketch and then seek the perfect or faultless fabric for it. Special trims and findings termed as notions and sundries, such as buttons or fasteners, can be significant features of some garment designs. A unique trim can convert an ordinary or classic garment into a new look in appearance (Burns & Bryant, 2007).

In summary, the various literature reviewed explain design as visual thinking of a higher order than verbal thinking. Design is also perceived as a systematic progression of accepted elements following certain principles, arriving at a good work done and as a marketing strategy for a business to make profit in the name of dressmaking.

2.2 Elements and Principles of Design

Elements and Principles of design are the building blocks or foundation upon which a work of art is fashioned. One cannot use all of them at the time but will use some of them most of the time. By understanding and using the element and principles of design one increase the prospect that one will be successful in creating designs that are pleasing. This helps one to understand how and why some things work together and other do not.

2.2.1 Elements of Design

When people say that one's dress is pretty, they are referring to the total effect including the design of the dress. A good design must follow certain guidelines which

could be reviewed as the elements and principles of design. The elements of design aid as a foundation for the development and creation of all textiles and clothing products. Throughout history artisans and designers have applied the elements of designs in a diversity of ways to produce certain aesthetic and appealing clothes.

Elements of design are the elementary parts or qualities of a design. These are visual components or parts which can be isolated and defined in any visual design or work of art. They are the structure of the work, and can carry a wide variety of messages (Annor et al., 2011). Elements of design are put together in different ways to form the design of a garment or an article. In other words, they contribute to the overall design of a garment or an article. A garment of good design is pleasing to the eye and it makes the wearer look his or her best (Evans & Thomas, 2004).

By analogy, elements of design are essentially the “ingredients” or the things one must work with to create an attractive design. Once people know how to use the elements of design effectively, they can produce good and fitting clothes and dresses to look their best (Forster, 2014).

Faimon & Weigand (2004) explain that, elements are the “what” of a design and the principles are the “how”. Elements are like the ingredients in a recipe, the parts of a machine or the notes in music. On their own, the elements may do little, but put together skilfully, they create a cake, a car or a concerto (Evans & Thomas, 2004).

Across the disciplines, the elements of design include colour, form, line, shape, space, texture and value. Put together skilfully, they create effective usual communication and used by every designer.

Colour

Forster (2014) refers to colour as the most exciting design element and very significant in clothes because that is what first catches the eyes of onlookers and also

the first thing one notices on a figure. It is the most personal and important aspect of fashion. It enables people to express themselves, affects and reflects how they feel. Chapman, (2010) add that colour in a design is actually subjective. What brings to mind one reaction in one person may evoke a very different reaction in someone else. Occasionally, this is due to individual preference, and other times due to cultural background. Clothing is usually selected because of the colour.

Priest (1990) states that the first thing most people notice when they look at one's dresses is the colour or colours. Colour is powerful, and it says a lot about people. Similarly, Forster (2014) observes that colour can create several impressions to make one look taller, shorter, larger, smaller, happier or sad. Knowing how to use colour in achieving a well-dressed appearance. Colour can flatter one's skin colouring, improve one's appearance, and can reflect or alter a mood. In addition to that, colour sends messages about how one sees oneself; it may be raining, but one's bright yellow slicker may make one feel so good about oneself that one would not care (Priest, 1990). Colour can make clothes seem warm or cool (Forster, 2014).

Gavor et al. (2014) buttress this view by stating that colour can be used to enhance figure. Darker colours can be used to make a person appear smaller and brighter colours have an enlarging effect. All colours are beautiful when used or combined professionally. Gavor et al. however, explains that, there should always be harmony when colours are combined to give a pleasing effect. Colour scheme is a discipline in itself. Reviewing how colours affect different people, either individually or as a group, is something some individuals build their careers on. There is a lot to it. Something as simple as changing the exact hue of a colour can evoke a completely different feeling (Chapman, 2010).

During planning, colours and fabrics for the new season's line are discussed. A colour story would be built in advance on the colour research conducted before the planning conference. The line needs a unified appearance, so a great deal of time is spent deciding on the precise balance of colour (Burns & Bryant, 2007).

Dot (.)

A small round spot is termed a dot (Annor et al., 2011). Similarly, Forster (2014) postulates that a dot can also be a simple spot of colour in image formation. "It is a point made by tool". Annor et al. (2011) add that when one positions a finger on a dusty table, the small spot left is a dot. When one positions the tip of a pen or pencil on a paper and leaves it, the small spot left is a dot. A line results from a connection of series of dots and are made in sizes.

Furthermore, Forster (2014) opines that, large dots on a fabric pattern tend to make the wearer look fatter, while smaller dots can make the wearer appear slimmer or smaller. Dots like curve lines, suggest feminine curves. A dot can be arranged in a way to generate a continuous path or line.

Line

A line is the moving path of a point (Evans & Thomas, 2004). A continuous mark made on a surface with a pointed tool can also be termed as a line. In design, a line is an actual mark made with a mass or edge. To Annor et al. (2011), a line moves, and it indicates the direction it is moving to. It can be moving up, down, straight, curved, and diagonal.

A line can have different qualities – it can be curved or straight, thin or thick, loose or precise, delicate or bold, expressive or controlled (Evans & Thomas, 2004). It can also

be broken and still indicate direction. In the environment, man is surrounded by lines. The leaves of tress, tress branches, blades of grass, spokes of wheels are all made up of lines that could be curved, wavy, circular or straight (Annor et al., 2011).

The qualities of a line will evoke different feelings; a curved line feels natural and organic, while a straight line feels manmade and mechanical. A delicate line feels soft and feminine, while a bold line feels strong and masculine (Evans & Thomas, 2004). As an important element of structure, it determines the direction of visual interest in an entire garment. Gavor et al. (2014) also argue that, details such as seams, openings, pleats, gathers tucks, topstitching and trims contribute to the line direction for the whole garment. Line can be used in a garment to make the wearer look taller, shorter, heavier or thinner.

Wolf (2011) raises a point that “line” as applied to clothing design comes in two ways; i.e. structurally and decoratively.

Lines used in the structural design of a garment are darts, seams, pleats, tucks and edges. Structural lines can also be formed by the use of panels or princess lines. They are the assembly details, which also create visual interest. Princess line, hip yoke and high waistlines are structural but they also add beauty to a garment (Forster, 2014). Individually, such design features are used in the construction of the garment decided upon by the designer (Wolfe, 2011). Decorative lines are part of the fabric design or trimmings added to garments. Rows of buttons and top stitching also create decorative lines (Forster 2014). Decorative lines are showcased by the use of surface details on a garment. Decorative lines are ruffles, braid, fringe, appliques, and accessories worn by the individual (Wolfe, 2011).

Priest (1990) explains that, line is the second weighty aspect about dresses. Line has so much influence that it can play tricks with people’s eyes. Therefore, vertical lines

tend to make things longer than they really are. Horizontal lines usually add width, but this depends on how wide the lines are. Wide lines spaced far apart make a figure look taller than it is. Skinny close lines make a figure seem smaller. Theodora continues that certain kinds of materials may even say things about personality. Wolfe (2011) adds that there are three dissimilar types of lines; straight, curved and jagged. When used in clothing, line can propose movement or rhythm while directing the eye to travel from one part of the body to another.

Further, line can draw attention to a specific part of the body or emphasize a specific detail in a garment. For example, a top stitch used on a pair of designer blue jeans draws attention to the seams throughout the garment focusing attention to the length of the leg and or the pockets of the jeans.

Shape/Form

Shape is produced when a line crosses itself or interconnects with additional lines to enclose a space (Annor et al., 2011). A shape can also be an area created by surrounding shape (Stewart, 2002). A shape is a two-dimensional (or is perceived as such); it has height, width and at least the appearance of depth (Annor et al., 2011, Lauer & Pentak, 1995; Sewart, 2002). It may also be regular or irregular. Examples in nature are shapes of seeds, leaves, stones and insects. Some artificial shapes are circles, cones, hexagons, ovals, pyramids, rectangles, spheres and squares (Annor et al., 2011). Straight edges and angular corners generate rectilinear shapes. Curves and rounded forms create curvilinear shapes (Lauer & Pentak, 1995; Sewart, 2002).

Shape is defined as the silhouette, or overall outline of a garment or other item. When a designer is creating a garment, how it is cut out and the construction techniques used influence the shape or form of the final manufactured article. When an individual is

walking down the thoroughfare, the image seen from a distance is measured as a shape, form or silhouette. The shape of a garment can be used by the wearer to draw attention to or away from several parts of the body. The larger the shape of a garment the larger the silhouette of an individual will be seen and vice versa (Wolfe, 2011).

In addition to that, the shape of a garment changes with fashion. Shape gives the outline of the silhouette of clothes and this outline changes proportions. People also have shapes and proportions. The current fashion shape may not always flatter an individual. It is vital therefore to know what suits one's figure or what improves one's figure (Forster et al, 2014). History has it that, three silhouettes have been used: back fullness, bell, and Tubular (Wolfe, 2011). The back fullness was chiefly seen in the 1780s and 1880s. A bell silhouette was originated in the 1740s and 1850s showcasing a fitted waist and full skirt on women. The last silhouette, the tubular silhouette was used in the 1820s and 1920s presenting the woman's body as slim by using vertical lines in structure and decoration. This application of shape or form incorporated a full skirt that puffed out in the back but not the front (Wolfe, 2011).

Space

An exposed zone in which all the elements of design are placed is called space. It is an element that gives meaning to other elements. Space can be accomplished in two and three dimensional forms. Space that is occupied by a form or object is termed as positive space while the space outside the form or object is negative space (Annor et al., 2011).

In dressmaking, the entire area in a garment is space. Poor spacing of any arrangement spoils its beauty. Equal division of space can be monotonous whilst uneven distribution of space becomes more interesting. Spaces are seen between

designs in fabric. Foster (2014) adds that, when motifs are spaced too wide in a garment, it loses its beauty. When motifs are not evenly spaced, it has its own effect on the prints. Again, when spaces are not well organised or arranged in the design of a garment, it also has a bad effect (Gavor et al., 2014).

In clothing design, designers use the negative and positive space related with shapes to create a surface design or pattern. The additional elements of design can be used to outline the contrast between the negative and positive space found on fabrics in clothing (Nielson and Taylor,).

Texture

Texture is the surface appearance or quality and feel of a fabric or garment. The weave or knit produce their characteristics. The texture of a fabric may be dull, bulky, rough, smooth, fuzzy, shiny or soft. How a fabrics feels affects its usefulness for different styles Gavor et al, 2014; Forster 2014). Wolfe (2010) points out that, texture of a clothing item is determined by the fibre content, yarns and method of construction used. A garment that has flowing features will need a soft rather than stiff fabric. A soft fabric is not suitable for tailored style. Sparkling fabrics are more effective for evening wear but not for a day or office wear (Gavor et al., 2014). Texture describes the fabric quality. Texture affects the way colour looks on people. For example, in shiny and smooth fabrics, colours seem lighter and brighter, while in rough fabrics, colours look dull. Generally, the more rough the texture, the duller the colour, and the smoother the texture, the brighter the colour (Forster, 2014).

Wolf (2010) states that, there are two dissimilar kinds of textures, these are structural and added visual textures. A structural texture is used to describe the weight or visual size of a garment. Added visual texture occurs when a surface design is incorporated

into the garment. Visual texture can also be produced by repeating marks or shapes (Stewart, 2002), and changes the appearance and feel of the texture (Evans & Thomas, 2004). Precisely, logos, patterned prints of different sizes, and pictures can be used to change the total motif of a garment. Considering the texture of a garment when procuring new clothing is significant for comfort, appearance, and can be used to produce interest in an ensemble (Wolfe, 2010).

According to Annor et al. (2011), texture is classified in two categories. There are actual or tactile texture and optical texture. Actual or tactile texture can be seen and felt through the sense of touch and optical texture is one that seems to be rough or smooth, but cannot be felt. It tends to be illusionary once felt or touched by the hand. Priest (1990) adds that a bulky-knit woollen sweater does not feel like a cotton denim jacket or a silk scarf. Texture can create illusions about size just as colour and line can. If one has a slim upper body and a large abdomen, one can balance these characteristics by wearing a rough, thick- textured sweater or vest. Sleek, shiny fabrics tend to make figures appear larger than they are. Texture may say a lot about one's mood. To describe the texture of a specific garment, the following words can be used: bulky, crisp, delicate, dull, fine, firm, furry, fuzzy, harsh, nubby, rough, scratchy, sheer, smooth, shiny, sparkling and soft (Wolfe, 2010).

Value / Tone

An element that denotes the connection between light and dark on an object or surface and also aid with form is termed as value or tone. It makes available objects' depth and perception (Annor et al., 2015).

Deducing from the discussion it is imperative that, the elements of design can be used by each and every one to communicate individual style, taste and even mood.

2.2.2 The Principles of Design

Principles of design are the rules which guide the organization of the elements into a design. They are the methods (guidelines) used in merging the elements to produce the designs that are exclusive and elegant clothes. A dress that follows the principles of a good design will not go out of fashion as speedily as one that does not (Gavor et al 2014; Forster 2014). The concepts used to organize or arrange the elements of design can also be called the principles of design. The way one applies the principles of design determines how successful it will be in producing or fashioning a work of art (Annor et al., 2011). In organizing the elements, the principles of design to follow are balance, emphasis (dominance), harmony, proportion, rhythm and unity (Forster, 2014). More importantly, the principles of design, conceivably even more than the elements, are difficult to separate from one another even for the sake of discussion, as it is only when they are working together that an effective design is created.

Balance

Priest (1990) defines “balance” as the look achieved when there is equal interest on both sides of a dress. Balance also denotes weight in design. Similarly, balance implies equilibrium in a design organization (Gavor et al., 2014; Forster, 2014). Sometimes the dress is more interesting to look at when it is not so obviously balanced in the traditional sense. It is a visual distribution of weight in the way design details are grouped. Balance brings overall stability to design. It produces a feeling of rest or lack of movement. Balance is achieved in a design when different parts of the design draw equal attention of viewers (Forster, 2014). In clothing, a well-balanced design is steady across (left to right) and from top to bottom. Balance in design may be either formal or informal. Formal balance is where the two sides are the same on

both sides of the garment. Where the two sides are not exactly the same, the design is informal balance or an asymmetrical design (Gavor et al., 2014).

Annor et al. (2011), further clarify that there are two categories of balance. These are symmetrical balance and asymmetrical balance. If an item in a design is divided into two equal parts, then the balance is believed to be symmetrical. Symmetrical balance can be defined as having equal “weight” on equal sides of a centrally placed pivot which may also be referred to as formal balance. Annor continues that, when elements of different sizes and shapes are placed together to balance pleasantly, they are said to be Asymmetrical balanced or informally balanced. Gavor et al. (2014) argues that asymmetrically balance appears to be more intricate and problematic to visualize. It encompasses placement of objects in a manner that will allow objects of varying visual weights to balance one another around a pivot point. The buttons on a blouse may be purposely placed unbalanced, depending on the other lines of the dress (Forster, 2014).

Contrast

Annor et al. (2011) indicate that the occurrence of opposing elements, such as colour, value, size and others are referred to as contrast. Contrast creates interest and pulls the attention toward the focal point. Objects which are dissimilar in a design create contrasting effect, while similar objects create a monotonous effect. In furtherance to that Foster (2014) reveals that elements with strong contrast stand out from the others and it aids one to show differences in a design. Again, contrast can be just enough or too much. Too strong a contrast creates confusion (Annor et al., 2011).

Emphasis

Emphasis which can also be referred to as point of focus is produced in a design when one element is the dominant item or a concentration of interest in a particular part of area of a design (Annor et al., 2011). Emphasis is the centre of interest of an outfit. It is the focal point that attracts the eye first. All other parts of the design are subordinate to the area of emphasis. Without the centre of interest, an outfit looks unplanned and monotonous (Forster, 2014). It marks the positions in a design which powerfully draws the viewer's attention. Generally, there is a primary or core point of emphasis, with perhaps secondary emphasis in other parts of the design (Annor et al., 2011). Emphasis is achieved by distinguishing the most outstanding part of the design from the less important parts. Emphasis can be created using colour, line accessories. When too many designs are emphasized, the design turns out to be cluttered (Gavor et al., 2014). Emphasis helps to call attention to some parts and camouflage certain other features. For example, neckline and necklace call attention to neck and face. A healthy harmonized outfit should have one outstanding design feature which is significant to be the centre of interest (Gavor et al., 2010).

Proportion

Proportion is referred to as the size of one part of a design in connection to the rest. It is a connection between divisions of space. It is determined by how the total space is divided not in terms of being equal but when all the parts work well together, the garment is well proportioned rather than out of proportion (Gavor et al., 2010; Forster, 2014). Proportion is not pleasing when all areas are exactly equal in size.

Unequal parts are more interesting. Proportion is sometimes called scale (Forster 2014). The human body is divided at the waist. Therefore, three eights of the total

height is from the top of the head to the waist and the remaining five-eighths of the total height from the waist to the floor which is the perfect body proportion (Gavor et al., 2010).

Priest (1990) raises a point that “proportion and balance” are literally two significant elements in a dress. They make everything else work together. Proportion in this instance refers to space relationships of parts of the dress or garment; that is the way the inner lines are arranged. Details like buttons and pockets should bear some relationship to the overall size of the dress.

Repetition

Repetition is the recurrence or the reappearance of elements such as colours, lines, shapes, spaces, values and others within a design. Any element that occurs is usually echoed, frequently with some variations to uphold interest (Annor et al., 2011).

Rhythm

Forster (2014) describes rhythm as an organized movement of elements suggested by the design. It is usually attained through the repetition of the elements. Rhythm can be defined as timed movement through space; an easy, connected path along which the eye follows a regular arrangement of motifs (Annor et al., 2011). It directs the flow of eye movement steadily and smoothly through the lines and spaces of the design. There is rhythm in a design when the parts of the design are arranged so that the eye travels effortlessly from one part of the design to another (Gavor et al., 2010).

The occurrence of rhythm generates predictability and order in a design. Visual rhythm may be best understood by connecting it to rhythm in sound (Annor et al.,

2011). Rhythm can be accomplished in a design through repetition, graduation and radiation of design of elements (Forster 2014; Gavor et al., 2010).

Movement

The path that the eye follows when one looks at a design is called movement. By carefully arranging and positioning design elements, a sense of movement can be formed in a design. Movement can be rhythmic or chaotic. Placing elements close to each other a rhythmic movement is formed from an object to the other while a chaotic movement occurs when elements are dispersed indiscriminately in a design (Annor et al., 2011).

Unity

Oneness, consistency or integration can be referred to as unity. It is produced when all elements in the design work together harmoniously (Annor et al., 2011). Unity is the fundamental principle of design and it is supported by all other principles (Evans & Thomas, 2004). It denotes that everything in a piece of work belongs there, and makes an entire piece. One can suggest unity in a design when careful placement of elements are established together. They serve to attract attention yet it will be useless without the rest of the other elements (Annor et al., 2011).

Variety

This is the use of different elements, which generates interest and uniqueness in the principles of design. When variety is generated, it turns out to be a way of securing interest (Annor et al., 2011). Variety is the complement to unity and is needed to create visual interest (Evans & Thomas, 2004). A good design is achieved through the balance of unity and variety; the elements need to be alike enough so that they are

perceived them as belonging together enough to be interesting (Faimon & Weigand, 2004). Variety means making it different (Stewart, 2002).

Harmony

Harmony is a vital principle of design. It is attained through the sensitive balance of variety and unity. It is attained when the choice of design elements are used effectively and connected according to the design principles (Annor et al., 2011).

Harmony is pleasing to visual unity. It is the tasteful relationship among all parts within a whole. Harmony gives the feeling that all the parts of an outfit belong together and suit the wearer and the occasion. A garment and the accessories worn with it should work together to make the wearer look his or her best (Forster, 2014).

Gavor et al. (2010) also define “harmony” as all the elements or part of a garment working together to produce a pleasing whole. Details like collars and pockets must be in tune with the style of the garment (dress). Garments should not merely be harmonized in lines and shape but also in texture and colour. Harmony is learning to tug all the parts of one’s clothing together to suit one. Colour harmony in dressmaking can also be attained using complementary or analogous colours. In conclusion principles of design can be ideas or rules, which aid to organize the elements of design

In a study of production of clothes, both elements and principles of design are the ways and guides use for master craftsmen to produce attractive clothes and also help them to reflect the ideas, interest and skills.

2.3 Concept of Theory

The word “theory” is derived from the Greek verb meaning contemplate. Though scholars may disagree on the finer points of theory, all would seem to settle on a basic definition: Theory is a description of phenomenon and the interactions of its variables that are used in attempt to explain or predict. But, in attempts to clarify the definition, scholar’s views vary on what constitutes a theory, its purpose, and what is a good theory (Gelso, 2006; Harlow, 2009; Stam 2007, 2010; Sutton & Straw, 1995; Wacker 1999, Weick 1995). However, the question of what constitutes a theory is not simple to answer as different scholars (Gelso, 2006; Harlow, 2009; Henderikus, 2007) have diverse interpretations about what a theory is, especially in more detailed discussions about what constitutes a theory. According to Harlow (2009), theory has no different and static meaning and the purpose of a theory is to suggest a decisive law or set of laws.

Conversely, Gelso (2008), is of the opinion that theory is an amalgamation of diverse constructs such as descriptive ability, explanatory power, heuristic value, testability, integration, parsimony, clarity and delimitation. He believes that theory is actually refined through research and understanding these constructs enables theory refinement.

Ellis and Levy (2008) articulate seven constructs, which define, support and quantify the significance and contribution of research for refining and explaining theory. These constructs are establishment of causal relationship, examination of element, method of creating product through development study, constructs development, predictive mode development, efficacy evaluation, and examination of the impact of time on the nature of the documented problem in a longitudinal study (Ellis & Levy, 2008).

According to Stam (2007), three opinions of theory that have been powerful for many epochs are: (a) reductionism, (b) instrumentalism, and (c) realism. Reductionism is an opinion that states that intricate systems are simply the sums of their parts and that one can study about the whole by examining the individual pieces (Burgelman, 2011; Stam 2007). Reductionists attempt to make intricate items more understandable by studying their individual's parts (Link, 2000; Nadler, 2004; Wood & Caldas, 2001). In breaking down its components, reductionists hope to realize a new opinion of the system base. Nadler (2004) provides four managerial principles for a reductionist approach. First, all things can be separated into their components. Second, any of those components may have alternatives. Third, solutions for partial problems can help solve whole problems. Fourth, the whole entity is nothing more than the sum of its parts (Nadler. 2004).

Instrumentalism states that theories are valuable instruments in understanding the world and are best defined as nothing more than mere instruments (Caldwell, 1984). In essence, a theory should be evaluated for its ability to be used to describe a phenomenon rather than the ability to utilize it to depict reality (Davies, 2008). An example of this view might be an examination of acupuncture. Some individuals swear by acupuncture's effects, even though they might not believe in the principles expressed by art, such as Ki energy. An instrumentalist would say it does not matter why it works, as long as it works.

A third clarification offered by Stam (2007) as influential in theory development is realism. Realism states that the world can be described in terms of science, that there is a real view of the world, which is independent of people's perceptions (Ramoglu, 2013). Generally, realists assert that one can make reliable predictions about unobservable (Ramoglu, 2013).

An example of an application of this view might be Copernicus' heliocentric theory where Copernicus predicted that the Earth revolved around the sun even though there was no way to observe the phenomenon.

2.4 Design Theory

Lundgren (2018) state that design theory involves an understanding of the tangible elements including form, space, proportion, colour, scale, texture, structure (grid), composition, line, shape and volume and how to arrange them to achieve balance, rhythm, pattern, hierarchy, emphasis, and unity. Design theory, blended with a purpose or problem to solve, results in effective design solutions. (Hines, 2016). Design theory, as well as design, is influenced by the particular context under which it is operating. Unlike other sciences, which may reflect their subjects experimentally or empirically, design is about varying its environment and thus is also the subject that is influencing theory (Hines, 2016). Design theory contains the essentials and principles of producing visual communication and all categories of skill. It deals with how one sees and understand visual information, and separates ideas of style, taste and trend from the universal principles of aesthetics that are mutual to every individual. It is introductory to the search of design, and visual skills in general. This mutual visual language connects designers from ancient times to contemporary day and from country to another.

Hines (2016) mentioned that there are a couple of parts to design theory, but it basically covers design and creativity. The primary part of design theory is analysis which comprises analyzing design choices to produce results and the other part is the method of design. These are usually discovered by analyzing design. Lundgren (2018) add that the worth of designers to their customers and causes is the rational and the

skill to cartel form of design principles (balance, emphasis, harmony, proportion, rhythm, and unity) and *function* (the purpose of the design) to achieve an effective and pleasing result. Method and function as generally applied design concepts were first well-defined and formalized at the Bauhuau, and have been the foundation for good design ever since. Software has altered the design procedure and the way one work with the design elements, but it has not changed the elements themselves.

Lungren (2018) further note that, the main aim it is vital to learn design theory is that one can be a designer and not simply a specialist. When one understands the elements and principles of balance, order, hierarchy, composition, structures etc, and one will have the basis to create good (meaning effective, appropriate and appealing) design and be far more valuable to her customers than a “wrist” could ever be. And, if one wants to be a designer, why not endeavour to be an excellent one? Excellence in working with the visual forms, a solid process and sound design thinking are what make one valuable to her customers. Where this applies to customers is in the excellence of the work they obtain. In written communication, a wrong word or a mark out of place hurts the message. This also happens in the visual language. Customers should seek dressmakers who understand how to combine the forms and principles of design to communicate their messages well.

2.5 Concept of Clothing, Clothes / Dress

Clothing is anything worn or carried on the body to modify personal look. It includes clothes, accessories and cosmetics. The organisation of hair and the covering of the entire surface of the body are all measured as clothing. People of the same culture generally use similar clothing to dress (Forster, 2014, p.79). Clothes are generally

clothing articles that are made mainly from textile fabric and worn on the body. They form the major items of clothing.

Cloth can be grouped into three, depending on the function it performs. The three groups of clothes are as follows: under garments, outer garments and inner garments (Gavor et al, 2014). Under garments are clothes worn next to the skin; examples are panties are panties, short, singlets and brassier.

According to Foster (2014), inner garments are clothes worn over the undergarments and can sometimes be seen on under the outer garments or the outside. To Gavor et el. (2014), inner garments include blouses, skirts, trousers, shirts etc. Foster (2014) add that these garments serve as part of the design of the undergarment. They come in a form of top wear or tube, vest or waistcoats, dresses, shirts, shorts and trousers. The weight and weave of the fabric used for inner garment must be right for the style. The fabrics used should feel warm in cool temperature and cool in high or warm temperature. They should drape well, and be comfortable to wear and cling to the body to reduce bulk.

However, Annor et al. (2011) put forward that, they should allow room for movement, absorb perspiration and be easy to wash. The garment should be of simple but interesting designs.it should be easy to put on and take off. Forster (2014) further explain that inner garments should permit for maximum change and variety, therefore precise colour choice is significant so that garment can mix and match. Since the weather conditions is warm in West African countries, in Ghana and neighbouring countries, the use of inner garments is not very mutual. Those who usually use them are individual who work in air conditioned offices and some of the clergy.

Foster (2014) state that, outer garment are the smartly looking clothing worn to cover our body and are seen by others. These clothes send messages about the wearer to

onlookers. They could be worn during the day, evening or in the night. Gavor et al. (2014) put forward that outer garments are worn over the inner or under garments and are seen outside. It includes clothes like blouse, coats, dresses, jackets, shirts, shorts, skirts suits, T-shirts and trousers. It should however be noted that this concept of classification of clothes is foreign and was based on the cold weather of western countries.

In addition, Foster (2014) explains that outer garments are the various garment worn by everyday out doors to modify appearance and to go about day-to-day activities. A full range of textiles fabrics are used to make this garments. Annor et al. (2011) stressed that fabrics from most of the textiles fibre could be used either from the original source, blended or mixed. The fabric used in manufacturing them should be strong and durable, hand and drape well, suit the style, and should be easy to clean and iron or press.

Under garments according to Foster (2014), are garment worn to the skin and under the fashion clothing. This includes brassieres, bellybands, boxer shorts, corsets and panty girdles, panty of all kinds, underpants and undershirts. These garments are known as foundation garment, as they are underclothes.

2.5.1 History of Clothing

Clothing denotes anything used to cover the body. This could be body painting, covering of leaves, tree barks and animal skins. In pre-historic eras, the early people migrated from the tropics to cooler regions and needed something to keep them warm. They used natural raw materials such as animal skins, bark of trees and leaves to cover themselves (Forster, 2014). During the stone age, people wore garments cut from animal skins and laced them together using needles made of bones, thorns, ivory

and string-like tendons from animals. Close to the end of the Stone Age, sewing turned out to be an art. The Magdalenian woman used needles to sew and decorate garments with geometric patterns (Gavor et al., 2014). People's skills and creative abilities gradually enabled them to make new materials and tools.

Later on in the medieval age, people learnt how to weave fabrics which were sewn together with finer needles. Steel needles were invented in about 1670. The first pair of scissors was invented by a shepherd who used it to clip animals (Forster, 2014). In 1856 when a cheap method of making steel was discovered, scissors became plentiful. The sewing machine was invented in 1830 by Elias Howe and that made the manufacturing of garment less difficult and faster. The Singer Sewing Machine Company added the first electric motor to the sewing machine in 1889 (Gavor et al., 2014). The contemporary age is the age of machine and industrial sewing, where sewing is no longer a craft for the home but a source of employment.

In line with the discussions, most master craftsmen are self-employed. They also train others to acquire skills for a living and also contribute largely to the economic development of the nation so as to reduce poverty in the country. Some industries involved in the production of clothing are Marks and spencer in Britain and Sharp Looks and Nice Shape in Cape Coast, J. T. Collection in China, Nallen Fashion and MKOG in Accra and Awura Abena Fashion in Kumasi all in Ghana (Forster, 2014).

2.5.2 Theories of Clothe Wearing

There is the belief that man started wearing clothes to cover his or her nakedness because it is shy to go about naked. It is improper. This is called the modesty or shame theory which say that it is natural to feel embarrassed and disgraceful from exposure of particular parts of the body. This theory is also recognised as the fig leaf

theory which is based the story in the Bible (Gavor et al., 2014). Genesis states that Adam and Eve understand that their states of being naked when they devour a fruit from the knowledge tree. And in shame they together stitched clothes out of fig leaves, later they name it fig leaf theory.

The Modesty, or a sense of disgrace or an embarrassment associated with the uncovered body part is not universal. What is covered or left uncovered varies among societies and what is modest also differs, depending on age, sex, sub-cultural groupings, settings and circumstances (Gavor et al., 2014; Forster, 2014). Different cultures have different ideas about modesty and what is accepted. In some parts of the world, religious custom requires Muslim women to cover themselves completely when they are outside their homes. An Australian aborigine woman has only the minimal attire of a belt around the waist and necklace but does not feel ashamed (Forster, 2014).

Immodesty theory is the second theory. This theory clarifies that clothing is used not to cover the body but to attract attention to it. According to the immodesty theory, the body was first covered as a sexual trap and clothes were used to call attention to the body parts that were covered. To support this theory people can note many clothing items that seem only to call attention to parts of the body. Such items of clothing are short skirts and pants, narrow skirt with long slits, tight clothes, bare backs and low necklines (Gavor et al., 2014; Forster, 2014).

The third theory is the protection theory. Clothing is used to protect the body contrary to the weather: cold or hot. Clothing is also used for psychological protection (Gavor et al., 2014). Conversely, in the Ghanaian traditional society, clothing is made to cover people's nakedness. Certain parts of the body must not be exposed or uncovered

and particularly, a lady is supposed to hide the parts of her body from above the breast to the knee with clothes and expose them to only her husband (Forster, 2014).

Based on the theories as related the topic, clothes are design for various functions and the choice depends on the individuals.

2.6 Methods of Fabric Cutting

2.6.1 Flat Pattern Cutting

Pattern making is an art of manipulating and shaping a flat piece of fabric to conform to one or more curves of the human figure (Salo-Mattila, 2009). It is a bridge function between design and production that is flat, while the body has height, width and depth. It is usually made pattern from a flat sketch with measurements. Foster (2014) explains “flat pattern” as a kind of pattern used to be recognized copying but all pattern excluding draped patterns are flat. Even the draped pattern lastly turn out as a flat pattern before it is used to cut garment. Hollen and Kundel (1999) put forward that flat pattern method is a 3D model in flattened state. Create flat Pattern calculate the material and layout required to flatten a 3F sheet. Pattern making using the flat method is one of the common and most cost effective way to produce garments.

Salo-Mattila, (2009) is of the view that, a flat pattern is also a designed in mutual relation to the design of a garment. The iterative connections among the design sketch, pattern, and trial garment are used till the outcome is suitable. Foster (2014) further brings to the fore the unending debate that, an attractive design can be copied without making any adjustments or copied and adapted for diverse designs. In coping, the seams in an article are undone or cut to get the sections in pieces. The sections are then pressed to remove creases and either used to cut new fabrics to get the same style or traced on a paper and adapted to make some changes for different designs.

2.6.2 Free Hand Cutting

Bally (2014) clarifies that freehand cutting was originally used throughout the world before the invention of commercial sewing patterns, according to Foster (2014), freehand cutting involves garment construction without the use of a commercial pattern but rather using personal body measurement to cut garments directly from a fabric. With this method, there is no common procedure or way of cutting an article. There is a lot of method to the insanity but as she always tells individuals, when one learnt the basic blocks, one can cut whatsoever. This method permits better level of exposure to the garment making process (Bally, 2014).

Aldrich (2008) opine that there is a lot of method to the madness but as she always tells individuals once you have learnt the basic block, one can cut Foster (2014) noted that freehand cutting is usually not considered as a method of making pattern because the technique is usually applied direct to the garment fabric. Detailed measurement is taken and used to project the body and design directly onto the fabric (Aldrich, 2008). However, the measurements used in cutting the fabric direct can be used to obtain paper patterns in a desired design to prevent fabric damage and wastage, especially in the case of learners. Also, the measurements are used to plot the desired style of fabric, thus creating patterns (Foster, 2014).

2.7 Concept of Figure Types

Foster (2014) explains the shape of a female body is called her figure. The name given to the shape of a male body is physique. Body size is usually measured at the chest or bust, waist and hip. However, the proportion of the part gives a better indication of shape (Gavor et al., 2014). This relationship among the different areas of the total human form is called body build. Body build or physique comes in different

types and it is important to know one's figure type and how it affects clothing design (Forster, 2014). Figure type size categories are determined by weight and body proportions (Gavor et al., 2014; Foster, 2014). An example of the different figures types are shown in Plate 2.1.



Plate 2.1 A Tall and Slim figure
Source: Madailytgist (2018)

The figure in Plate 2.1 is the ideal “model” shape for wearing clothes by Western standards. The figure is well-proportioned and well-developed in the all body areas. It is the tallest type and could be considered the average figure. This type of figure can wear Misses pattern garments (Foster, 2014). Tall slim girls will wear clothing designed with lines going across the figure and a very tall girl can take several of them used boldly. Examples are wide contrasting waist belt, deep yoke, pockets on bodice and skirt. Full skirts and soft drapery hide the angularity of the figure. Boldly patterned materials and horizontal strips are all becoming.



Plate 2.1 A Tall and Plump figure
Source: WordPress.com (2017)

The type of figure in Plate 2.2 has a statue-frame look. It has a tall and heavy body build which needs a careful choice of style to enhance the figure.

The figure could probably wear the Women's pattern size (Forster, 2014). Tall plump girls will choose vertical lines to break the width. They will avoid wide areas unbroken with any line or detail of style, example skirts with six to eight panels will reduce width better than skirts with two to four. Well-placed pockets on a plain bodice and skirt can break the width and will not add to the height. Spreading, gathered styles add width, but a well-placed fullness can hide a pronounced curve; for example, a bodice' fullness can lessen the apparent size of a full bust. On the whole, rather straight styles, easy fitting and not very full, are best for tall plump girls (Gavor et al., 2014).



Plate 2.3 A Short and Slim figure
Source: *Yen.com.gh* (2017)

Short and slim people are small in appearance as shown in plate 2.3. They have shorter waist length than any other type of figure. Even at their matured age they look like teenagers or junior petites. Short and slim people may wear either a teen or junior petite pattern (Forster, 2014). Short slim girls will choose mainly long vertical lines to add to the height and will counteract the slimming effect with fullness. Plainly cut clothes without much detail are best. There is no room for several pockets, plus yoke and a belt as they are on a large figure. Immature figures are not improved in pencil line skirts and tightly fitting jackets. Skirts with a swing, bodice with fullness, are much more becoming to such type of figure (Gavor et al., 2014).



Plate 2.4: A Short and Plump figure

Source: *Jiji Blog*

The figure in Plate 2.4 is fully developed but shorter. It has a larger waist in proportion to the bust than other mature figure types (Forster, 2014).

Short plump will choose long vertical lines, particularly rejecting any conspicuous horizontal line which would make them look both shorter and fatter; for instance a plain belt in material to match the dress may define the waistline without constituting a line across the figure, but a contrasting belt or conspicuously designed belt draws attention to the belt and in cutting the figure in half considerably reduces height.

When pattern materials are chosen, the pattern should be small. Straight, but not skimpy styles suit such figures best (Gavor et al., 2014).



Plate 2.5 A Tall figure with large hips
Source: *GhanaCelebrities.com* (2017)

This figure in Plate 2.5 has large or heavy hips in proportion to the rest of the body. Such figures usually have longer waists and narrower shoulders than other figure types (Forster, 2014). With large and heavy hips, materials with large, brightly coloured patterns should not be worn below the waist.

They can be used for tops. Decorative necklines, padded shoulders, yokes with gathers and jewellery also draw the eyes upwards. Slimming dresses are better than trousers. Skirts and trousers, if worn, should be made from plain fabrics with simple textures. Loose jackets have a slimming effect as do loose wrappers with tops and kaftans styles. They disguise large hips (Gavor et al., 2014).



Plate 2.6 A Tall with large bust figure

Source: *Quara.com* (2017)

The figure in Plate 2.6 has large upper body in proportion to the rest. This usually has a smaller hip as compared to the bust, making the lower part of the body narrower. A carefully selected style is needed to flatter this figure. People in this category can decide to use any of the measurements from the seven standard figures which is nearest to their measurements (Foster, 2014).

For heavy bust, clothes should not cling. Loose-fitting blouson tops are flattering and these are best made in darker colours with the emphasis on vertical lines. Design detail should be simple and uncluttered. V-necked tops are flattery but those with square or polo necks are not (Gavor et al., 2014).



Plate 2.7: A figure with large hips

Source: *Neon Images (2017)*

The figure in Plate 2.7 is usually described as a shape. It has narrower shoulder with large hips. Since it gives short and heavy appearance, choice of garment should give illusion of height and slimness. This figure can use the closest measurement and proportion from the measurement chart to obtain a better fit (Forster, 2014).



Plate 2.8: Shorts figure with large bust

Source: *ghanacelebrities.com (2017)*

People who are short but have large busts as seen in Plate 2.8 are virtually the same as short and plum figures. The only difference is that one has a larger bust than the other. Despite the heavy upper body this figure has a larger waist to carry the heavy bust. A person with such a figure can decide to use measurement close to his or her own measurements and proportion for a better fit (Phyllis, 2014). Besides, with no waist people, large, fussy patterns make a waist look bulkier (Gavor et al., 2014). Moreover, people with shoulders need arms rounded; forward-sloping shoulders are distinguished by raglan sleeves, preferably with no shoulder seams. Narrow shoulders look wider with set-in sleeves and with shoulder pads. Fleshy arms are flattered by soft drapes. Sleeves, whatever their length, should be loose. Square shoulders are softened by raglan-style sleeves. One should avoid shoulder pads (Foster, 2014).

2.8 Sewing Equipment and Tools in Dressmaking

Every trade necessitates equipment and tools for its activities to be performed efficiently and effectively. The trade of sewing or clothing construction is no different (Gavor et al., 2014). The performance of a task encompasses the use of tools and equipment specifically designed for a job. Equipment and tools for sewing differ according to their sizes and functions or the jobs they are used in doing and they include all tools that aid to perform the various tasks involved in sewing (Foster, 2014). Sewing equipment make each stage in the sewing process easier, faster, and more accurate (Priest, 1990). In addition to that, Sewing and Craft Alliance (2008) makes it clear that there are some sewing tools that a dressmaker cannot even begin without. The precise sewing tools make the sewing project easier. Knowing which tools to select and where to use them will simplify and improve the outcome of each sewing step.

Equipment and tools whether large or small and irrespective of the function must be carefully chosen and also be used properly. For this reason, one needs to know the characteristics to be able to choose and take proper care of them (Gavor et al., 2014). Wise selection of equipment is essential for achieving good results. For this reason one needs to know the characteristics to be able to choose and take proper care for the equipment and tools. Knowing this also ensures success in the sewing business and long life and good performance of the equipment and tools (Foster, 2014). Essentially, there are six clusters of tools that are used in sewing and are grouped according to their uses. These are measuring tools, pinning tools, cutting tools, marking tools, pressing tools and stitching and turnings tools (Priest, 1990).

2.8.1 Measuring Tools/Devices

The making of clothing (sewing) is an art that requires the accuracy and precision of science. Garments are made to fit particular sizes or body types. Measurements are taken and translated to measurement on paper in the case of pattern making or directly onto fabric, helping the sewing and the fit of the garment to be perfect (Gavor et al., 2014). During the course of making the garment, measurements are taken of the different parts of the garment to make sure they conform to that of the body the garment is being made for. The starting point of all clothing construction is the measuring of the body on paper during pattern making and on fabrics during the construction process (Gavor et al., 2005).

Measuring Tools and Devices are as follows:

Meter Rules (Yardsticks or Meter Stick): It is a rigid tool used in measuring and drawing straight lines especially during pattern making adaptation and alteration. It is very useful in free hand cutting and it is made of metal, plastic or wood.

Tape Measures: A measuring tape is a basic measuring tool of 150cm (60inches) long and is a flexible measuring tool for taking body measurements but it is non-stretchable material like plastic. It measures either round or flat surfaces. A good tape measure is strong, flexible, firm and clearly marked on both sides (readable at either end) in centimetres and inches, with the end protected with either metal or plastic.

Transparent Ruler: It is ruler that the sewer can see through. It is usually useful for marking pleats and bias-strips.

Seam/Sewing Gauge: It is a metallic device with markings and it has adjustable sliding devices on them. The small attached device, slides along the short ruler to provide the required length, and remains in the desired position once it has been set. It is used for marking or measuring short length. It is also used to measure hems, tucks and pleats.

French curve: it is useful for redrawing curved pattern lines, such as armholes and necklines.

Hem Marker: It is a tool which aids as an accurate or precise measure for marking hems while they hang. Even though they are not marked like other measuring tools they are adjustable and are placed on the floor and adjusted to the level of the hem at one point. It is then moved round the garment to allow for an even hem of the garment from floor level.

2.8.2 Marking Tools

It will be necessary for a dressmaker to transfer accurately a pattern from the paper to the fabric. The tools most often used is the tracing wheel (used with the help of carbon paper). The following are numerous marking tools.

Dressmaker's Carbon Paper: This is a kind of carbon paper that is used for transferring pattern marking or outline from pattern to fabrics. It is obtainable in different colours. Dressmakers need to use a colour that can be seen on the fabric but which will not leave obvious marks on the garments. One can make her own carbon paper by using a plain sheet and crayon if one cannot find dressmaker's carbon paper. It is used to transfer outlines to all types of fabric together with the tracing wheel.

The glazed surface is faced to the negative side (wrong side) of the fabric and the tracing wheel is run through the pattern symbols to transfer them to the cut fabric pieces.

Tailor's Chalk: It is clay or crayon bought in the form of flat pieces. It is available in different colours and it is usually rectangular in shape. It is an oil free chalk used for marking pattern lines and corrections on fabrics or paper. The edge of the chalk should be sharpened before use in order to achieve a clean fine line. The Tailors chalk marking can be brushed off or will disappear when hard-pressed with an iron.

Tailors/ Dressmakers Pencil: It is used to mark fine lines on fabric to transfer pattern symbols in pattern making with the help of an erasing brush at one end for correcting mistakes.

Tracing Wheel: It is made of a wheel with sharp teeth which rotates on a handle. As the handle is pushed, the wheel rotates and in the process imprints marks on the area of the fabric it passes. It is also used with or without dressmaker's carbon paper to transfer pattern markings to the wrong side of a fabric after cutting. When

dressmaker's carbon is used, the carbon is placed face down on the fabric, the pattern is placed over it and the tracing wheel passed over the pattern mark line.

2.8.3 Cutting Tools

Cutting tools are used in cutting out papers, fabrics and other materials that will be used in the making of clothes. They are accuracy instruments and should be handled prudently.

Scissors: A pair of shears for cutting out. One of the holes in the handles larger than the other, for convenient handling. Two or more fingers are pushed through the larger hole. A pair of scissors are for trimming seams and facings, and also for clipping. Both handles of scissors are usually straight. A pair of scissors usually has the same handles, with the blade usually less than 15cm. The smaller scissors are usually used for trimming off threads and seams and also for making buttonholes.

Pinking / Scalloping Shears: The tool has zigzag edged blades. It is used to form fray-resistant edges on firmly woven fabrics or cut a decorative edge that reduces tangling of the fabric. It cuts to form a notched edge finish as a good investment neatening edges for decoration. The shears also help in preventing fabric edges from fraying.

Awl/Stiletto: An awl or stiletto is a sharp instrument made of bone or steel, used for piercing small holes in fabric for eyelets and buttonholes. Stiletto is a round shaft with a sharp pointed end, mounted on a convenient handle, used for eyelet-making and sometimes for removing tacking thread.

Seam/Stitch Ripper: It is a curve cutting blade used to "rip" stitches or "reverse sew" one end of the curved blade has a sharp point and the other has a small plastic ball that essentially averts the ripper from slipping. The seam ripper is used for opening seams

or unpicking seams and comes in very handy for cutting or undoing processes, buttonholes and stitches. This small tool easily removes unnecessary stitches without ruining the fabric.

Rotary Cutter: It is a fabric cutter that appears like a pizza cutter with a sharp, round blade for accurately cutting several layers of fabric. It is similar to the tracing wheel, but it is larger and has a wider round blade. It is good for cutting through straight edges or lines.

Thread Clipper: It is used for clipping threads rapidly.

2.8.4 Stitching and Turning Tools

Stitching tools are instruments that help in achieving a sewing task and can be manipulated by hand, while turning tools are also a perfect point turner used for turning items inside out corners, simply run the tool along the seam while giving a good press-no more having to pull the seam out with a pin.

These are:

Needle: Dressmakers have numerous shapes and sizes of needles used in dressmaking. The choice is determined on its purpose and sometimes the worker. Hand sewing needles are used in hand stitching. Needles used for hand stitching vary in sizes, lengths and point shapes. The most common needles are “betweens” and “sharps.” The larger the number indicated on the needle, the finer the needle. Betweens, which are shorter than sharps and have sloping eyes, permit experienced workers to do very fine sewing rapidly.

Bodkin: It is a sewing tool which is thick with blunt ends, a long eye (or occasionally a round one) through which it is possible to thread cords, elastics, ribbons, tape, and

other trimmings through casing and lacing holes or hems. It is also a tool shaped like a long blunt needle and used to thread elastic or cord through a casing. It can also be used to turn Rouleau loop.

Needle Threader: It is a tool used to thread needle when sewing and it makes threading of needle easier.

Magnet: They are very useful for picking up propped pins and needles from the floor.

Pin: These ranges in lengths from $\frac{1}{2}$ to $\frac{7}{8}$. Sharp, smooth, rustproof pins that can bend without breaking should be used for different types of general sewing, quilting, and working with silks or knits.

Pin cushion: It is a small, firm-padded cushion for holding pins and needles in use. It is helpful, particularly if attached to an elastic band worn on the wrist when sewing.

Plastic Point turner: It is a piece of plastic stick with a pointed end used to push out points in collars and other corners.

Pointer and creaser: It is a wooden tool designed to aid turn corners and hold seam open while pressing.

Rouleau loop turner: It is used for turning bias tubing right side out.

Thimble: It is made up of metal, rubber, leather or plastic and it is a small protective cover slip over the middle finger. When sewing or quilting with hand, a thimble protects the fingertip from pin pricks and is used to push the needle through multiple layers of fabric.

2.8.5 Pressing Tool and Equipment

Good pressing tools aid in producing a professional- looking finished garment. Some of the pressing tools listed are vital. The most significant ones are the iron, ironing board, and pressing cloths.

Pressing Iron: It is the main tool in the pressing process. It is an electrically heated appliance which aids in flattening, creasing, smoothening and shaping out the fabrics and also to bond fabrics together. It comes in a wide range, such as coal, dry, flat and steam irons. A combination of steam-dry iron is best; one with a temperature control essential. Before a dry iron is used, a damp pressing cloth must be available to provide steam. In the absence of electricity, flat or box iron may be used. One cannot sew without ironing. While sewing, one must keep the iron warm to the wool setting, and be prepared to press each seam before it is stitched, depending on the fabrics ability to handle heat. On no occasion should one stitch across a seam that has not been pressed, it is sure way to make your project appear homemade.

Ironing Board: An ironing board is essential for pressing fabrics or garments. This equipment should be covered with a smooth and padded thick felt or blanket or with thin foam sheeting surface and be of correct working height for ironing and pressing. This is usually a board about 1.5ft. by 1ft. it is shaped to almost a point at one end to permit for garments to be put around it. The best is made adjustable for different heights and has easily removable outer covers provided in smooth, washable, lint free fabrics. The cover and pad selected should fasten securely to the board and fit it well.

Press Cloth: This is the lint-free piece of cloth or fabric, usually cotton, positioned between the garment and the iron. Its purpose is to prevent charring and sheen developing on the garment as a result of the iron being in direct contact with the garment and also for damping. Closely woven cheese- cloth also makes an excellent press cloth. The open texture allows the steam to go through but the weave keeps the fabric surface from shining. A dry wool press cloth under a damp cheese- cloth is helpful for problem materials that shine.

Sleeve Board: It is a miniature form of the skirt board used in pressing sleeves to avoid creases.

Point Pressor: It is a narrow wooden board that tapers to a point at one end. It is used for pressing enclosed seams of shaped pieces like collars, cuffs and lapels (Foster, 2014).

Pounding Block/Beater: This is a pressing tool made of wood. It used to shape the edges of garment especially those made of woolen fabrics whilst the fabric is still moist, hot and pliable.

Needle Board: It is a board with fine steel wires set vertically. It is a tool usually used beneath pile fabrics during ironing to prevent matting. To prevent the pile of velveteen, velvet and other pile fabrics from matting, the needle board is used. The fabric is placed face down on the needles so that the pile fits between the needles and can be pressed without marking.

Seam /Sleeve Roll: It is a cylindrical piece of wood curved firmly with fabric. It is suitable for pressing seams particularly those of sleeves. Its shape prevents the seam allowance from printing on the fabric under.

Pressing Cushions: They are made in various shapes and covered with heavy fabric. It is stuffed very firm and used in pressing darts and curved seams.

Pressing Mitt: They are padded gloves that are used on the hand to press a small area of a garment.

Pressing Ham/Tailors Ham: This is a ham- shaped cushion with an egg shape pad stuffed with wool used for pressing curved seams, dart and other shape areas (shaped details). It is essential to plan to do any sort of tailoring. Inexpensive hams are available commercially, or one can make one's own. Two oval pieces of firmly woven cotton or lightweight wool about 8 by 12 inches are cut. The ovals are sewn

together leaving an opening. The right side is turned out and stuffed firmly with wool scraps, kapok or sawdust. The secret of a successful ham is packing it firmly. For best results the scraps are soaked and stuffed into the ham while wet. It is shaped as it is being packed until solid. Then the opening is sewn closed with an overhand stitch.

Clothes Brush: This is used on wool and nap fabrics that have lost their surface nap during ironing. Brisk brushing revives the nap or dullness.

2.8.6 Fitting Equipment

These equipment has the form of human figure (dress form or mannequin) which can be adjusted to get the correct figure type and are used by dress makers to check fit during fitting and to control the fit of a garment. Some are used to grip layers on patterns and cloths together in the course of cutting.

Dressmaker's Pin: They are used to hold layers on patterns and fabrics together in the course of cutting, and also layers of fabrics in the course of stitching. They are of different kinds, thickness and length, and the metal used to produce pins are brass, nickel-plated steel and stainless steel.

Full Length Mirror: It is used to check fit during fitting. No satisfactory fitting can be carried out unless the wearer is able to see one's image and make the necessary alterations on the garment. It can be fixed to the wall or to the side or door of a hanging cupboard or wardrobe.

Dress Form: "It is used to check and control the fit of garments. Small dials between the sections on the dress form are used to adjust various parts of the form to get the desired form of a garment".

Dress Stand: A form that has the shape of human figure which may be adjusted to get the correct or exact figure type. It is always better to fit garments on the human figure but the stand comes in handy when this is not possible.

In conclusion, using the right equipment and tool for the right job is a lay down principle for any successful profession as such for a master craftsman irrespective of what vocation or trade they may belong. Moreover, sewing without the right equipment's and tools is like trying to cook without the right ingredients. It can also make the difference between unprofessional or professional result.

2.9 Teaching and Learning Methods in Dressmaking

For an apprentice to get a better understanding of what a master craftsman is teaching the training methods employed should be able to convey, the right message in a conducive environment. Teaching or training methods used in teaching sewing are many. They include lecture, discussion, question and answer (guide practice), demonstration, observation and implementation. A master craftsman can give good sewing lessons and get the desired results from the apprentice even though the skills in the training is only average. Master craftsmen only need to have full understanding of the value of the subject and must appreciate that apprentices need careful teaching and constant supervision.

The process of teaching and learning is as old as human beings on earth. It has been carried out by human beings and even animals in teaching their young ones for successful adjustment in the environment. The process has undergone several changes from non-formal to formal with the passage of time. Chauhan (2006) also explains that the traditional explanation of teaching and learning with telling is not acceptable to the educators (teacher, instructors, coaches) of today. He mentions individual

differences as one major principle that every teacher must adhere to in the art of teaching and learning. Individuals differ in socio-economic conditions, emotional expectations, development needs, motivation and interest.

Guthrie (2004) is of the view that, teaching and learning of skills call for pragmatic approaches or practical teaching techniques, if the learners are to acquire knowledge and practical skills to enter into the real world of work. Though there is no one particular method or techniques which is adjudged the best, he suggests demonstration, project work, participative learning, discussion and exposition learning techniques as the best options for teaching skills.

2.9.1 The Lecture Method

According to Brown (2002), the word lecture is derived from the Medieval Latin *Lectare* which means to read aloud. (Bligh, 2000; McKeachie, 1986) lecture is one of the oldest and the most widely used teaching method in higher education institutions, predominantly in relation to conveying information to large numbers of learners. Brown (2002) describes lecture as an oral presentation intended to present information or teach individuals about a specific subject or theme. Edwards, Smith and Webb (2001) add that this teaching method contain the explanation of facts, principles which the lecturer needs the apprentices to understand. A lecture “a slot in the timetable where learners are taught in a selected space, a lecture theatre, in a group which size can vary from 20 to 800 and more, and where one lecturer has a primary responsibility for “delivering content”. Ramsdeen (2003) put forward that this teaching method as education through the transmission of information and proposes that this theory of learning assumes that learners are passive receivers of knowledge conveyed by the lecturer. The forte of lecture method is that it is possible

to educate huge number of individuals at once thereby lowering costs. A limitation is that it yields less deep knowledge compared to other teaching method (Chaplin 2009, White et al.2009, Grunwald & Hartman 2010).

2.9.2 The Discussion Method

Discussion is a procedure of giving and communication, talking and pay attention, describing and observing which help enlarge horizontal and promote common understanding they again simplify that it is only through discussion that an individual would be presented to novel opinions and introduction, build understanding and recharge inspiration to keep learning (Stephen and Stephen, 2005). In the view (2012), discussion is a process of activities, which includes splitting the class into smaller group for effective conversation on a matter pertaining to dressmaking, a problem or issue. It is similarly in a reason- together- process in which apprentice talk openly to the master craftsmen. It is an apprentice method to training since apprentice partake vigorously. The purpose of the master craftsmen is that of a mediator.

There is a movement of information from master craftsmen to apprentice, from apprentice to apprentice. When using the discussion method, the master craftsmen should not allow individuals to control the discussion. Discussion is a strategy if teaching and learning aids apprentices to understand better and quicker.

In teaching dressmaking, master craftsmen must involve apprentices in learning process by making them vigorous contributor pretty than inactive receiver. Reutzel and Cooter (2007) stipule that the master craftsmen can select strategies that socially include apprentice actively in the teaching and learning process so as to sustain their interest in the lesson.

2.9.3 Question and Answer

Good Master craftsmen use a variety of questioning methods to involve their apprentices and improve apprentice learning. Questioning apprentices is one of the most significant training methods in the Master craftsman. The challenge is to find ways to encourage all apprentices to answer the question either in their head or with others in the workshop. Chandramoulesh (2015) question and answer teaching approach is an ancient approach also recognised as “Socratic Method of teaching”. It was developed by the famous philosopher Socrates. According to Parke, “the question is the key to all educative above the habit-skill level. It approach is focus on to achieve the cognitive objectives and bringing knowledge to the conscious level.

Cotton (1988) underscore the advantages of question and answer approach. In this approach the master craftsman controls the situation. Generally informal lesson is industrialised by means of question and answer approach. Besides the knowledge can be produced by connecting the questions with an answer. It can be used in all master craftsman situations and help in developing the power of expression of the apprentices. It is helpful to ascertain the personal difficulties of the apprentices. It provides a check on preparation of assignment. It can be used to reflect apprentice’s background and attitude. To this end, it is quite near to the master craftsman when no other suitable teaching approach is obtainable.

2.9.4 The Demonstration Method

The demonstration teaching and learning technique is a practical display or exhibition of a process and it serves to show or points out the fundamental principles or actions involved (Walklin, 1994). According to Walklin (1994) research has proved that teaching by the demonstration technique is a useful tool available to the instructor and plays an important part in the teaching of skills. The process is recommended for

teaching skills because it covers all the necessary steps in an effective learning order. The method is recommended for teaching skills because it covers all the necessary steps in an effective learning order.

The demonstration step gives apprentice the opportunity to see and hear the details of elements related to the task and to enable trainees to observe procedures the first time they try a task (Petty, 2004). For effective demonstration, Gagae (2000, as cited in Dogru and Kalender, 2007), advises that trainers should;

- a) Plan the demonstration ahead of time
- b) Obtain tools and materials (apparatus) needed for the demonstration
- c) Rehearse the demonstration

According to Lehman, Russell, Newby and Stepich (1996), demonstration has many advantages: since it utilizes several senses. Some of these are that it enables apprentices to see, hear, and possibly experience an actual event. It also stimulates interest of students; presents ideas and concepts more clearly; proves direct experiences, and reinforces teaching and learning. This approach is very effective for training apprentices in dressmakers to be practical oriented (CRDD, 2008)

2.9.5. Observation

Badu- Nyarko (2009), observation comprises of the basic critical look at proceedings to give important understanding or interpret how individuals carry on in real life situations. The purpose for the observation is to facilitate an understanding of the setting in which the respondents work and to give information about the inflight in which the meeting occurred (Huberman and miles, 2002; Creswell, 2003; 2009; Scott and Usher, 2011). Observation similarly causes experts to check for non-verbal expression of demonstrative state, figure out who narrates with whom, see how

associates express with each other and enquire how much time are spent on different exercised (Schmuck, 1997)

Deducing from the discussion, master craftsman are the source of data while apprentices have to recall what the master craftsman articulates. To overcome the limitations, combining or blended teaching method can aid both to learn from each other and get additional understanding into the dressmaking skill.

2.10 Evolution of Craftsmanship and Master Craftsman

Craftsmanship as defined by Sennett (2008) entails skilled working with the hands to create something of use for a purpose where the skills require training and usually continuous practice. He explains further that, “Craftsmanship” results when highly trained, skilled, and knowledgeable workers use tools and machinery to perform their work, or trade, with the highest levels of quality and appeal.

According to Osasona, (2005) building craftsmanship can be traced back to prehistoric days where people who were more skillful or adept in certain jobs such as construction, clothing and textiles manufacturing, plumbing works and all other forms of skilled works within a particular community, were hired to undertake such activities. He expatiates that in those days, children of master craftsmen were made to automatically learn their parent’s trade to ensure continuity of transfer of knowledge and skills of craft from father to son. Mostly, a craftsman begins as an apprentice, but the apprentice partly works with a qualified craftsman and for a definite period of time (usually about four years), after which the apprentice is fully qualified as a craftsman (Williamson, 2007).

Skilled manual workers in a specific trade or craft were called craftsmen or tradesmen (Williamson, 2007). Their status was considered between a laborers and a highly

trained and educated “professional.” Most of them had high degrees of both practical and theoretical knowledge of their trade. Since the 14th century, a tradesman wishing to become a “master craftsman” would produce a “masterpiece” that would be judged by the craft guild members (professional associations). Successful candidates would then be elected as “masters” in their craft and were generally obligated to take on young apprentices in order to pass on their skills and knowledge. Master craftsmen irrespective of whatever vocation or trade they may belong, contribute largely to the economic development of nations.

Mostly, a craftsman usually begins as an apprentice, working for and learning from a master craftsman, and after four to seven years is released from his master’s service as a tradesman or a journeyman. Training in craft and trade within the European cultures has been a recognized tradition since the late Middle Ages (Williamson, 2007).

The word “journeyman” was taken from the French word *journée*, meaning the period of one day and referred to his right to charge a fee for each work day. In England, the journeyman would typically work as an employee for daily pay. In Germany, the journeyman would often “journey” from workshop to workshop learning from many different masters while being paid for his daily work. The term “jack” is sometimes used as an informal name for journeyman. A “jack of all trades...” is a common term for someone who possesses a degree of skill in more than one trade but has not made a continuous career of any one to become a master tradesman or master craftsman (Williamson, 2007).

2.11 Concept of Apprenticeship and Apprentice

Coy (2000) describes apprentice as, one who learns by participation or observation in a skilled trade. He goes on to say that one Japanese term for apprentice is “minarai”

literally meaning one who learns by observation. Apprenticeship is worldwide. As a perfect way of learning the basic description of the term, apprenticeship is recognized across the biosphere. It is also becoming known as a policy instrument of governments across the world and is regarded as a cure for a number of policy ill to youth unemployment, the economic downturn, and social exclusion to name but a few (Fuller and Unwin 2011).

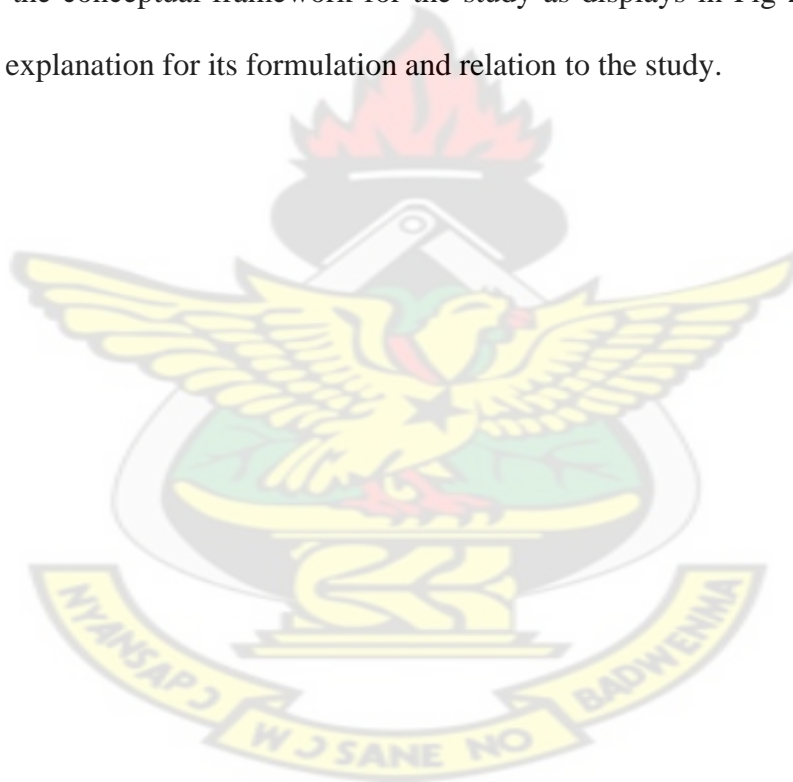
Apprenticeship is a contractual agreement undertaken by the master-craftsmen and the apprentice, through which the apprentice is trained for a prescribed job process through practical experience, under the supervision of the master-craftsman for a period of time. It is a form of workplace learning, which enables the apprentice to have on the job training (Uwameiye & Iyamu, 2010). When associated with the school based model, the informal training model has the advantage of being closer to the present needs of owners in the informal work market, in this way, making a substantial promise to the indigenous economy (ILO, 2012).

The apprenticeship system of training dressmakers and tailors has been in place for a period of time and remains a form of training for youth to equip them with remarkable skills in order to reduce unemployment (Larbi, 2009). Larbi continues that, it is imperative that in the absence of academic certificates and other paper qualifications, the youth can be equipped with strong vocational or technical as a means of livelihood. Biney-Aidoo (2006) indicate that a lot of women with sewing skills have benefited from sewing through apprenticeship, because they mostly work at home and also have time to take care of their families without any hindrances.

2.11 Conceptual Framework for the Study

Miles and Huberman (1994 as cited in Vaughn, 2008), explains “conceptual framework” as the graphical expression, that clarifies, either graphically or in narrative form, the focal things to be studied – the key factors, concepts, or variables- and the supposed relationship among them.

To this end, the conceptual framework developed by the researcher for this study is basically intended at providing the attention and content which aids as the lens through which all variables recognizes in the study can be measured. The next section presents the conceptual framework for the study as displays in Fig 2.1, and offers a detailed explanation for its formulation and relation to the study.



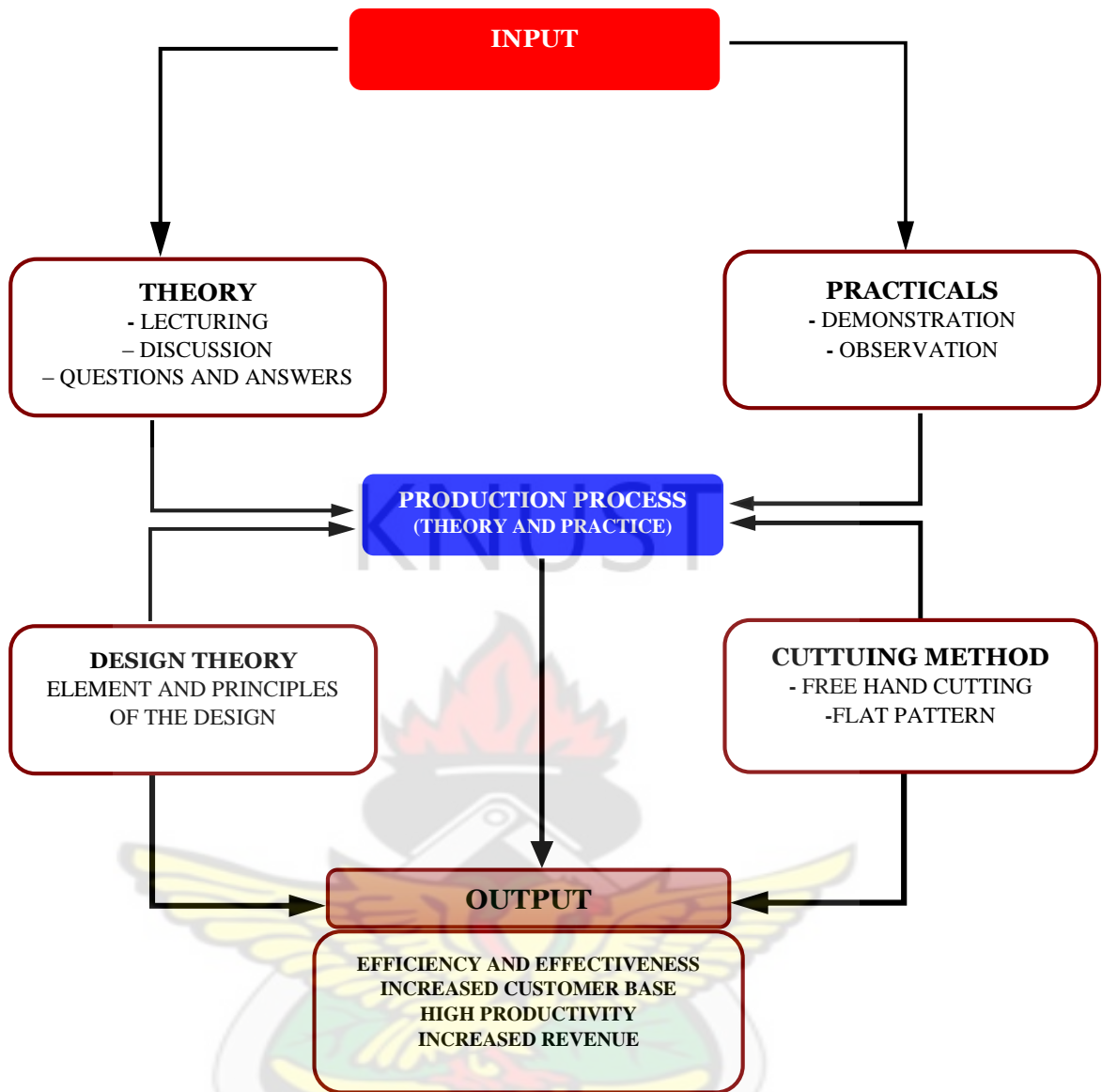


Fig 2.1 Conceptual Framework for the study:

Source: Researcher's own construct

From the conceptual framework (refers to Fig 2.1.), developed by the researcher for this study was based on two key aspect of design theory namely, design theory and cutting or production methods which are the Independent Variables, and how they impact on the performance of master craftsmen which is the Dependent Variable within the dressmaking industry. The design theory which include the elements and principles of design; line, shape, balance, harmony, proportion, rhythm, etc.

According to Annor et al. (2011) when someone admires one's dress is pretty, they are referring to the total effect including the style and design of the dress. A good design must follow certain guidelines which could be reviewed as the elements and principles of design. The style choices are influenced by the figure (body) types that is tall and slim, tall and plump, short and slim, short and plump, tall with large hips, tall with large bust, short with large hips and short with large bust. According to Forster (2014) opines that, body build figure comes in different types and it is important to know your figure type and how it affects clothing design. Figure type categories determined by weight and body proportions (Gavor et al., 2014; Foster, 2014).

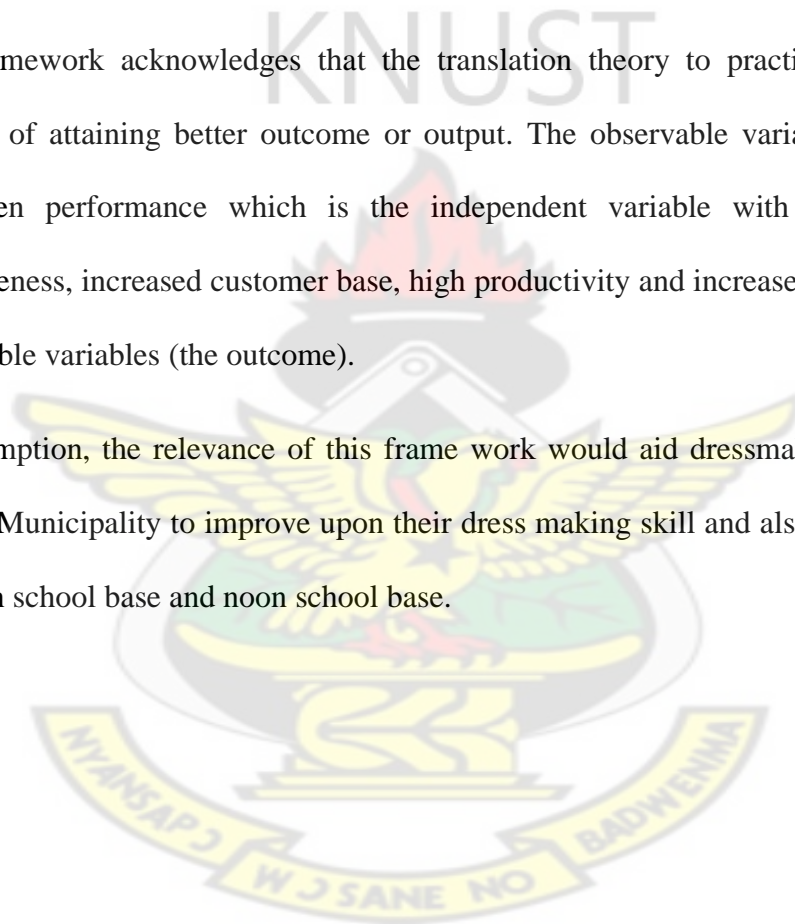
By analogy, the elements of design are essentially the “ingredients” or the things one must work with to create an attractive and becoming a design. Once people know how to use the elements of design effectively, they can produce good and fitting clothes and dress to look their best (Forster, 2014). In accordance with Annor et al. (2011), the way one applies the principles of design determines how successful it will be in producing or fashioning a work of art. The principles of design are the methods (guidelines) used in merging the elements to produce the designs that are exclusive and elegant clothes. A dress that follows the principles of a good design will not go out of fashion as speedily as one that does not (Gavor et al., 2014; Forster 2014). More importantly, the principles of design, conceivably even more than the elements, are difficult to separate from one another even for the sake of discussion, as it is only when they are working together that an effective design is created. Secondly, the production or cutting methods with either (free hand cutting or flat pattern method) also creates the efficiency and effectiveness of the garment.

In the researcher's view, dress making should base on the combination of three key elements namely i) the input, ii) the process and iii) output. However, this framework

is grounded within the process which is the theory and practice of dress making. The theoretical process includes Lecture, discussion and question and answers, while the Practical base also looked at demonstration and observation. The researcher agrees with Chankseliani and Relly (2015) that apprenticeship is a system of acquiring knowledge and occupational skills through a combination of theoretical component and practical work experiences under the mentorship of master craftsmen either in the classroom or at home.

The framework acknowledges that the translation theory to practice leads to the journey of attaining better outcome or output. The observable variables for master craftsmen performance which is the independent variable with efficiency and effectiveness, increased customer base, high productivity and increased revenue as the observable variables (the outcome).

In assumption, the relevance of this frame work would aid dressmakers at the New Juaben Municipality to improve upon their dress making skill and also bridge the gap between school base and noon school base.



CHAPTER THREE

METHODOLOGY

3.0. Overview

The chapter encompasses the research design and specific methodological plan adopted in attaining the objectives of the study. It also seeks to examine the prospects of introducing design theory to master craftsmen in dressmaking within the New-Juaben Municipality. The chapter discusses the research design, the population for the study and sample size as well as sampling procedure employed for the study. Also, the data collection instruments, types of data and the data analysis plan used for the study are discussed. Towards the conclusion of this chapter is the presentation of ethical reflections that guided the process of gathering data for the study.

3.1. Research Design

Research design is defined as the way in which a research idea is transformed into a research project or plan that can then be carried out in practice by a researcher and to obtain answers to the study. To Creswell (2009 as cited in Nizeyimana, 2014), research design contains the connotation of elements such as “philosophy, strategies of inquiry and specific methods. The research design is more than just the selection of methods or sampling techniques to be used in collecting data for a particular study (Given, 2008). It involves decisions about how the research is conceptualized, the conduct of the research and the type of contribution the research is intended to make to the development of knowledge in a particular field of study. However, Collis and Hussey (2009) puts forward that adopting the appropriate research paradigm is imperative as it impacts greatly on the choice of research design. Bryman and Bell (2007) identifies three research strategies which could be accepted by a researcher in

the conduct of a research namely; quantitative, qualitative and the mixed method. The mixed method is adopted to address the specific context of research in line with the position of Verschuren and Dooryard (2010); both qualitative (interview and open-ended questions) and quantitative approaches are employed in the data collection process in each case as appropriate and demanded by questions being answered. Positively, some writers have perceived the method as a unique strategy on its own when compared with the quantitative and qualitative research (Labaree, 2009). Because, when comparing both designs, quantitative research design necessitates the reliability of data collection in order to enhance statistical comparison.

The qualitative research design in contrast needs a flexible atmosphere which allows one to answer user data as it may emerge during a session. Thus, trends are looked at rather than performing statistical analysis. In identifying trends, statements that look similar across different research respondents are looked at. The idea is that, when a statement is heard from a respondent it is considered an answer, from two it is a chance and from three, it is considered as a trend (Rafik, 2014). In a nutshell, one can conclude that, the effectiveness of the mixed research method is greater than a piece of the qualitative and quantitative research designs (Creswell & Clark, 2007). In other words, a mixture of qualitative and quantitative research designs assists in practical solutions to overcome restrictions of mono-method research as discussed over periods (Kelle, 2006).

The researcher upon serious considerations of all the necessary factors has adopted the mixed method approach for more convincing and reliable conduct of the research to aid in the attainment of the stated research questions and objectives, based on the merits and criticisms identified in the qualitative and quantitative research designs.

3.2. Research Method and Strategy

A research drive specifically seeks to explore, describe or explain a phenomenon (Collis and Hussey, 2003). Considering the proposed research questions and objectives to be achieved, the researcher employed descriptive survey for the study. According to Shield and Rangarjan (2013) descriptive research is used to describe characteristics of a population or phenomenon being studied.

The researcher thus considered descriptive research survey since it facilitated gathering of reliable and accurate data that clearly described and showed the relationship between events and meaning of such relationships with regards to the prospects of introducing design theory for master craftsmen in dressing making within the New-Juaben Municipality.

3.3 Population for the Study

Population refers to the total number of individuals who are affected by a research problem (Oliver, 2004). A population involves all the subjects one wants to study that comprise all the possible cases (Yount, 2006). Creswell (2005) also describes population as the target of participants in the study with similar characteristics of interest. Given (2008) further clarifies the population as a collection of such elements as individuals or entities that fit the criteria that the researcher has laid out for research participants.

The general population for the purposes of the study was the dressmakers and their apprentices of the New Juaben Municipality.

3.3.1 Target Population

This is the overall aggregate of individuals that meet the set criteria of the study that conclusions can be drawn from (Samkange, 2009). The Target population for the study comprised zonal leaders, master- craftsmen and apprentices from the New-Juaben Municipality. The master craftsmen in dressmaking were drawn from six (6) zones as follows; Adweso, Akwadum, Anlo Town, Asokore (Effiduase), Central and Old Estate (Nsukwao) in the New Juaben Municipality. The target population was $6 + 108 + 12 = 126$, as shown in Table 3.1 below.

Table 3.1 Target Population for the Study

Zones	Zonal Leaders	Master-Craftsmen	Apprentice	Target Population
Adweso (Zone A)	1	22	2	25
Akwadum (Zone B)	1	17	2	20
Anlo Town (Zone C)	1	16	2	19
Asokore (Zone D)	1	18	2	21
Central (Zone E)	1	20	2	23
Old Estate (Zone F)	1	15	2	18
Sample Categories	6	108	12	126

Source: Field Data, 2018

3.3.2 Accessible Population

Accessible Population signifies a particular subject in the study to whom the conclusions of the research can be applied to. This population is also referring as the readily reachable subset of all the possible entities under consideration. The accessible

population for the study was made up of only dressmakers who sews as the Zonal leaders, master craftsmen and two apprentices from each zones of the New Juaben Municipality. The accessible population was $6 + 77 + 12 = 95$, as shown by Table 3.2 below.

Table 3.2 Accessible Population for the Study

Zones	Zonal Leaders	Master-Craftsmen	Apprentice	Accessible Population
Adweso (Zone A)	1	16	2	19
Akwadum (Zone B)	1	12	2	15
Anlo Town (Zone C)	1	11	2	14
Asokore (Zone D)	1	13	2	16
Central (Zone E)	1	14	2	17
Old Estate (Zone F)	1	11	2	14
Sample Categories	6	77	12	95

Source: Field Data, 2018

3.4 Sample and Sampling Technique

Sample size concerns the use of a small part of a population to make a conclusion about a whole population of a study (Saunders et al., 2007). That is, it is a subset of a population. Having determined the sampling frame for this study, the sample size calculator software developed by Creative Research System (2012) was used to calculate the sample size for the quantitative data collected. In order to arrive at the correct sample size in the conduct of a research, one needs to consider the confidence interval and confidence level of the sample to be deduced (Creative Research System 2012). The confidence interval known as margin of error, confirms that the sample

selected is a true representation of the total population. The confidence level gives some level of assurance and mostly presented as a percentage, thereby showing how frequent the true percentage of the population which responded falls within the confidence interval. For the purpose of this study, the confidence interval chosen was 95-100% and hence a confidence level of 95%.

The two figures when inputted into the sample size calculator software generated 95 as the appropriate sample. The results of the copies of questionnaire retrieved are presented in the Table 3.3 below.

Table 3.3 Sampled Respondents for the study

Zone Identity	Derivation of expected No. of Respondents From Each Zone	Questionnaires Retrieved from Each Zone	Respondents Identity
Zone-A (Adweso)	$25/126 \times 100$ $19.8/100 \times 95$ =19	19	Master craftsmen, Zonal leader and Apprentices
Zone-B (Akwadum)	$20/126 \times 100$ $15.9/100 \times 95$ =15	15	Master craftsmen, Zonal leader and Apprentices
Zone-C (Anlo Town)	$19/126 \times 100$ $15/100 \times 95$ =14	14	Master craftsmen, Zonal leader and Apprentices
Zone-D (Asokore)	$21/126 \times 100$ $16.7/100 \times 95$ =16	16	Master craftsmen, Zonal leader and Apprentices
Zone-E (Central)	$23/126 \times 100$ $18.3/100 \times 95$ =17.4	17	Master craftsmen, Zonal leader and Apprentices
Zone-F (Old Estate)	$18/126 \times 100$ $14.3/100 \times 95$ =14	14	Master craftsmen, Zonal leader and Apprentices
Total		95	

Source: Field Data, 2018

Below is a tabular presentation of the sample size for the study.

Table 3.4 Breakdown of the Sample Size

Zones	Zonal Leaders	Master-Craftsmen	Apprentice	Sample Size
Adweso (Zone A)	1	16	2	19
Akwadum (Zone B)	1	12	2	15
Anlo Town (Zone C)	1	11	2	14
Asokore (Zone D)	1	13	2	16
Central (Zone E)	1	14	2	17
Old Estate (Zone F)	1	11	2	14
Sample Categories	6	77	12	95

Source: Field Data, 2018

3.4.1 Purposive Sampling

There are various types of sampling techniques, they comprise convenience sampling, snowball sampling, and purposive sampling which come under non-probability sampling. Ross (2002) explains the purposive sampling is a non-random technique whereby a researcher selects members from a population to comprise a sample because they possess specific qualities of interest that address the purpose of a particular research problem under study. To Kumekpor (2000 as cited in Womo, 2015), purposive sampling deals with the individuals within the sample are deliberately selected on the basis of certain attributes they exclusively possess that are of interest to the study.

The researcher uses the purposive sampling technique. This is because the researcher had in mind the classes of respondents who were conversant with the subject

understudy. In that case, not anyone on the street was given the questionnaire to answer for ideas on the prospect of introducing the design theory to dressmakers in the New Juaben Municipality. The zonal leaders, master craftsmen and apprentices in the selected zones were sampled because they possess the requisite skills and knowledge in the practice of dressmaking to answer the questionnaire.

3.5. Data Collection Instruments

Data gathered were both numerical and non-numerical obtained through verbal and nonverbal study with regard to the activities of master craftsmen and the use of design theories. Questionnaire, interview and observation are the main data collection instruments employed for the collection of data from the Zonal leaders, Master-Craftsmen and apprentices in dressmaking vocation within the New-Juaben Municipality.

3.5.1 Questionnaire:

The data was obtained by means of a self-administered questionnaire. A questionnaire is data collection tool which individuals respond to a set of standard questions in a pre- determined way (Creswell, 2009). Questionnaire reviews aid to characterize the features of the target population in relation to the identified variables and also ensure reliability.

The instrument employed as part of the gathering of the essential information from the respondents was a structured questionnaire. Three main categories of respondents were considered. These were zonal leaders, master-craftsmen and apprentices in the dressmaking vocation. The questionnaires were similar and each had three sections. Section A of each questionnaire requested for demographic data of the respondents

namely: zone, gender, age and academic qualification. The other three sections sought the respondents' opinions on the research questions.

3.5.2 Interview:

Interviews are ways in which respondents share their views and interpretation regarding a given situation from their point of view; the types of interview classification usually include structured, semi-structured, unstructured and non-directive interviews (Kajornboon, 2005). Flick (2006, p.160) opine that the purpose of an interview "is to reveal existing knowledge in a way that can be expressed in the form of answers and so become accessible to interpretation." Again, four strategies to interviews including informal conversation interview, interview guide approach, closed quantitative interview and standardized open-ended interview can be identified (Patton, 2000). Structured interview was used as the data collection tool to gather other information that the questionnaire could not adequately ascertain. This enabled the researcher to conduct the interview the best way. This also enhanced further explanation of answers which were uncertain.

The researcher organized an interview session with the Regional Secretary of Ghana National Dressmakers and Tailors Association (GNTDA) Mr. Alfred Yaw Kissi.

The interview guide was adopted for the study and this consisted of exact subjects to be covered alongside initial questions and probes which were used to follow up on respondents' responses to gain deeper understanding (King, 2004). Precisely, the interview guide sought for information on the teaching and learning process that are used by master craftsmen in training apprentices, the impact of the use of design theory and the introduction of design theory.

3.5.3 Observation

Leedy and Ormrod (2005) say observation includes retrieving information, data or impressions on the field of research with the use of the researcher's senses. These senses may include watching, listening, smelling, feeling or any other, in the quest to investigate a phenomenon. Sidhu (2003) claims that data collected through observation are often more real and true than data collected by other methods. The workshop observation technique was selected to enable the researcher have firsthand information on the teaching and learning processes that are used in garment production in New-Juaben Municipality as indicated in appendix D.

3.6 Types of Data Collected

Data collection is the systematic approach to gathering and measuring information from diverse sources so as to gain complete and correct picture of an area of interest (Bryman & Bell, 2007). The study deduced data and information from two main sources respectively and these are discussed below.

3.6.1 Primary Data

The information given to the researcher by personalities such as master craftsmen, zonal leaders, apprentices and the Regional Secretary constituted the primary data. Some were in the form of field notes and photographs of training sites, sewing tools and materials obtained from interviews and observation. This qualified the researcher to draw conclusions from the research findings to reflect the state of apprenticeship training within the New Juaben Municipality.

Apart from the questionnaire, the apprentices were involved in mutual discussions which gave the researcher the opportunity to learn more, beyond the organized questions.

3.6.2 Secondary Data

Secondary sources from which information was derived include published textbooks, thesis, journal articles from databases such as SAGE publications, online sources or websites, report and libraries such as KNUST-Kumasi campus, Accra Technical University library, Ho Technical University library, and Koforidua Technical University (KTU) library. Individual authors, relevant in the search area of the prospects of introducing design theory for master craftsmen in dressmaking within the New Juaben Municipality, were also contacted.

3.7 Data Collection Procedure

Letters of introduction were collected from the Head of Department, Educational Innovations in Science and Technology, Kwame Nkrumah University of Science and Technology, Kumasi, were sent to the general secretary of tailors and dressmakers association, zonal leaders and selected master craftsmen and apprentices to obtain permission to conduct the study. A meeting was held with the general secretary of tailors and dressmaker's association to agree on the days and times for the administration of the questionnaires and interview guides.

The data collected on the field was classified as the primary data. The prepared questionnaire for zonal leaders, master-craftsmen and apprentices were administered personally by the researcher during their general meeting. The researcher offered assistance by clarifying areas where the respondents had difficulties. Respondents

who could not read or write were given assistance by the researcher by explaining or clarifying the question to them in the Akan and Ewe Languages, and the answers provided were translated and written in English. Respondents were given sufficient time to complete the questionnaire.

3. 8 Data Analysis Plan

Miles and Huberman (1994) are of the view that the data analysis process comprises of extrapolating details from raw data. Creswell (2005) further explains that the data analysis process involves constant reflection about data, critical probing and documenting evidences. The data analysis was done using quantitative and qualitative methods of analysis. These were the reflection of the mixed method approach; a process of analyzing data from more than one source selected to inform a particular research questions of concern. Respondents were requested to respond to all the items on the questionnaire. They were requested to provide answers for part I (demographic data). In performing the analysis, control variables were considered; gender, age and educational level of participants used in the study because, research has indicated that these variables have influence on functional diversity and innovation (Simonton, 1984; Doss and Morris, 2001; Bunderson and Sutcliffe 2003). For part II, options were provided for respondents to choose from. In analyzing the qualitative data, a thematic approach was used.

The researcher got familiar with the data and concepts after which the data were arranged. The rising themes and sub-themes in line with the research objectives were brought out and transcribed. As stated earlier, apart from the items in part I (demographic data of respondents), the main items were assigned the weight 4, 3, 2 and 1 for a great extent, to some extent, to a little extent and not at all. Some were also

assigned the weight 1, 2, 3 and 4 for strongly agree, agree, disagree and strongly disagree respectively. There was also an interview session with the General Secretary to solicit his views regarding the introduction of design theory into dressmaking within New Juaben Municipality by master craftsmen. The quantitative data obtained from the questionnaire were analyzed through the Structure Equation Modeling (SEM) using Statistical Package for Social Sciences (SPSS) version 23.0. The mixed method approach was used in the study, and as such, the findings were presented in simple descriptive statistics involving some tables and bar charts. These tools were chosen because they made it easier to investigate the relationship of interest.



CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.0 Overview

This chapter meticulously examines and analyses the required data gathered from respondents on the investigation of prospects of introducing Design Theory to Master Craftsmen in Dressmaking within the New Juaben Municipality. The researcher dedicated the first section to analyzing the data gathered on master craftsmen and zonal leaders and the second section to the Apprentices' views on teaching and learning dressmaking, and the impact of the use of design theory on dressmaking within the New Juaben Municipality. With regard to the research work, data was obtained from the field survey undertaken by the administration of copies of questionnaire to sampled Eighty-three (83) respondents in the case of Master Craftsmen and Zonal Leaders; and twelve (12) apprentices with a response rate of 100%. The questions were both open and close ended. Analyses of the data were based on frequency tables, charts and cross tabulation generated by Statistical Products and Service Solutions (SPSS V.23) version. The descriptive analysis was used to illustrate or present responses gathered from the field survey to make the research findings meaningful and inferential. The ensuing analyses shows and unearths the responses received from the retrieved copies of questionnaire administered during the field survey.

The researcher also used structured interview guides to solicit additional information.

Data from the interview guide was analyzed qualitatively.

4.1 Respondents' Demographic Data (Finding from Master Craftsmen and Zonal leader)

The statistical demographic characteristics of respondents are represented in the Figure 4.1. The researcher merged the demography of master craftsmen and zonal leaders. The demographic characteristics of respondents therefore address the demography of all the respondents selected for the study.

4.1.1 Profile of Master Craftsmen and Zonal Leaders

To begin with, the gender distribution revealed from the survey that majority of respondents were predominantly female constituting 84.30% (70) of the master craftsmen and zonal leaders as compared to male who made up only 15.70% (13) of the sample.

Figure 4.1, shows that majority of the respondents who are within the industry are females in the New Juaben Municipality, Koforidua. A research conducted by Biney-Aidoo (2006) indicates that a lot of women rather sign in to acquire sewing skills and majority of those with sewing skills have benefited immensely and in diverse ways from sewing apprenticeship. Figure 4.1 presents below a summary of how the participants' gender have been distributed.

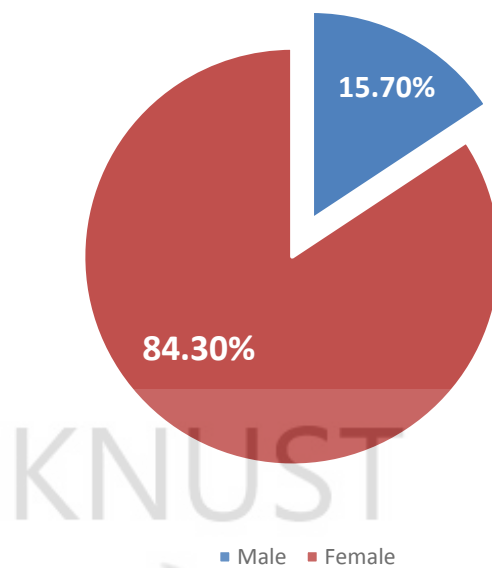
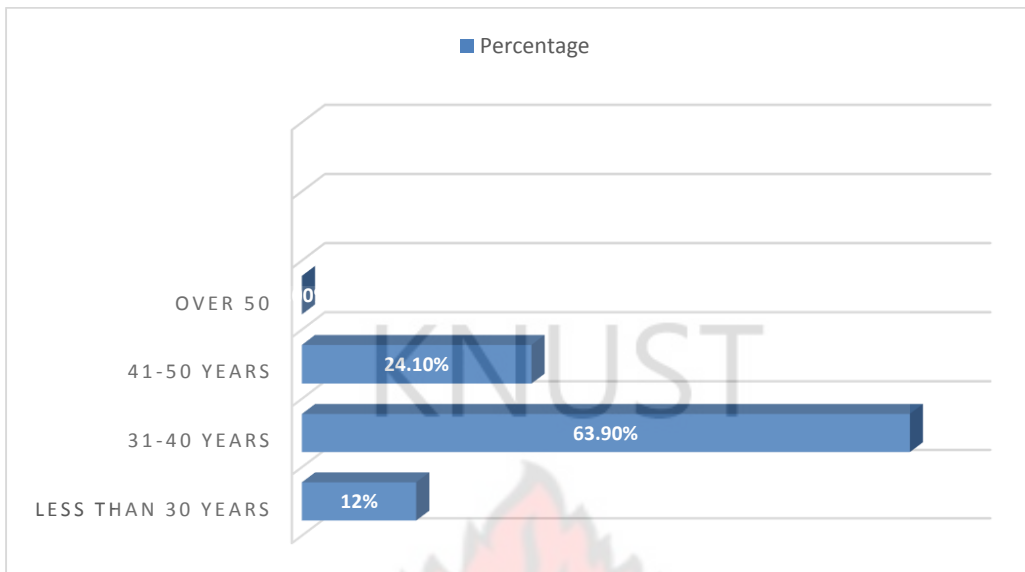


Figure 4.1: Gender Distribution of Respondents (Master Craftsmen and Zonal Leaders)
Source: Field Data, 2018

Figure 4.1.1, With respect to age distribution of respondents, majority of master craftsmen and zonal leaders showed that they were composed of relatively young through middle age to aged members. Of the respondents, 0% (0), with 24.10 (20) representing those within 41-50 years, those respondents who were between the age group of 31-40 constitute 63.90 (52) and 12.0% (1) of them were below 30 years respectively. Figure 4.1.1 summaries the breakdown of the participants' gender age distribution below.

Figure 4.1.1 Age Distribution of Respondents (Master Craftsmen and Zonal Leaders)



Source: Field Data, 2018

The academic strengths of the master craftsmen and zonal leaders were measured by the academic qualifications they have acquired such as Basic Education, Secondary Education, Tertiary Education and other professional qualifications. The responses presented in Figure 4.1.2, shows clearly that, respectively and in accordance with the aforementioned academic qualifications, the respondents who have educational background are represented by, 30.10% (25), 57.8 % (48), 1.20% (1), and 10.80% (9).

The responses reveal that, most of the master craftsmen and zonal leaders have had secondary school education. Furthermore, Figure 4.1.2 reveals that majority of the respondents in the industry who are in the New Juaben Municipality have Secondary Education followed and Basic Education. This affirms Larbi (2009) ascertain that the apprenticeship system of training dressmakers and tailors has existed for some time, which then makes it a form of youthful training to equip them with outstanding skills

as a means of unemployment reduction. Hence, it is imperative to note that, in the absence of academic certificates and other paper qualifications, the youth would yet be equipped with resilient vocational and technical training as a way of earning income. Figure 4.1.2 present the academic qualification of respondent.

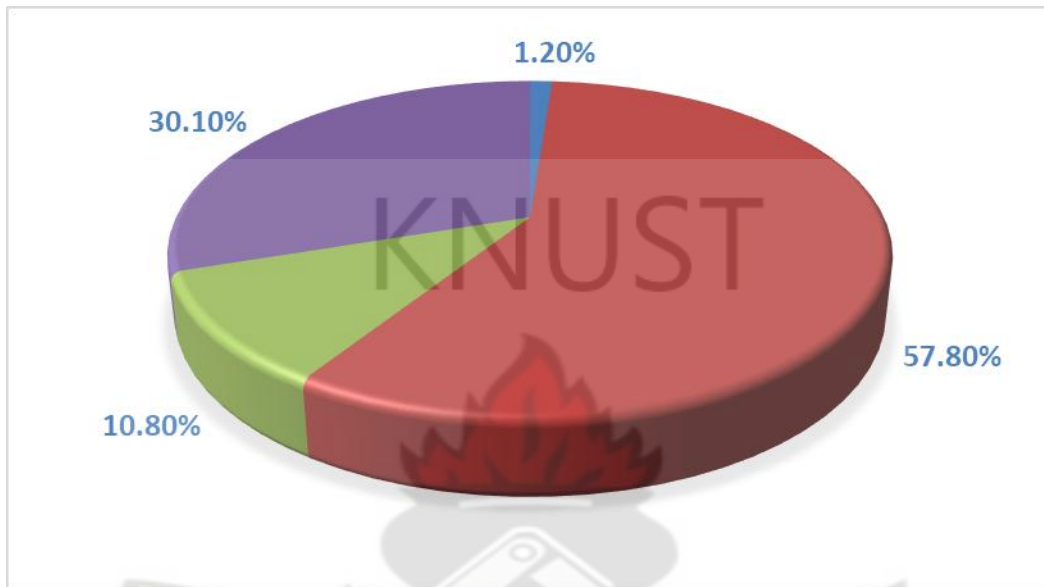
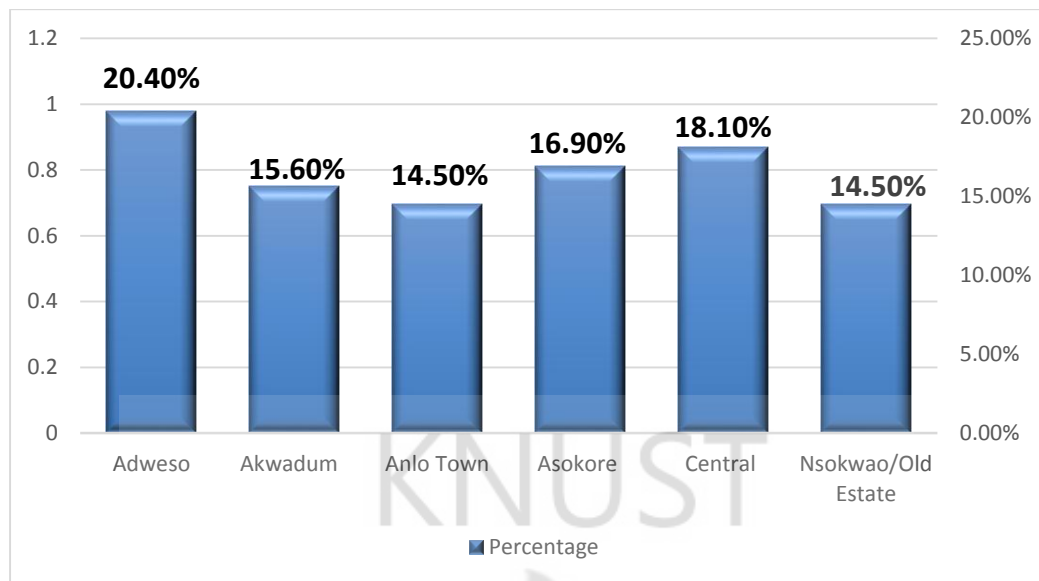


Figure 4.1.2: Academic Qualification of Respondents

Source: Field Data, 2018

The master craftsmen and zonal leaders are representatives of Adweso, Asokore, Central, Old Estate, Anlo Town and Akwadum. Figure 4.1.3 shows that 20.40%, 15.6%, 14.5%, 16.9%, 18.1% and 14.5% correspondingly represent the zones stated earlier. The majority of the respondents are in the Adweso, Asokore and Central zones, followed by Anlo Town and then Akwadum. It is however discovered that fewer respondents are found in zones such as Old Estate and Akwadum.

Figure 4.1.3: Zone of Respondents



Source: Field Data, 2018

4.2 Analysis of the views of the Master Craftsmen and Zonal Leaders in the New Juaben Municipality on Teaching and Learning Process

The period by which master craftsmen have taught and trained apprentices in dressmaking is tantamount to the experience they have in the field and the industry as a whole. With reference to Figure 4.1.4, it is evident that 10% and 2% have trained apprentices in dressmaking between the period of 16-20 years and over 20 years respectively. On the other hand, 40%, 34% and 14.0% have conducted apprenticeship training for a period of 5-10, 11-15 and below 5 years respectively.

From Figure 4.1.4, majority of the respondents, being master craftsmen and zonal leaders who have trained apprentices for a period of 5-10 and 11-15 years, show that apprenticeship in dress making has been the practice of master craftsmen who have the knowledge and skills in production of clothes, and transmit or transfer what they have grasped from generation to generation or across the space of time.

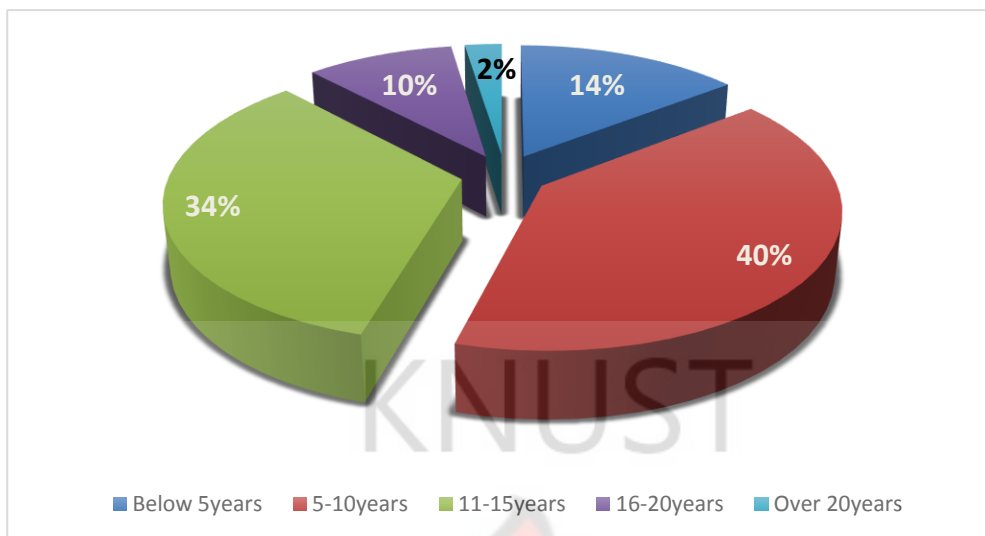


Figure 4.1.4: How Long Have You Been Training Apprentices in Dressmaking (Sewing) as a Vocation/Profession? (Question by interviewer)

Source: Field Data, 2018

Table 4.1: Skills used by Master Craftsmen in Teaching Practical Lessons

Skills used by Master craftsmen	Do you have the skills in teaching practical lesson?	Total
	Yes	
Taking of Measurement	83 (100%)	83 (100%)
Ironing/Pressing	83 (100%)	83 (100%)
Freehand cutting	83 (100%)	83 (100%)
Stitching	83 (100%)	83 (100%)
Hemming	83 (100%)	83 (100%)
Fixing of Zippers	83 (100%)	83 (100%)
Fixing buttons and working of Buttonholes	83 (100%)	83 (100%)
Seam finishing	83 (100%)	83 (100%)
Total	83 (100%)	83 (100%)

Source: Field Data, 2018

Master craftsmen employ various skills to teach practical lessons and apprenticeship. Table 4.1 indicates that all the respondents 100% (83); master craftsmen and zonal leaders have skills and it is important to note that their skills are in the areas such as taking body measurement, ironing or pressing, freehand cutting, stitching, hemming, fixing of zippers, fixing buttons and working on buttonholes as well as seam finishing. According to Priest (1990), pressing tools aid in producing a professional look on a finished garment and also another skill which aids as an accurate or precise measure for marking hems (Gavor *et al.*, 2014).

With regards to Foster (2014), seaming is very essential due to its ability to measure hems, tucks and pleats as well as mark or measure short distances. It can therefore be said that all the afore mentioned skills are necessarily involved since the designer is bent on producing garments without fault; which in the end will show the essence of the industry in the society and country as a whole. This goes to support the view that the making of clothing is an art that requires the accuracy and precision of science where garments are made to fit particular sizes or body types. Measurement of that which are taken and translated to measurements in the form of pattern making or directly onto fabric, enabling the perfection of sewing and the fitness of the garment (Gavor *et al.*, 2014).

Table 4.2: Training Process by Various Master Craftsmen

Indicators	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
GNDTA have curriculum or syllabus for training.	0 (0.0%)	0 (0.0%)	3 (3.6%)	0 (0.0%)	80 (96.4%)
Curriculum or syllabus covers both theory and practical.	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (3.6%)	80 (96.4%)
Practical lessons are taught.	53 (63.9%)	28 (33.7%)	2 (2.4%)	0 (0.0%)	0 (0.0%)
Theoretical lessons are taught.	0 (0.0%)	0 (0%)	3 (3.6%)	70 (84.3%)	10 (12.1%)
Practical lessons are taught more than theoretical lessons.	26 (31.3%)	56 (67.5%)	1 (1.2%)	0 (0%)	0 (0.0%)
Master craftsmen vary their teaching techniques	0 (0.0%)	23 (27.7%)	0 (0%)	48 (57.8%)	12 (14.5%)
Practical lessons are handled with the appropriate technique (Discussion, questions & answer, demonstration, observation, implementation)	22 (26.5%)	40 (48.2%)	0 (0.0%)	17 (20.5%)	4 (4.8%)
Teaching technique is teacher-centered	0 (0.0%)	21 (25.3%)	3 (3.6%)	52 (62.7%)	7 (8.4%)
Involve Apprentices in the teaching learning process	0 (0.0%)	72 (86.7%)	4 (4.8%)	7 (8.5%)	0 (0.0%)
Apprentices have special skills they go through during their training	5 (6.0%)	75 (90.4%)	3 (3.6%)	0 (0.0%)	0 (0.0%)
Often test apprentice to find out their defects	6 (7.2%)	74 (89.2%)	3 (3.6%)	0 (0.0%)	0 (0.0%)

Source: Field Data, 2018

The process of apprenticeship was carefully looked at from the respondents within the New Juaben Municipality. The responses shown on Table 4.2 reveal that there are practices that apprenticeship trainees go through in preparing them to be cutting-edge craftsmen within the industry. The strength of agreement which then determines the usefulness of the listed practices or laid down principles and further tells whether the practices are effectively undertaken. It is revealed from a response of 80 (96.4%), that there exists no such GNTDA curriculum or syllabus for training as well as curriculum or syllabus covering both theoretical and practical training; the remaining 3 representing 3.6% of respondent, being indifferent. Fifty-three of them making up 63.9% and 28 representing 33.7% of the responses say that practical lessons are taught whereas 70 respondents representing 84.3% and 10 representing 12.1% who disagree say that theoretical lessons are not taught.

On the other hand, 26 respondents representing 31.3% and 56 representing 67.5% “strongly agree” and “agree” respectively that practical lessons are taught more than theoretical lessons which affirm the earlier responses. Therefore, practical lessons are handled with the appropriate techniques namely: Demonstration, lecturing, collaboration, and practicals with regard to 22 respondents representing 26.5% and 40 representing 48.2% who agree while 17 representing 20.5% and 4 representing 4.8% disagrees. Fifty-two respondents representing 62.7% while 7 of them making up (8.4%) disagree that, teaching techniques are teacher centered.

However, 72 respondents representing 86.7% were of the view that apprentices are involved in the teaching and learning process, while only 7 of the respondents representing 8.5% disagree. With regard to whether or not apprentices have any special skills they go through, 6.0% (5) and 90.4% (75) indicate they “strongly agree” and “agree” respectively that master craftsmen and zonal leaders, as well as

apprentices go through special skills during their training. It is revealed from the responses provided that master craftsmen often test apprentices to find out their defects and further grant them needed and required assistance and proper training. This is shows that 74 of them making up 89.2% and 6 of the respondents representing 7.2% who indicate they “agree” and “strongly agree” respectively that as an apprentices they do not go through test to fine out their defects.

From the analysis, it can be deduced that the master craftsmen within the new Juaben Municipality use no curriculum in training their apprentices and training is solely practical based. This is presented in Table 4.3 at the next page.

Table 4.3: Objective 2: Impacts of the use of design theory on the performance of master craftsmen in Dressmaking Production within the New Juaben Municipality.

Indicators	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
The use of Design theory increases dressmaking opportunities for master craftsmen	70 (84.3%)	13 (15.6%)	0 (0%)	0 (0.0%)	0 (0.0%)
Design theory brings about effectiveness and efficiency in sewing	76 (91.6%)	5 (6.0%)	2 (2.4%)	0 (0.0%)	0 (0.0%)
The use of design theory increases productivity.	80 (96.4%)	(0.0%)	3 (3.6%)	0 (0.0%)	0 (0.0%)
Design theory helps to increase customer base for the master craftsmen	65 (78.3%)	15 (18.1%)	0 (0%)	3 (3.6%)	0 (0.0%)
The use of Design theory in					

dressmaking enhances the income levels of master craftsmen.	58 (69.9%)	25 (30.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
The use of design theory leads to timely delivery of services to customers	13 (15.7%)	70 (84.3%)	0 (0%)	0 (0.0%)	0 (0.0%)

Source: Field Data, 2018

The impact of the use of design theory on the performance of master craftsmen should it be introduced to them is expressed in Table 4.3, relative to the responses of respondents. It is revealed eighty-four 84.3% and 15.7% of the respondents indicated, that the use of design theory indeed will increases dressmaking opportunities for master craftsmen to a great extent. Ninety-one (91.6%), 5(6.0%) of the responses also toe the same line that design theory brings about efficiency and effectiveness in sewing while only 2.4% of the respondents are indifferent.

96.4% of the respondents are also of the view that the use of design theory increases productivity while only 3.6% are indifferent. In the same vein, 78.3% and 18.1% agree to the statement that design theory helps master craftsmen to increase their customer base while 3.6% of the total respondents disagree to the statement. With regard to the use of design theory in dressmaking enhancing the income levels of master craftsmen, all the respondents responded in the affirmative as explained by 69.9% and 30.1% of the respondents.

Similarly, all respondents were of the view that, the use of design theory leads to timely delivery of services to customers. This assertion is explained by 15.7%, whereby 84.3% of respondents indicating that they “strongly agree” and “agree” respectively to the statement. It is worth noting that, the responses gathered from

master craftsmen with respect to the impact of the use of design theory in dressmaking on the performance of craftsmen is in conformity with literature.

Table 4.4: Level of Awareness of Design Theory by Master Craftsmen and Zonal Leader

Indicators	To a Great Extent	To Some Extent	Indifferent	To a Small Extent	Not at All
Master craftsman's awareness of the Design Theory	0(0.0%)	3(3.6%)	0(0.0%)	0(0.0%)	80(96.4%)
Is it important to introduce Design Theory programme for Ghana National Dressmakers and Tailors Association (GNTDA)	79(95.1%)	4(4.8%)	0(0.0%)	0(0.0%)	0(0.0%)
Master craftsman's readiness for the application of the new Design Theory course or programme	74(89.2%)	3(3.6%)	6(7.2%)	0(0.0%)	0(0.0%)
Master craftsmen have the required resources to fully implement design theory	35(42.2%)	20(24.1%)	0(0%)	28(33.7%)	0(0.0%)
Master craftsmen have the needed skills to implement the design theory programme	0(0.0%)	10(12.1%)	5(6.0%)	20(0.0%)	48(57.8%)

Source: Field Data, 2018

With reference to the responses in Table 4.4, it is noted that 3.6% respondents who are master craftsmen have some idea or glimpses of design theory to some extent. On the other hand, 96.4% of the respondents, forming the greater proportion have absolutely no knowledge of design theory and are in support of the implementation of the theory in the New Juaben Municipality. Their responses are such that it is important to a great extent to introduce a design theory programme for the Ghana National Association of Dressmakers and Tailors Association (GNTDA) as 95.1% of total respondents affirm this. Also, 89.2% of respondents indicate their readiness for the application of the new design theory course or programme. They see it as an avenue which to a large extent, will help improve the industry in the New Juaben Municipality.

In compliance with Chauham (2006), a master craftsman gives good sewing lessons as to the desired results he or she requires from the apprentice though the skills in the training is virtually average. It is therefore necessary for master craftsmen to acquire knowledge and skills relative to their jobs to enable them impart knowledge to the apprentices since apprenticeship in sewing has been the practice by “master-craftsmen who have the knowledge and skills in producing of clothes, and transmitting what they have grasped from generation to generation to ensure continuity (Larbi 2009).

It was impressive to find the master craftsmen and zonal leaders willing to champion the cause of the implementation of the design theory in the municipality. This implies that there would be effective implementation of the theory in the municipality due to the unprecedented agreement support of both apprentices and master craftsmen.

Patrick (1994) says that a designer ought to have an understanding of all the diverse aspects of creative designing and of the source of inspiration, and a complete knowledge of the different area of style. This then improves the authenticity,

credibility and integrity of the designer on the market within the industry, giving an advantage over competitors. A good number of the master craftsmen indicated that they have the required resources to introduce design theory. This shows that 42.2% and 24.1% of the respondents who stated that to a large extent and some extent, they respectively have the required resources for the implementation of the programme. However, it is worth noting that, despite the willingness and readiness of the master craftsmen to accept the introduction of design theory, most of them indicated they lack the needed skills for it. This is explained by 0.0% and 57.8% of the respondents stating they have, to a small extent, the needed skills for the programme, respectively. Only 12.1% of the respondents indicated they have the needed skills. These are well presented in Table below.

4.5 Findings from Apprentices (Respondents' Demographic Data)

Table: 4.5 Profile of Apprentices

Parameters	Frequency	Percentages
Gender		
Male	4	33.3%
Female	8	66.7%
Total	12	100.0%
Age		
Under 15 years	2	16.7%
16-20 years	4	33.3%
21-30 years	5	41.7%
31-40 years	0	0.0%
41-45years	1	8.3%
Total	12	100.0%
Education		
BECE	4	33.3%
WASSCE	6	50.0%
Certificate	2	16.7%

Total	12	100%
When did you start learning dressmaking?		
Primary	2	16.7%
JHS	4	33.3%
SHS	6	50.0%
Tertiary	0	0.0%
Total	12	100.0%

Zone of Respondent		
Adweso (Zone A)	2	16.7%
Akwadum (Zone B)	2	16.7%
Anlo Town (Zone C)	2	16.7%
Asokore (Zone D)	2	16.7%
Central (Zone E)	2	16.7%
Nsokwao / Old Estate (Zone F)	2	16.7%
Total	12	100%

Source: Field Data, 2018

This section analyses the responses from apprentices whose views were solicited on the use of design theory by master craftsmen. Gender distribution for apprentices revealed that 66.7% of the respondents were female while 33.3% of the respondents were male.

With regard to age distribution, 5 of the respondents representing 41.7% were within the ages of 21-30 years while 33.3% were between the ages of 16-20 years. Some of the respondents representing 16.7% and 8.3% were under 15 years and between 41-45 years respectively.

The number of years a respondent signed in for the vocation and the number of years a respondent has been learning the vocation were ascertained. This is a very important

factor to decipher since a designer who plans a work, puts together certain qualities which are elements of design (Annor *et al.*, 2015) which becomes a perception leading to deeper sense of knowing, and a subconscious thought, often in the apparent absence of rational confirmation. This then makes tuition as similar as an elongated insight that tells that one is on to a particular thing (Miller, 2009).

It is therefore realized that majority of the respondents have remained persistent and consistent with the study of the vocation.

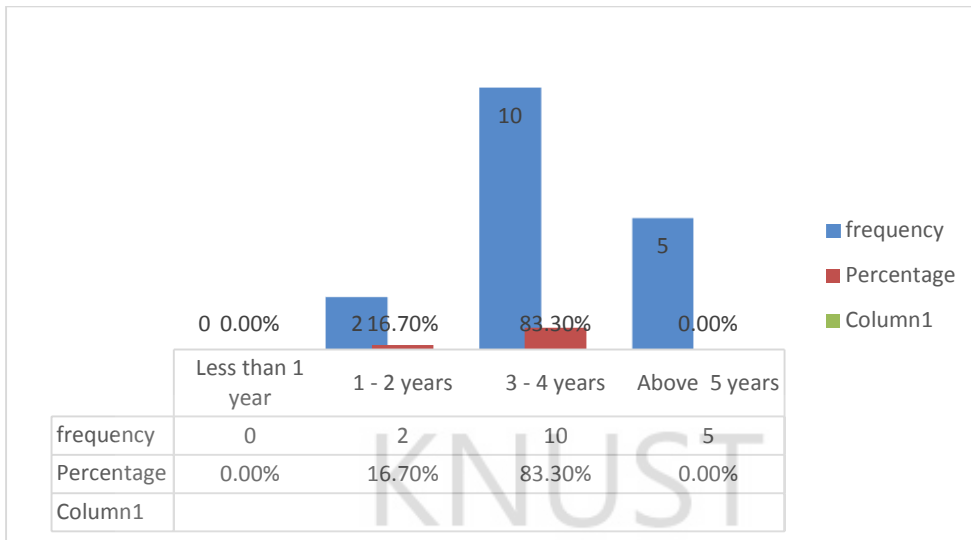
A number of scholars have adequately revealed that apprenticeship is a contractual agreement undertaken by the master craftsmen and the apprentice, and this is a means by which the apprentice is trained for a prescribed job process through practical experience under the supervision of the master craftsman for a period of time. This period of time is defined in the contractual terms which enable the apprentice to have on the job training (Uwameiye and Iyamu, 2010). For Abban and Quarshie (1993), apprenticeship training continues in phases. It is observed in the industry that, dressmaking or garment production has gained popularity for both men and women and there have been long and sustained conditions and varying contractual terms of apprenticeship in garment making (Imirhe, 2004).

The gravity of knowledge of the apprentice is a measure of how well the knowledge is applied in the industry. The period of time an apprentice begun apprenticeship and the knowledge acquired in dressmaking reveals the impact of the master craftsman on the apprentice and reveals the strength that the learning process has on the apprentice, as well as the effect of the learning process in the dress making industry. Again from Table 4.5 below, 50% of the total respondents begun their learning of dressmaking from SHS level, while 33.3% begun with JHS education. The rest 16.7% started their training in dressmaking from the Primary level.

Information regarding the educational background of the respondents was also gathered. The educational background of the respondents was found to be playing a major role in the apprentices' speed of acquisition of knowledge as well as their level of acquired knowledge. Table 4.5 shows that 50.0% and 33.3% of respondents had qualification in BECE and WASSCE 16.7% of the respondents had other certificates. It is believed by Chankseliani and Relly (2015) that apprenticeship is a system of acquiring knowledge and occupational skills through merging practical work experience and theoretical component; an apprentice who is in the process of training to be a designer must have a proper understanding of various aspects of creativity in designing of the source of inspiration and a complex knowledge of the different areas of style since designing has to do with transforming ideas or concepts into concrete plans, providing preview of intended and expected products and skills (Forster, 2014). It is therefore required by the apprentice to master and acquire enough knowledge for application within the industry for growth.

In reference to Figure 4.3, it was observed that none of the respondent have sign in for learning dressmaking less than 1year, whereas 2 respondents representing 16.70% have between 1 to 2 years. Also, majority of respondents have been learning between 3 to 4 years were 10 respondents accounting for 83.30% fell within that category of learning dressmaking. However, there was neither an apprentice who sign in for 5 years and above. Figure 4. 2 below provide the data captured in relation to years that apprentices sign in for learning dressmaking as a vocation.

Figure 4.3: How many years did sign in for learning this vocation?



Source: Field Data, 2018

With reference to Figure 4.3. and 4.3.1, the table 4.5 reveals that, 83.3% of respondents signed in to learn the vocation for 3-4 years while the rest 16.7% signing in to learn the vocation for 1-2 years. Same number of respondents who have signed in to respectively learn the vocation from 1-2 and 3-4 years are actually learning it for 1-2 years and 3-4 years, representing 16.7% and 83.3% of total responses respectively.

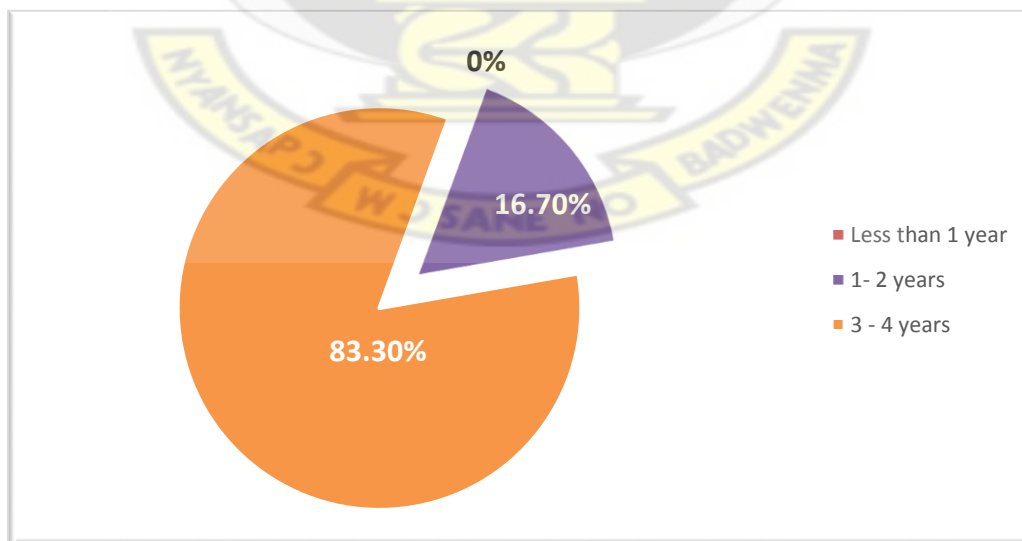


Figure 4.3.1: How long have you been learning dressmaking as a vocation?

Source: Field Data, 2018

4.6 Analysis of Apprentices' View on Teaching and Learning Process

Table 4.6: Available Learning Tools and Equipment

Tools and Equipment	No	Yes
Sewing machine	0(0.0%)	12(100%)
Tape measure	0(0.0%)	12 (100%)
Fabric for demonstration	0(0.0%)	12 (100%)
Brown paper	0(0.0%)	12 (100%)
Tailors chalk	0(0.0%)	12 (100%)
Scissors (cutting out)	0(0.0%)	12 (100%)
Scissors (paper cutting)	0(0.0%)	12 (100%)
Tracing wheel	3(25.0%)	9(75.0%)
Pressing Iron	0(0.0%)	12 (100%)
Ironing Board	0(0.0%)	12 (100%)
Dressmakers Pins	0(0.0%)	12 (100%)
Hand sewing needle	0(0.0%)	12 (100%)
Sewing thread	0(0.0%)	12 (100%)
Thimble	0(0.0%)	12 (100%)
Hem maker	2(16.7%)	10(83.3%)
Hanger	0(0.0%)	12 (100%)
Dressing Mirror	0(0.0%)	12 (100%)

Source: Field Data, 2018

The availability of equipment and tools for apprenticeship training is essential (for the master craftsman to provide). In Table 4.6, at most all the apprentices have the learning tools and equipment available with the exception of 25% respondents who had no tracing wheel and 16.7% who have no hem maker but according to Craft Alliance (2008), there exist some sewing tools that a dressmaker cannot begin without, and they make sewing easier and faster. It was realized from the table that some measuring tools, marking tools, cutting tools, stitching and turning tools, pressing tool and equipment were owned by the apprentices. It was further revealed that the equipment that were presented were very essential for the apprentice to begin work with. The sewing equipment makes each stage of the sewing process accurate, making it more effective and efficient (Gavor *et al.*, 2014).

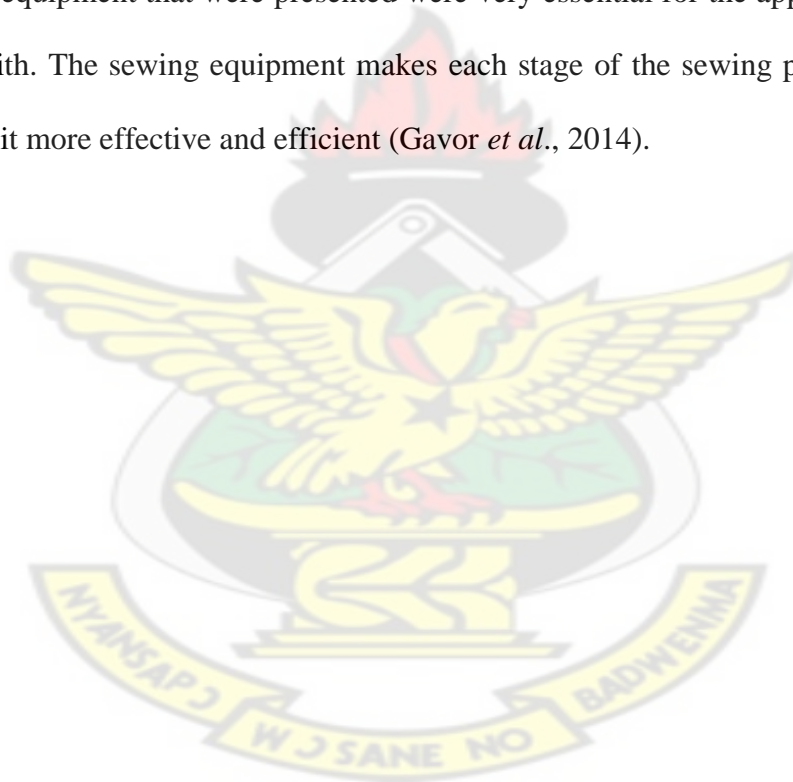


Table 4.7: Apprentices' Views on the Impacts of the use of Design Theory in Dressmaking Production in the New Juaben Municipality

Indicators	To a Great Extent	To Some Extent	Indifferent	To a Small Extent	Not at All
The use of Design theory increases dressmaking opportunities.	8(66.67%)	4(33.33%)	0(0.0%)	0(0.0%)	0(0.0%)
Design theory brings about effectiveness and efficiency in sewing	3(25%)	9(75%)	0(0.0%)	0(0.0%)	0(0.0%)
The use of design theory increases productivity.	10 (83.33%)	2(16.67%)	0(0.0%)	0(0.0%)	0(0.0%)
Design theory helps to increase customer base.	7 (58.33%)	5(41.67%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
The use of Design theory in dressmaking enhances the income levels of my master	11 (91.6%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
The use of design theory leads to timely delivery of services to customers	10 (83.33%)	2(16.67%)	0(0.0%)	0(0.0%)	0(0.0%)

Source: Field Data, 2018

Since it is concerned with training, teaching and learning to improve upon the technical knowhow of the apprentice, its impact on the industry within the municipality is expressed in Table 4.7 relative to the responses of the apprentices.

It was revealed by 66.67% and 33.33% that the use of design theory in dressmaking increases opportunity in dressmaking. From Table 4.8, 25% and 75% of the

respondents stated that the use of design theory brings about efficiency and effectiveness in sewing. 83.3% and 16.7% of the respondents were also of the view that using design theory in dressmaking helps to increase their masters' customer base. It was also revealed that, 91.6% and 8.3% of respondents stated that “to a great extent” and “to some extent” respectively, the use of design theory in dressmaking enhances the income levels of their masters.

Finally, all respondents agreed to the statement that the use of design theory in dressmaking leads to timely delivery of services to customers. This is better explained in Table 4.7 where 83.33% and 16.67% of respondents confirmed this position by stating “to a great extent” and “to some extent” respectively.

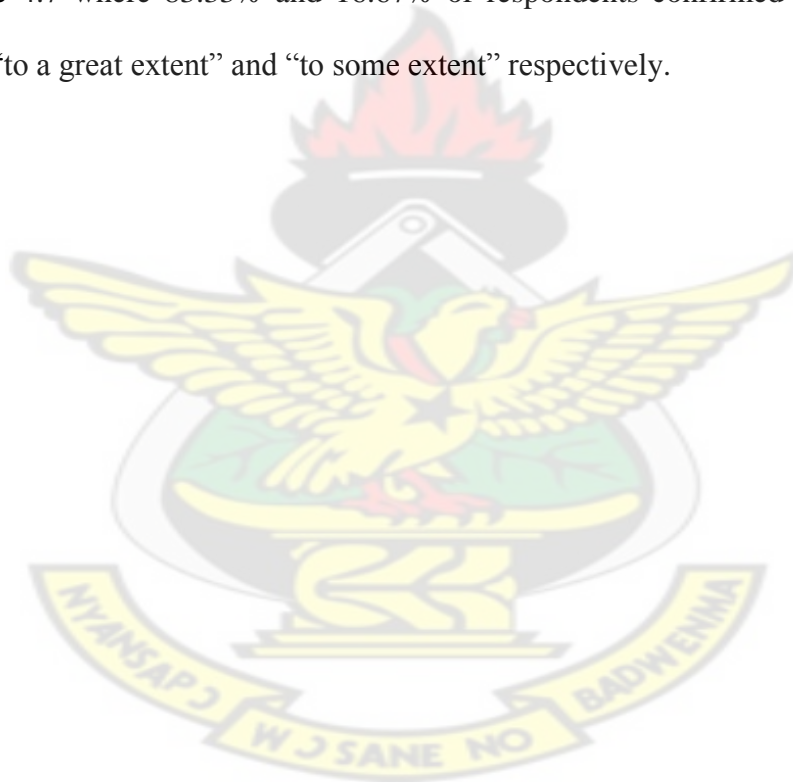


Table 4.8 Apprentices' Responses on Introduction of Design Theory into the Dressmaking Industry within the New Juaben Municipality.

Indicators	To a Great Extent	To Some Extent	Indifferent	To a Small Extent	Not at All
Apprentices' knowledge about the new design theory course or idea for dressmakers.	0(0.0%)	0(0.0%)	2(16.67%)	4(33.33%)	6(50%)
Apprentices readiness for the application of the new design theory course/concept	12(100%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
It is important to introduce design theory programme for Ghana National Dressmakers and Tailors Association (GNDTA)	12(100%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
It is recommendable to suggest to improve the interest of the design theory implementation in the GNDTA	12(100%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)

Source: Field Data, 2018

The responses of the apprentices show clearly their readiness for the introduction of the design theory into the industry within the New Juaben Municipality in accordance with 100% responses from the respondents as shown on Table 4.8.

It can be seen on table that a greater majority of the apprentices have no idea of design theory represented by 50% with 33.33% and 16.67% of respondents stating they have ideas about the design theory to some extent and indifference respectively.

This shows all the respondents representing 100% apprentices show how important it is to introduce the design theory programme for the Ghana National Tailors and Dressmakers Association (GNTDA) as well as suggesting the design theory implementation in the GNTDA so as to affect positively, the dressmaking or sewing

industry in the New Juaben Municipality. This is line with the suggestion made by Chankseliani and Relly (2015) that apprenticeship is a system of acquiring knowledge and occupational skills through a combination of practical work experiences and theoretical component under the mentorship of Master Craftsmen either in the classroom or at home. It is therefore proper to view responses by the apprentices with their enthusiasm to acquire knowledge. The responses show how naive the apprentices were, in relation to design theory and their overwhelming eagerness to receiving the theory and its importance to the sewing industry in the New Juaben Municipality. In affirmation to Lundgre (2016), design theory has the ability to harness the methods and strategies which reinforces creative works. It includes the understanding of significant elements and how their achievement could be made based on the principles. Then they are merged with a purpose to effectively accomplish or rectify problems.

The researcher therefore wishes to state that the introduction and implementation of the design theory within the New Juaben Municipality will largely be patronized and put into major use by the apprentices in the industry within the municipality. This will enable the apprentices or designers to ultimately meet the needs of the industry.

4.9 Interview with the Regional Secretary of Ghana National Dressmakers' and Tailors' Association (GNTDA).

AN INTERVIEW WITH THE GENERAL SECRETARY OF GNTDA

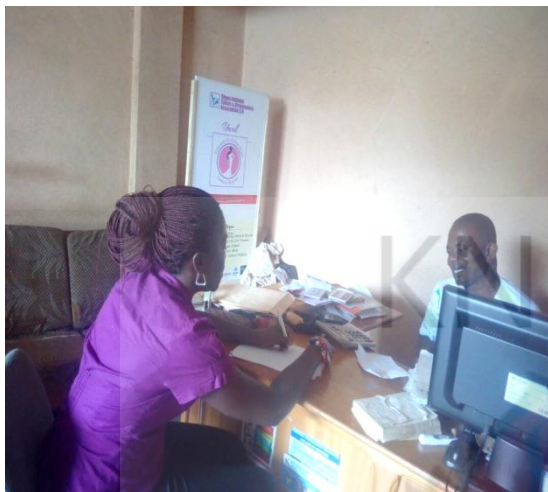


Plate 4.1a: An interview with the Regional Secretary (GNTDA).

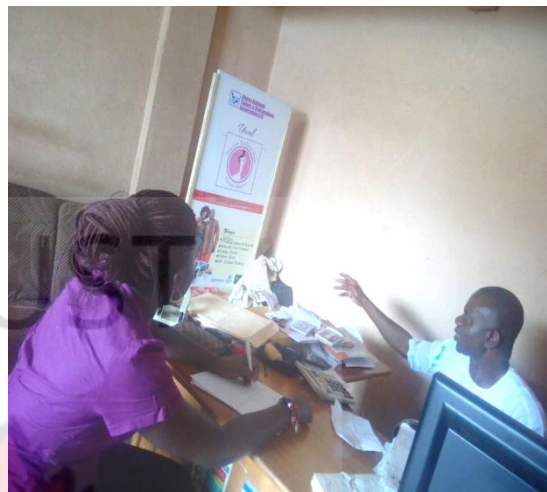


Plate 4.1b: The General Secretary showing upcoming event on the board.

On August 12, 2017, an interview was held between the Koforidua Regional Secretary of Ghana National Association of Dressmakers and Tailors Association which took place in his office (see Plate 4.1a and 4.1b). The interview begun with researcher exchanging pleasantries and subsequently introducing herself and her mission. The whole interview session lasted for about 20 minutes as analyzed below.

4.9.1 Teaching and Learning Process

1. **Researcher:** Do you have a curriculum or syllabus that master craftsmen use as a guide in teaching apprentices in the New Juaben Municipality?

Interviewee (Response): *“Yes”. Though they have a syllabus, they do not use it because they see it as a waste of time.”*

Researcher: Why do they hold that position?

Interviewee: *“But we will try to implement it.”*

This response to the researcher is very interesting, and at the same time shocking and reiterates the importance of the study. Researcher felt with dismay that using a curriculum or syllabus will waste the respondents' time and that such a statement was quite unfortunate and must be discouraged.

2. **Researcher:** What teaching and learning process is used by the master craftsmen in training apprentices?

Interviewee: *"We only use the practical method approach".*

Researcher: What about the discussion and "do as I do" method?

Interviewee (retorts): *"how can these two methods be good for teaching apprentices?"*

The researcher, upon realizing the willingness of the interviewee to understand her question better, explained how the discussion and "do as I do method" can be used.

Interviewee (Response): *"these two methods will also benefit both master craftsmen and apprentices by imparting knowledge together for an improvement."*

3. **Researcher:** What is the required number of years' master craftsmen must use in teaching apprentices?

Interviewee (Response): *"to be honest with you, we do not have a fixed term or period for training. However, it has become a norm that most training periods last between 1 and 3 years. I must quickly add that the length of time for training of an apprentice is dependent on the ability of that apprentice to pick up things quickly and to understand what he or she is being taught."*

This response was one that the researcher found very interesting. The researcher felt that there was the need to have the length of training fixed, so as to formalize the entire contractual agreement process. This response is also in line with those gathered from master craftsmen, zonal leaders and apprentices.

4.9.2 Impact of the use of Design Theory

Researcher: In your opinion what significant impact will the use of design theory in dressmaking have on the performance of master craftsmen?

Interviewee (Response): *“With the little understanding I now have on how the design theory works; I think it will help improve on their service delivery. With that I mean, they will be able to work more.” ...I also think if master craftsmen begin to use design theory, more people will prefer to sew with them and with that they will make more money. Yes, that is what I think will be the significant impact. Thank you”*

4.9.3 Introduction of Design Theory

1. **Researcher:** Do you have any knowledge about what design theory in dressmaking entails?

Interviewee (Response): *“Yes” ... you know something; I am not a tailor by profession but what I know is that design is something that is done by someone to add creativity to what he or she does”.* (He showed examples of a design in a cloth).

The researcher was not surprised at this response (I am not a tailor by profession). The reply is however the true reflection of the level of awareness of the use of design theory by most of the master craftsmen within the dressmaking industry at the New

Juaben Municipality as was revealed in the earlier analysis of the data gathered through questionnaire.

2. **Researcher:** In your opinion, do you think the introduction of design theory into dressmaking is important?

Interviewee (Response): “Yes”, “...though I do not have an in-depth understanding of how design theory works, I believe its introduction will be very critical to the success of master craftsmen and the growth of the industry as a whole”.

This response corroborates the earlier position of other respondents, giving the researcher a firm assurance that it will be indeed very helpful to see to a successful introduction of design theory.

3. **Researcher:** What is your thought on the fact that when design theory is introduced, it will help improve dressmaking in the New Juaben Municipality?

Interviewee (Response): (smiles) “Why not? I sincerely believe that when that is introduced it will enhance their work... I have realized that most master craftsmen really wish they could go and learn some few stuff in the tertiary institutions even though they can sew. For that matter they are willing to learn everything from the academicians concerning fashion”.

4.10 Observation of Activities of Master Craftsmen in a Training Session with Apprentices

Analysis of dressmaking activities demonstrated during the training of apprentices by master craftsmen were expressed in various ways.



Plate 4.2a: The researcher explaining a point to a respondent



Plate 4.2b: The researcher explaining a point to a respondent



Plate 4.3a: A Finished garment sewn by a master craftsman



Plate 4.3b: A finished garment showing the waistline do not meet when the zipper is closed at the



Plate 4.4a: A Master craftsman using the free hand cutting technique



Plate 4.4b: A Master craftsman demonstrating laying and cutting skills to an apprentice



Plate 4. 5: A Master craftsman laying out pattern before cutting out



Plate 4.6a: A Master craftsman teaching an apprentices how to hold the fabric with tuck pins before marking out



Plate 4.6b: A Master craftsman teaching an apprentice marking and cutting skills



Plate 4.6c: An apprentice cutting a fabric

Sewing Techniques



Plate 4.7: An Apprentice sewing.



Plate 4.8: A Master craftsman creating fullness to form gathers in a dress.

Pressing Techniques



Plate 4.9a: A Master craftsman ironing the collar of a shirt to lie flat.



Plate 4. 9b: A Master craftsman ironing to finish a dress.

The researcher makes a point to both master craftsmen on their non-use of tack pins to hold fabrics together while sewing, as shown in (Plate 4.2a and 4.2b).

The finished garment shows that some master craftsmen do incorrect joining of fabric to make a garment. The waistline of the finished garment does not match or correspond to the other side of the seam lone or joint, as the zipper is closed at the back of the dress due to the wrong positioning of the joints on the finished garment in Plates 4.3a and 4.3b. Watching the other master craftsman using a free hand cutting techniques of cutting fabric without the use of the basic tools such as (tape measure, tailor's chalk and pins) as indicated in plate 4.4a. It was also observed that the master craftsman trained apprentices through the demonstration technique on how to cut out fabric as seen in Plate 4.4b. The other master craftsman laying out a dress pattern on a fabric before cutting it out (flat pattern method) as indicated in Plate 4.5. The master

craftsman was teaching the apprentice how marking and cutting skills are applied on a fabric. The apprentices are mostly taught how to use the free hand cutting technique, while some apprentices also try their skills on cutting fabrics as seen in (plate 4.6a and 4.6c).

In Plate 4.7, an apprentice joins and cuts out pieces together to form a full garment as requested by a master craftsman. In Plate 4.8 master craftsman is pulling gathers around the waist of a dress as indicated. To quickly add, Plates 4.9a and 4.9b a master craftsman is ironing the collar of a shirt to lie flat while the other master craftsman is also ironing to give a finishing to a client's garment (skirt).

Garments Showing Inconsistent Designs without the Application of Design Theory

The researcher also realized that other master craftsmen without the knowledge of design theory were excellent in producing garments but were not able to introduce or apply the design theory in the garment. The motifs in the front and back views of the shirt were not well emphasized, due to unplanned construction of design in the dress thus making the motifs imbalanced. See Plates 4.10a-4.14b.



Plate 4.10a: A Front view of a finish garment worn, showing balance



Plate 4.10b: A Back view of a finished garment worn, showing imbalance.



Plate 4.10c: A Front view of finished garment showing imbalance



Plate 4.10d: A Back view of finished garment showing imbalance.



Plate 4.10e: A Master craftsman displaying her finished garment (front view)



Plate 4.10f: A Master craftsman displaying the finished garment (back view)



Plate 4.11a: A Master craftsman displaying her finished garment (front view)



Plate 4.11b: A Master craftsman displaying her finished garment (front view)



Plate 4.12a: The back view of a dress when worn showing irregular movement of motifs (back view).



Plate 4.12b: A Finished garment worn by client with the design turned upside down (front view).



Plate 4.13a: A Finished garment worn, showing balance (front view)



Plate 4.13b: A Finished garment worn, showing imbalance (back and side view).

The researcher realized the master craftsmen without the knowledge of design theory were excellent in producing garment but were not able to introduce or apply the design theory in the garment. The motifs in the front and back views of the shirt were not well emphasized, due to unplanned construction of design in the dress thus making the motifs imbalanced in Plate 4.10a and 4.10b.

Finished garments sewn by master craftsmen with the motifs disorganized in the dress cause the view of the garment to look clumsy and unprofessional. The method of laying out the fabric for the cut out of the front was done to the back of the dress which repeats the disorganization of the patterns and motifs at the back of the dress. These observations can all be seen in Plates 4.10c - 4.10f.

In Plates 4.11a and 4.11b, the themes were not well arranged on both front and back views, due to the choice of style for that particular cloth. The back view of the dress held by the master craftsman show irregular movement of motifs, thus breaking the chain of rhythm in the garment. Again, the back view of a dress worn by a client also show irregular movement of motifs, thus breaking the chain of rhythm and making the full shape of the circular motif jumbled at the back view of the garment as shown in Plate 4.12a. The dress worn by the client in (Plate 4.12b) shows how the design in the fabric were turned upside down, due to the dressmaker's lack of knowledge of design theory

Finally, it is evidence that, design theory was not implemented in the garment as shown in Plate 4.14a and 4.14b thereby making the motif jumbled in both front, back and side view in the garment.

Training Session with Master Craftsmen on the Application of Design Theory



Plate 4.14a: In a process of taking front measurements



Plate 4.14b: In a process of taking back measurements



Plate 4.14c: Trying to work out the position of the design on the fabric to acquire the best result in the cutting of the dress



Plate 4.14d: The researcher is introducing Design Theory to Master craftsmen in the production of dressmaking



Plate 4.14e: The researcher explaining how the fabric is to be cut depending on one's stature.



Plate 4.14f: The researcher is holding the already cut fabric with tuck pin gain to secure the joint of the dress



Plate 4.14g: The researcher is cutting out the exact measurement including allowance



Plate 4.14h The Master craftsman also trying to help in the cutting out



Plate 4.14i: The Front view of a dress showing balance and rhythm.



Plate 4.14j: The Back view of the finished garment representing balance and rhythm.

In the production of dressmaking, after getting the fabric for the garment a dressmaker need to illustrate the design on a sheet of paper or jotter to check whether the design will be fitting and suitable for the cloth provided by the customer. Before then, the researcher begins to take the full body measurement of herself which was used to outline the style on the fabric to be cut out in Plate 4.14a- 4.4b. The measurement taken are; the bust (38), waist (33), hip (46), back width (15), dart (1.5) nape to waist (15), shoulder to waist (17), Armscye depth (8), waist to hip (8) and Sleeve length is (4) including the full length of the dress (43) all in inches. This confirm the view of Bally (2014) that measure is very important, if one get it wrong, the clothes will not fit one correctly. In trying to figure out the position of the designs in the fabric, the researcher laid the fabric on a cutting table or surface for best result as shown in Plate 4.14c. The researcher is then introducing design theory to master

craftsmen in the production of dressmaking using the theoretical method such as (lecture, demonstration, discussion, question and answer) and the practical (demonstration, observation and approach) as perceived in Plate 4.14d. The researcher is explaining how the back view can also be cutout in getting the same design as compare to the front view plate 4.14f. I further explain that this can also depend on one's stature or figure type. This confirms the view of Forster (2014), that figure comes in different types and it is important to know one's figure type and how it affects clothing design. Gavor et al., (2014) buttress that when pattern materials are chosen; the pattern should be small for short and plump figure. In Plate 4.14f, the researcher is holding the already cut fabric well, using the dressmaking or safety pin to hold it firm and match or correspond to the seam lines. This is in line with the assertion made by Foster (2014) that dressmaker's pins are used to hold layers on fabrics together in the course of cutting, and also, layers of fabrics in the course of stitching to prevent the waist line of the back dress not to meet.

The researcher folds the fabric in half, right side facing in, and press with the hand. She then uses her personal measurement and make outline for cutting lines on the fabric with the help of tailor's chalk or board chalk. the researcher from the top corner, measure 5 inches along the top edge, measure down 5 inches and join these two marks with a rounded 'u'; that shows the front neck hole. Working again at the top edge mark half the back measure 5 by 7 inches. Then researcher then place the top of the tape on the top edge of the fabric measure down 7 and mark. Then mark the vertical measurements 17 inches (shoulder to waist) and 25 inches (shoulder to hips). Along the line of the first reference point (9.5 inches) mark a quarter of the bust measurement plus one point five (+1.5 inches) which is the allowance. The researcher make outline of cutting lines on the fabric to be cut with the help of

tailor's chalk or board chalk before cutting out. However, allowances were added to the seams, hems opening and fullness, to the marked design or style on the fabric before cutting thus (1.5 inches). With the help of the master craftsman cutting out on the exact measurement as shown in Plate 4.14g -Plate 4.14h. The exact measurement should also be applied to the lining. After cutting, fuse the neckline facing with fusible. Stitch the seams with a matching thread. Press plain seams open to enhance the seam lines. Prepare sleeve and attach to armscye. Apply finishing, final press and dress is ready. These observations can all be seen in Plates 4.14a-4.14j.

Lastly, the garment produced by the researcher was accurately sewn. This is because the fabric consists of all over patterns which create variety and harmony in the dress. The researcher then agrees with Faimon & Weigand (2004), that a good design is achieved through the balance of unity and variety; the elements need to be alike, so as to perceive them belonging together enough to be interesting. The researcher also made an additional observation to admit that, harmony is achieved when there is an agreement in the differing things used in similar way or when design elements and principles work well together. In agreement with Annor et al. (2011), harmony is a vital principle of design. It is attained through the sensitive balance of variety and unity. It is attained when the choice of design elements is used effectively and connected according to the design principles.

In addition, the front and back view of the dress sewn in Plate 4.14i-4.14j displays a good placement of the motifs been projected in three section of the dress, showing a well-balanced proportions and well distributed weight in arrangement throughout the garment after using the design theory. In agreement with Forster (2014), balance brings overall stability to design. It produces a feeling of rest or lack of movement.

Moreover, balance is achieved in a design when different parts of the design draws equal attention of the viewers. In clothing, a well-balanced design is steady across (left to right) and from top to bottom.

Garments Showing Consistent Designs after the Introduction of Design Theory to Master Craftsmen

The researcher also made another observation to confirm that the designed project or the final manufactured garment made by 1 (1.2%) respondent was produced by a master craftsman who has an idea on design theory and was the only one with a certificate in fashion design. However, the master craftsman was able to introduce or apply the design theory in the process of sewing as she cut, design and join the layers in the dress accurately.



Plate 4.15a: A Finished shirt sewn by a Master craftsman with a good motif found at the centre front indicating symmetrical balance.



Plate 4.15b: This shows a full motif found at the centre back also indicating symmetrical balance



Plate 4.16a: A front view of a skirt with the motif well arranged to match each other, creating harmony and unity.



Plate 4.16b: The back view of a skirt with motif well arranged.



Plate 4.17a: The Front view of a dress showing balance.



Plate 4.17b: The Back view of a finished garment showing balance.



Plate 4.18a: The Front view of a finished garment showing rhythm.



Plate 4.18b: The Back view of a finished garment showing rhythm.



Plate 4.19a: A Finished garment showing balance and harmony

Plate 4.19b: A Finished garment's back and side views showing balance and harmony

The finished garment (tunic) sewn by the master craftsman show a good motif at the center front and back of the dress (shirt), creating a center of interest that draws attention to the focal point of the garment indicating emphasis and symmetrical balance as seen in Plate 4.15a and 4.15b. The researcher then agrees with Annor et al., (2011) that emphasis can also be referred to as the point of focus that is produced in a design when one element is the dominant item or a concentration of interest in a particular part of an area in a design or in an outfit. It is the focal point that attracts the eye first. All other parts of the design are subordinate to the area of emphasis. Without the centre of interest, an outfit looks unplanned and monotonous.

In addition, balance is achieved in a design when different parts of the design draw equal attention to the viewers. Forster (2014) goes further to explain that, in clothing, a well-balanced design is steady across (left to right) and from top to bottom and to be visually pleasing, a garment must be balanced. In conclusion, the researcher can deduce that balance can be the interval spaces of a shape working together.

In Plate 4.16a and 4.16b, the front view of the skirt sewn by the master craftsman with the motifs well arranged to match each other, creates harmony and unity. Harmony is learning to tug all the parts of sewn clothe together to suit an individual. Colour harmony in dressmaking can also be attained using complementary or analogous colours. The study supports the view of Annor et al., (2011) that oneness, and consistency can be referred to as unity. It is produced when all elements in the design work together harmoniously. Unity is also the fundamental principle of design and it is supported by all other principles. One can suggest unity in a design when careful placement of elements are established together. They also serve to attract attention, yet it will be useless without the other elements. On the other hand, the back view of a

skirt with motifs is well positioned as the zipper is closed at the back of the dress in plate 4.16b. The motif well positioned is also creating or showing contrast.

Further to that, the front, side and back view of the dress sewn by a master craftsman in Plate 4.17a and 4.17b shows a good placement of the individual motifs especially in the centre of the front of the dress, showing a well-balanced proportions and well distributed weight in arrangement throughout the garment.

In Plate 4.18a and 4.18b, the front and back views of a finished garment (skirt and blouse) worn was accurate and that depicts rhythm in the garment. Moreover, as the design in the fabric creates a particular rhythm, the master craftsman was able to cut, join and stitch the end together, thereby creating the same rhythm. This is in line with the suggestion made by Forster (2014) that rhythm is an organized movement of elements suggested by the design or dress. It is usually attained through the repetition of the elements. Therefore, there is rhythm in a design when the parts of the design is arranged so that the eye travels effortlessly from one part of the design to another.

It is also observed that, the garment produced by the master craftsman in plate 4.19a - 4.19b are accurately sewn. This is because the fabric consists of all over patterns which create variety and harmony in the dress. The researcher then agrees with Faimon & Weigand (2004), that a good design is achieved through the balance of unity and variety; the elements need to be alike, so as to perceive them belonging together enough to be interesting. The researcher also made an additional observation to admit that, harmony is achieved when there is an agreement in the differing things used in similar way or when design elements and principles work well together. In agreement with Annor et al., (2011), harmony is a vital principle of design. It is attained through the sensitive balance of variety and unity. It is also attained when the

choice of design elements are used effectively and connected according to the design principles.

Nevertheless, harmony gives the feeling that all the parts of an outfit belong together and suit the wearer and the occasion. Garments should not only be harmonized in lines and shapes, but also in textures and colours. Harmony is learning to tug all the parts of your clothing together to suit you. Colour harmony in dressmaking can also be attained using complementary or analogous colours. These observations are all expressed in (Plates 4.15a-4.19b).



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

Having presented and discussed extensively the results obtained from the study in the previous chapter, the current chapter presents the summary, draws conclusions, recommendations and directions for future study based on the findings of the study.

5.1 Summary

The main aim of the study was to analyze the prospects of introducing design theory for master craftsmen in dressmaking within the New-Juaben Municipality. To successfully achieve this aim of the study, three significant specific research objectives were formulated to direct the entire research schedule as follows;

The Main Finding of the Study

In reference to Objective One of the study that sought to identify and document the teaching and learning processes used by master craftsmen in training their apprentices in dressmaking within the New Juaben Municipality. The researcher found that master craftsmen and zonal leaders have jointly been training apprentices between 5-15 years within the New-Juaben Municipality. Skills such as taking of measurement, ironing or pressing, freehand cutting, stitching, hemming, fixing of zippers, fixing buttons and working of buttonholes as well as seam finishing are imparted during the training. Therefore, dress making is seen as an art that requires the accuracy and precision of science where garments are made to fit particular sizes or body types.

The study further revealed that almost all the Master Craftsmen strongly agreed with the view that there is no curriculum or syllabus though there is a sort of training for

apprentices and also the training is solely practical based whereas no such theoretical training is being undertaken in the industry within the municipality. Teaching techniques also do not follow any strict patterns and therefore it is not teacher centered but based upon the discretion of the master craftsmen. In agreement with Chauham (2006), a master craftsman gives good sewing lessons in relation to the desired result he or she requires from the apprentice, though the skills in the training is virtually average. This would require the master craftsmen in the New Juaben Municipality to advance and upgrade their knowledge of the sewing skills and techniques in order to rightfully train the apprentices to be abreast with current modern sewing practices in the industry.

Hence it was revealed that majority of the apprentices have been in apprenticeship between one to three years which is considered enough time to acquire knowledge. With regard to the educational background of the apprentices it was discovered that apprentices with SHS educational background had a high level of knowledge than the others, though they did not form the highest percentage of respondents.

With regards to the researcher, the researcher revealed tools and equipment which are used by the apprentices in their learning process. Some tools which were absent as far as the responses are concerned include Transparent Ruler which is a ruler that the sewer can see through and is usually useful for marking pleats and bias-strips; French curve which is useful for redrawing curved pattern lines, such as armholes and necklines; Dressmaker's Carbon Paper which is a kind of carbon paper that is being used for transferring pattern marking or outline from pattern to fabrics.

The second objectives concentrated on the perceived impacts of the use of design theory on the performance of master craftsmen in dressmaking Industry within the New Juaben Municipality. The researcher realized from the study, various impacts of the use of design theory on the performance of master craftsmen in the New-Juaben Municipality. It is worth noting according to the research that there is a significant impact of design theory on the performance of master craftsmen within the dressmaking industry.

This is seen where master craftsmen were all in agreement that, the use of design theory will help increase their dressmaking opportunities and also design theory brings about effectiveness and efficiency in sewing. It was also revealed that the use of design theory increases productivity. Furthermore, it was uncovered that design theory helps to increase customer base for the master craftsmen. The study also revealed that the use of design theory in dressmaking enhances the income levels of master craftsmen and leads to timely delivery of services to customers.

The study revealed from the perspectives of the apprentices that, there is indeed a perceived impact of the use of design theory on the performance of masters. They were all in agreement that if their masters (master craftsmen), use design theory it will increase dressmaking opportunities for them and also bring about effectiveness and efficiency in and the resultant effect would be high productivity.

For Objectives Three, which examined the significant contribution of the Introduction of Design Theory to the Apprentices in the Dressmaking Industry of the new Juaben Municipality. The study revealed that the introduction of the Design Theory would significantly improve the apprenticeship training and master craftsmen skills for training apprentices in the New Juaben Municipality. The study revealed that almost all the apprentices, master craftsmen and zonal leaders are absent to the knowledge

and acquaintance of the Design Theory. The response from the apprentices were that it is important to introduce design theory programme for Ghana National Tailors and Dressmakers Association (GNTDA) as well as the suggestion to improving the interest of the design theory implementation in the GNTDA so as to affect, the dressmaking or sewing industry in the New Juaben Municipality positively.

The responses show how unfamiliar the apprentices are, in relation to design theory and their overwhelming eagerness to receiving the theory and its importance into the sewing industry in the New Juaben Municipality and in agreement with Lundgre (2016), Design Theory has the ability to harness the methods, and strategies which reinforces creative works. The researcher deduced from the responses that the introduction of the design theory in the New Juaben Municipality would improve knowledge and skills of apprentices, master craftsmen and zonal leaders within the industry which in the long run transform the phases of the industry at large.

In reference with an interview held with the General Secretary of GNTDA, it was revealed that there is the need to implement the Design Theory for GNTDA which include zonal leaders, master craftsmen and apprentices due to its ability to enable them improve on their design styles and meet the specifications of their customer demands as well as the transformation in the sewing industry within the Municipality and the country at large.

5.2 Conclusions

The following conclusions have been drawn based on the findings of the study.

1. The master craftsmen and apprentices articulates that there is no lay down curriculum for their training except that short courses are organised for them.

2. There are inadequate tools and equipment in the teaching and learning processes that master craftsmen used in training their apprentices in dressmaking.
3. Practical lesson is only undertaken by master craftsmen in the teaching and learning processes in training their apprentices in dressmaking.
4. The master craftsmen and apprentices do not have any idea about design theory. It came up as a result of the responses gathered from both master craftsmen and apprentices.

5.3 Recommendations

Based on the findings of the study, the following recommendations are suggested to help in the prospects of introduction of design theory to master craftsmen in dressmaking within the New-Juaben Municipality in Ghana.

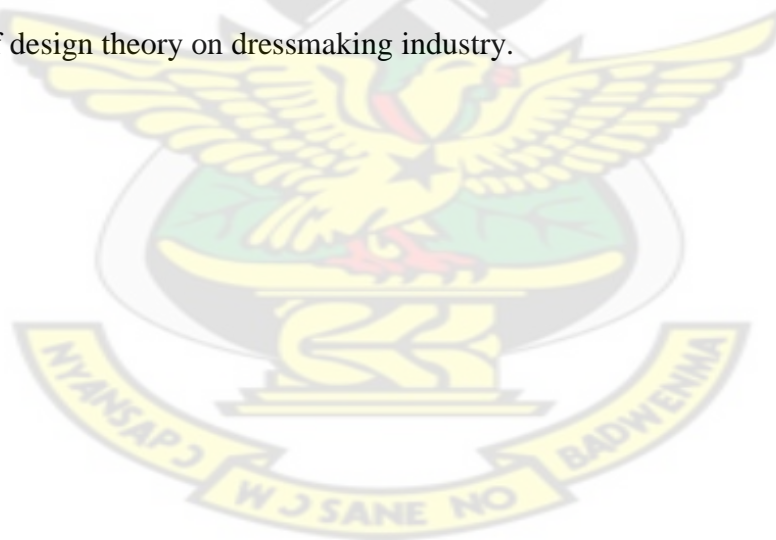
1. GNTDA should introduce curriculum for master craftsmen in training their apprentices in the New-Juaben Municipality to guide them in their teaching and learning processes.
2. Master craftsmen of the dressmaking industry at New-Juaben Municipality should include the provision of adequate tools, materials and equipment to help improve quality teaching and learning processes in the apprenticeship training.
3. The teaching and learning processes should therefore include theoretical phases in as much as the practical is undertaken, so as to give proper

apprenticeship training and expertise since apprenticeship is a system of acquiring knowledge and occupational skills through a combination of practical work experiences and theoretical component.

4. The GNTDA should organize regular workshops for all master craftsmen within the New-Juaben Municipality on the application of design theory so as to keep them abreast with modern techniques in dressmaking.

5.4 Future Research Agendum

As the case is with all types of research, this study could not cover all aspect of master craftsmanship in dressmaking and as such the following recommendation for further study is made. A further study on the subjects would determine the relationship and impact of design theory on dressmaking industry.



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APPENDICES

APPENDIX A

**QUESTIONNAIRE FOR ZONAL LEADERS AND MASTER CRAFTSMEN IN
THE NEW JUABEN MUNICIPALITY**

This questionnaire is designed to solicit your responses on the prospects of introducing design theory for master craftsmen in dressmaking. Kindly respond to the questions as precisely as you can and supply the appropriate answers by ticking or writing. Confidentiality of these responses is highly assured for academic purpose.

PART I

Demographic Data

1. Name of Zone:
2. Gender: Male Female
3. Which age range do you belong?
Less than 30 31- 40 41-50 Over 50
4. Academic Qualification: BECE MSLC WASSCE
Certificate

PART II

Teaching Processes

5. What are the responsibilities of a master craftsman in dressmaking?
.....
.....
6. How long have you been training apprentices in dressmaking as a vocation?
Less than 5yrs 6-10yrs 11-15yrs 15-20yrs Over 20yrs
7. What is the age range for admitting apprentices?
Below 15years 15-20years 21-25years 26-30years

8. What is the minimum entry requirement for the apprentice?

9. What are the contractual obligations for apprenticeship?

Financial commitment.....

Tools needed

Crate of Mineral or Malt

Any other (specify)

10. What is the duration of apprenticeship?

1yr [] 2 years [] 3years [] 4years [] other (specify) ...

11. How many hours are allocated for teaching dressmaking (sewing) in a week?

12. What is the number one role in your dressmaking (sewing) shop?

.....

13. How do you get your teaching materials?

14. Please indicate by ticking the teaching materials available in your shop?

Materials and Tools	Available	Not Available
Tape measure		
Fabric for demonstration		
Brown paper		
Tailors chalk		
Scissors		
Tracing wheel		
Pinking Shears		
Pressing Iron		
Ironing Board		
Dressmakers Pins		
Sewing Machine		
Sewing thread		
Thimble		
Hanger		
Dressing Mirror		

15. Do you have the skills in teaching practical lessons? Yes [] No []

16. If yes, which of the following skills do you use? Please tick [✓]

Taking of Measurement	
Ironing/Pressing	
Freehand cutting	
Stitching	
Hemming	
Fixing of Zippers	
Fixing buttons and working of Buttonholes	
Seam finishing	

17. Please tick (✓) where appropriate in the box that best explains your opinion.

Strongly Agree (1), Agree (2), Disagree (3), Strongly Disagree (4)

	1	2	3	4
GNTDA have curriculum or syllabus for training.				
Curriculum or syllabus covers both theory and practical.				
Practical lessons are taught.				
Theoretical lessons are taught.				
Practical lessons are taught more than theoretical lessons.				
Master craftsmen vary their teaching techniques				
Practical lessons are handled with the appropriate technique (Demonstration, Collaboration, practical)				
Teaching technique is teacher-centered				
Involve Apprentices in the teaching learning process				
Apprentices have special skills they go through during their training				
Often test apprentice to find out their defects				
Impact	1	2	3	4
The use of design theory increases dressmaking opportunities for Master craftsmen				
Design theory brings about effectiveness and efficiency in sewing				
The use of design theory increases productivity				
Design theory helps to increase customer base for the master craftsmen				
The use of design theory in dressmaking enhances the income levels of master craftsmen				
The use of design theory leads to timely delivery of services to customers				

PART IV

Introduction of Design Theory

18. Master craftsman's awareness of the Design Theory Yes [] No []
19. Is it important to introduce Design Theory programme for Ghana National Association of dressmakers and tailors Association GNTDA? Yes [] No []
20. Master craftsman's readiness for the application of the new Design Theory course or programme. Ever ready [] Ready [] Not ready []
21. Master craftsman's perception about Design Theory course for dressmaker.

.....
.....

Thank you very much for your cooperation

Shine A. Asimah (Researcher)

KNUST



APPENDIX B

QUESTIONNAIRE FOR DRESSMAKERS' APPRENTICES IN THE NEW JUABEN MUNICIPALITY

This questionnaire is designed to solicit your responses on the prospects of introducing design theory for master craftsmen in dressmaking. Kindly respond to the questions as precisely as you can and supply the appropriate answers by ticking or writing. Confidentiality of these responses is highly assured for academic purpose.

PART I

Demographic Characteristics Data

1. Name of Zone:
2. Gender: Male Female
3. Which age range do you belong? Less than 15 16-20 21-30
4. Academic Qualification: BECE WACE WASSCE Certificate

PART II

Learning Process

5. What were you doing before you joined the dressmaking vocation?
.....
6. When did you start learning dressmaking (sewing)?
Primary JHS SHS Tertiary Other
(specify).....
7. How many years did you sign in for learning this vocation/profession?
Less than a year 1-2 years 3-4 years 4-5 years
8. How long have you been learning dressmaking as a vocation?
.....
Less than a year 1-2 years 3-4 years 4-5 years
9. What is your knowledge level on dressmaking?
High Average Low Very Low

10. Please indicate by ticking [√] the learning tools and equipment available in your shop. You can tick as many as possible.

Materials and Tools	Available
Sewing machine	
Tape measure	
Fabric for demonstration	
Brown paper	
Tailors chalk	
Scissors (cutting out)	
Scissors (paper cutting)	
Tracing wheel	
Pressing Iron	
Ironing Board	
Dressmakers Pins	
Hand sewing needle	
Sewing thread	
Thimble	
Hem maker	
Hanger	
Dressing Mirror	

11. Please, tick [√] on the scale given that best describes the degree at which the Master craftsman is competent in handling the Apprenticeship training.

to a great extent =4, to some extent =3, to a little extent =2, not at all =1

Degree at which the Master craftsman is competent in handling the Apprenticeship training	4	3	2	1
Apprentices have curriculum or syllabus for training				
Curriculum or syllabus covers both theory and practical lessons during training.				
Master craftsman has in-depth knowledge in dressmaking.				
Master craftsman has the skills to teach practical lessons for training.				
Degree at which the Master craftsman is competent in handling the Apprenticeship training	4	3	2	1
Master craftsman possesses both occupational and professional expertise.				
Master craftsman can teach practical lessons well during the training.				
Master craftsman can teach theoretical lessons during the training.				
Master craftsman can teach both practical lessons and theoretical lessons.				
Master craftsman can teach Practical lessons more than theoretical lessons.				
Different teaching and learning techniques are employed by Master craftsman				
Master craftsman varies teaching and learning techniques				

Master craftsman involves Apprentices in the teaching and learning process				
Master craftsman can use the tools and equipment effectively for practical demonstration				
Master craftsman supports teaching with materials (TLM) that are used in training delivery				
Teaching technique is teacher-centered				
Apprentices have special skills they go through during their training				
Master craftsman teaches the skills in practical lesson				
Master craftsman encourages apprentices				
Master craftsman often tests apprentices to find out their defects				
Apprentices go through a process in the dressmaking production.				
Impact	4	3	2	1
The use of design theory increases dressmaking opportunities				
Design theory brings about effectiveness and efficiency in sewing				
The use of design theory increases productivity				
Design theory helps to increase customer base				
The use of design theory in dressmaking enhances the income levels of my master				
Impact	4	3	2	1
The use of design theory leads to timely delivery of services to customers				
Apprentices are aware of Design Theory				
Apprentice's perception about this new design theory course or idea for dressmakers.				
Apprentices readiness for the application of this new design theory course/concept				
It is important to introduce design theory programme for Ghana National Dressmakers and Tailors Association (GNTDA)				
It is recommendable to suggest to improve the interest of the design theory implementation in the GNTDA				

Thank you very much for your cooperation

Shine A. Asimah (Researcher)

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APPENDIX C
INTERVIEW GUIDE FOR REGIONAL SECRETARY

Teaching and Learning Processes

1. Do you have a curriculum or syllabus that master craftsmen use as a guide in teaching apprentices in the New Juaben Municipality?
2. What teaching and learning process are used by master craftsmen in training apprentices?
3. What is the required number of years a master craftsman must use to teach apprentices?

Impact of the use of Design Theory

4. What significant impact in your opinion will the use of design theory in dressmaking have on the performance of master craftsmen?

Introduction of Design Theory

5. Do you have any knowledge about what design theory in dressmaking entails?
6. In your opinion, do you think the introduction of Design Theory in dressmaking is important?
7. What is your thought on the fact that when design theory is introduced, it will help improve dressmaking the in the New Juaben Municipality?

Thank you very much for your cooperation

Shine A. Asimah (Researcher)

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APPENDIX D

OBSERVATION GUIDE / CHECK LIST FOR TEACHING AND LEARNING TRAINING IN APPRENTICES

1. Name of the Shop (training Center)
2. Training Environment (indoor or outdoor)
3. Name of the Instructor
4. Qualification
5. Teaching and learning Method/Technique(s) employed (lecturing, demonstrating, collaboration, practical)
6. How practical lessons are handled (Small groups, large groups, Individual groups)
7. Training resources (TLMs) for the Training.
8. Sources of Tools and Equipment.
9. Tools and Equipment available.
 - a) Measuring Tools/Devices (hem marker, meter rules or yardsticks, tape measures, long and short ruler, seam or sewing gauges)
 - b) Marking Tools (dressmaker's carbon, tailor's chalk, tailor's pencil, tracing wheel)
 - c) Cutting Tools (scissors and shears, awl, trimming scissors, seam or stitch ripper, button hole scissors, rotary cutter, stiletto, thread clipper)
 - d) Stitching Equipment (needle threader, pin cushion, magnet, bodkin, plastic point turner)
 - e) Pressing Tool and Equipment (pressing iron, press cloth, ironing board, sleeve board, point pressor, pounding block/beater, needle board, seam /sleeve roll, pressing cushions, pressing mitt, pressing ham/tailors ham, clothes brush)
10. Equipment Available
 - a) Sewing machine/Hand Sewing Machine/ Knitting Machine
 - b) Fitting Equipment (dressmaker's Pin, dressing mirror, dress form)
 - c) Storage Equipment (cupboard/ wardrobe, hanger and racks)
11. The use of Tools and Equipment (poor, satisfactory, good, very good, excellent)

Thank you very much for your cooperation

Shine A. Asimah (Researcher)

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