

UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

**THE EFFECTIVE USE OF ELEMENTS AND PRINCIPLES OF DESIGN IN
GARMENTS CONSTRUCTION AMONG DRESSMAKERS AND TAILORS IN
THE WA MUNICIPALITY**



DECEMBER, 2018

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**PROJECT SUBMITTED TO THE COLLEGE OF TECHNOLOGY EDUCATION,
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REQUIREMENTS FOR THE AWARD OF MASTER OF TECHNOLOGY**

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DECLARATION

STUDENT'S DECLARATION

I **CLAUDIA KYIILEYANG VIIRU** declare that, this dissertation is the result of my own original research and except for the references from other people's work which have been cited and acknowledged accordingly, and that no part of it has been presented for another award of degree in this university or elsewhere.

Signature: Date:

SUPERVISOR'S DECLARATION

I declare that, the preparation of this dissertation was supervised in accordance with the guidance and supervision of project work laid down by the University of Education, Winneba.

Signature: Date:

NAME:

ACKNOWLEDGEMENT

My first appreciation goes to the good lord for seeing me through the educational ladder. I wish to express my profound gratitude and appreciation to my supervisor Dr. Josephine Ntiri for her guidance and support throughout my work. Indeed, she has offered me the most useful suggestion and advice which have enabled me to successfully complete this dissertation. My sincere thank also goes to all my lecturers in the Fashion Design and Textiles Education Department, my colleagues, family and friends who have assisted me in diverse ways. I say; thank you for your support and encouragement.



DEDICATION

The work is dedicated to my parent, sister and brothers, beloved children and Mr. Gordon for their support.



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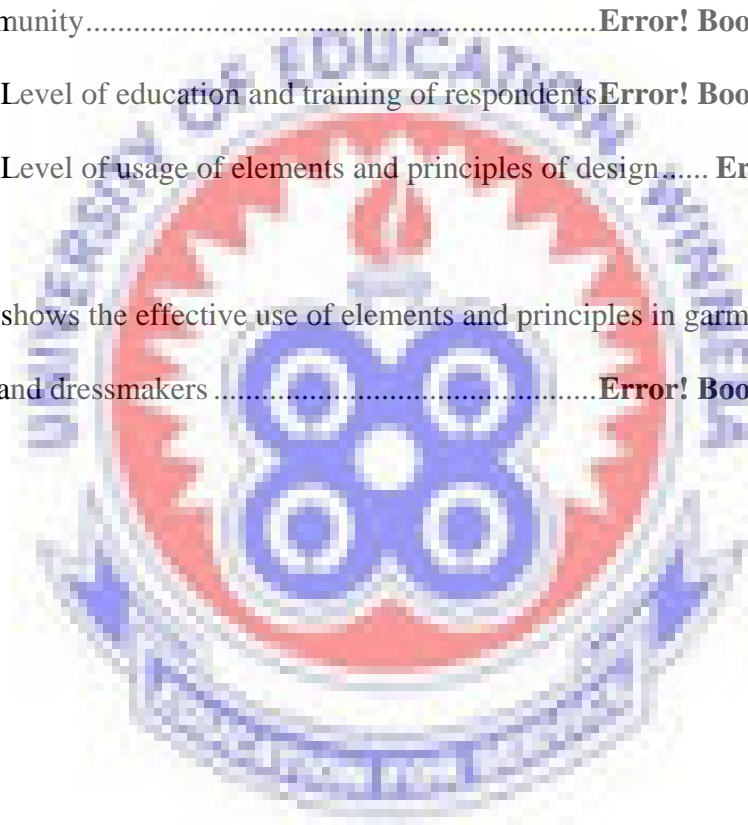
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ABSTRACT

Throughout the world, fashion design is considered as the art and application of various designs or natural beauty to clothing and other accessories necessary for human dressing. Products of Fashion & Design are influenced by cultural and social opportunities and as such vary from place to place and from time to time. The elements and principles of design are important components of every design work and as such often discussed in almost every beginning design course with basic terminology for understanding the concepts of design. In Ghana, especially the Wa municipality, tailors and dressmakers lack the requires skills and knowledge in basic elements and principles of design and one could easily notice that most of the dresses constructed by the tailors and dressmakers are out the use of basic elements and principles of designs as shape, space, lines, form, colour, value, and texture. Consequently, the current study to investigate how effective use of elements and principles influences garment development in the Wa municipality using mixed method which combined both qualitative and quantitative techniques with sample of 100 respondents (Dressmakers and Tailors). The findings showed that majority of the dressmakers and tailors in the Wa municipality lack knowledge on the elements and principle of design which have affected their effective use. The study therefore concluded that the ineffective use of elements and principles of design has negatively affected garment construction. The study therefore recommends that government together with respective associations should institute courses or programmes capable of enhancing the knowledge of tailors and dressmakers for better products.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Throughout the world, fashion design is considered as the art and application of various designs or natural beauty to clothing and other accessories necessary for human dressing (Kennedy, 2015; Watkins, 2011). The products from the fashion and design industry are influenced by cultural and social opportunities thus vary from place to place and from time to time. Fashion designers work in a number of ways in designing clothes and accessories such as dresses, shirts, trousers, bracelets and necklace for everyday life activities as well as for occasions. Though a lot of the time is required to bring a garment onto the market, designers are required to always anticipate changing in consumer tastes and preferences. Consequently, they must be innovative enough to meet current demands and fashion trends (Watson, 2003).

Fashion has been established as a social phenomenon common to many fields of human activity and thinking and has always been a reflection of our society (Obinnim, 2015). It has over the years transformed the image of individuals and groups and has been instrumental in helping individuals and groups express their identity or even make a social statement in a wider sense. As argued by (Obinnim, 2015), fashion has been used to portray the spirit of many generations. The fashion field has thrown a diverse set of people together to transform a creative vision into something tangible and profitable.

Designers create original garments by appropriately using the components of design such that the outcome follows established fashion trends. A design is seen in two folds, thus a process and a product.

As a process, design involves planning, organizing to meet a goal, being carried out to meet a particular purpose and as a product, it is an end result, an intended arrangement that is the outcome of that process or plan (Rajesh, 2009). The arrangements are done by using the elements and principles of design to create a visual image. Kothari (2004) reiterates that the elements and principles of design are important components of every design work and as such often discussed in almost every beginning design course with basic terminology for understanding the concepts of design. Davis (2003) explained elements and principles as having distinct roles, though he sees the two as tools used to create desired visual effects. Davis (2003) relates the elements to ingredients and the principles as strategies to organizing the elements so as to hold interest and command attention. These are also employed in other creative medium such as architecture, music, film, theatre, and writing. They also have a base deep in humanity, affecting values, attitudes, cultures and ethnicities.

According to Anitha (2005), understanding how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing. Construction of garments should be designed considering three key characteristics: structure, function and decoration. It should be structurally appealing and appropriate for the customers need.

Functionally, it should give the added value or function that the garment is expected to perform and decoratively, it provides a psychological feeling of well-being through beauty. Ever since people began to wear clothes, their choices as what to wear have changed considerably with time and this has attracted the attention of many people to field of fashion.

Theoretically, fashion has suddenly become an academic field of contradictions particularly in areas like creative and technical as well as art and profit (Obinnim and AfiPongo, 2015). It has widely been recognized that fashion is undoubtedly an economic venture, a powerful way to convey identity, politics, status, and personality as well as an industry capable of depicting culture. Stone (2013) explains that a critical analysis of the history of fashion in its symbolic, creative and coercive dimensions revealed how it (fashion) has been central in the construction of national identities and the remapping of the world economy. To emphasise on the significance of fashion, Stone (2013) further stated that fashion is a strong economic force in recent times and to a larger extent, being the determinant of what people buy. This recognition goes to confirm the need for this research.

In recent times, Kozar and Connell (2014) indicated that there are concerns regarding fashion designers and their professional development relative to the production of clothing. To make fashion fulfils the expectation of people, Black and Cloud (2009) observed that there is the need for the fashion design industry to advocate for the enhancement and improvement of design and creative skills of tailors and dressmakers.

In dressmaking, the tailor or dressmaker needs to consider the designing of clothes base on the intended purpose of the costumer. Obinnim and Afipongo (2015) in their study revealed that tailors and dressmakers in the Volta region of Ghana lack the requires skills and knowledge in basic elements and principles of design since most dresses are constructed out the use of these elements and principles such as shape, space, lines, form, colour, value, and texture. It is very important to indicate that designing is of the most vital aspect of dressmaking and as such, one cannot make an aesthetically pleasing garment without the

knowledge and understanding of the elements and principles of design, hence the need for a research that can assess the knowledge and skills of dressmakers and tailor.

In the Upper West Region of Ghana specifically Wa municipality, there are several dressmakers who sew dresses for the residents both male and female. However, one can easily notice that most of the dresses sew lack the effective and efficient use of the elements and principles of design, the fashion design shops in the Wa municipality gives the dressmakers and tailors the opportunity to bring out their innovative capabilities through their products. It also offers them the chance to be responsible for others, determine how they look, what they wear or should wear to a particular occasion at a particular point in time through its elements and principles.

1.2 Statement of the Problem

In most cases particularly in less developed areas, dressmakers and tailors construct garment for customers paying less attention on established standards (Obinnim & AfiPongo, 2013; Watson 2003; Anitha, 2005; Kawamura, 2005). For instance, Gilmour & Sarah, (1999), researched into the formation and functions of colour and indicated that, colour is the major deciding factor and enables one to express them-selves, to affect the feeling. They also argued that colour reveal the personality of the wearer and has the power to thrill and shock, irritate or soothe, attract or repel. However, Gilmour & Sarah, (1999) observed that most fashion designers do not pay the needed attention to colour which has affected the fashion industry in developing countries.

Also, Obinnim and AfiPongo (2015) researched into the appropriate use of elements and principles of design in Garment Construction by dressmakers and tailors in the Ho municipality of Ghana and their found that most dressmaker and tailors in the municipality

do not have much understanding of the use of elements and principles of design and its application in creating aesthetically appealing garment designs. Also in a study, Watson, (2003) observed that the tastes and preferences of consumers is fast changing and as such, fashion designers must be innovative enough to meet current demands and fashion trends. However, Watson noted that most fashion designers have failed to live up to expectations. In most of these studies, it is argued that most dressmakers and tailors in rural areas often concentrate on only the measurements just for the clothes to fit the consumer as most of them are deficient in the combination and capable of using the elements and principles of design in construction (Obinnim and AfiPongo, 2015). In the Wa municipality for instance, it could be noticed that some dresses produced by dressmakers turn to either over-elaborate or misuse the elements and principles of design, thus compromising the beauty of the products of the industry in the Wa municipality and beyond. It is with respect to the above situation in literature and the happenings in the Wa municipality that the current study assessed the effective use of elements and principles by tailors and dressmakers in garment construction in the Wa Municipality of the Upper West Region of Ghana.

1.3 Objectives of the Study

The research general objective is to investigate how effective use of elements and principles influences garment development in the Wa municipality.

1.3.1 Specific Objectives

- To find out how tailors and dressmakers understand the use of elements and principles in garment construction in the Wa municipality.
- To examine the extent to which tailors and dressmakers use elements and principles in the construction of garments in Wa municipality.

- To assess the constraints associated with the use of elements and principles in garment construction among dressmakers in the Wa municipality.

1.4 Research Questions

- How do tailors and dressmakers understand the use of elements and principles in garment construction in the Wa municipality?
- To what extent does tailors and dressmakers use elements and principles in the construction of garments in Wa municipality?
- What are the constraints associated with the use of elements and principles in garment construction among dressmakers in the Wa municipality?

1.5 Significance of the Study

In the Wa municipality, the dresses produced by dressmakers and tailors are able to fit the intended consumers even though their construction are not often based on practical elements and principles of design. Knowingly or unknowingly, almost all the dressmakers and tailors in the Wa municipality has taken the trend of not taking into consideration the significance of making appropriate use of the elements and principles of design in their garment construction. Consequently, one can state categorically that if care is not taken the fashion or dressmaking industry in the Wa municipality would lose its value for lack of effective use of elements and principles of designing.

Fundamentally, the study would provide a response to the numerous concerns of the general public with regards to the nature, style and quality of clothing produced by dressmakers and tailors. The study is significant because it will contribute knowledge on the use of basic elements and principles of design among dressmakers and tailors to the little theoretical work that has been done so far. The study is expected to provide full

database of information on elements and principles of design, how dressmakers and tailors are applying them to the construction of garments as well as the challenges confronting dressmakers and tailors in their attempt to strictly follow the established elements and principles of design. It would further serve as a basis for future research works, policy formulations and direction for fashion industry players who would like to control greater share of the market in the near future.

1.6 Scope of the Study

The study covers two main dimensional areas as its scope. That is the theoretical scope and geographical scope. The theoretical scope covers the works conducted by scholars and institutions. The study theoretically covered literature on fashion and design industry, the activities of dressmakers and tailors focusing on the application of elements and principles of design established in theory. Geographically, the study covers the activities of dressmakers and tailors in the Wa municipality in the Upper West Region of Ghana.

1.7 Limitations of the Study

Series of problems were encountered in the course of the study which includes, high cost and risk associated with travelling, which restricted the research to mainly urban selected areas of Wa Municipality for data collection. Retrieving questionnaires from respondents were really frustrating, since the researcher had to personally follow up on some occasions two or more times before questionnaires were completed and submitted.

1.8 Organisation of the Study

The project is divided into five chapters, Chapter One introduces the study, which comprises the background, problem statement, objectives of the study, research questions,

scope of the study, significance of the study, and organization of the study. Chapter Two covers the literature review which is literature made up of theories, concepts and empirical reviews on fashion design. Chapter Three deals with the methodology of the study which comprises research design, target population, sampling technique, sample size, instruments for data collection and analysis. Moreover, Chapter Four includes data analysis presentation, results and discussion of findings of the study. Finally, Chapter Five consists of summary, conclusions, recommendations, limitations and further study.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines existing literature on the effective use of elements and principles of design in garments construction among dressmakers and tailors definition of terms etc. It further examines the concept elements and principles in fashion industries in relation to socio-economic development. The chapter further reviews research works on the design processes and new themes of thinking in the fashion industries, uses of elements and principles of design and finally look at the constraints associated with the use of elements and principles of design.

2.2 Historical Overview of Fashion and Design

According to Baker (1992), the new century promised many changes and improvements, but at first, fashion remained much the same as it had been at the end of the nineteenth century. Styles for men, women, and children were extremely restrictive. For fashionable women at the turn of the century, the ideal body had an ample bosom, tiny waist, and large hips. Known as the hourglass or S' bend (because it followed the curves of a letter "S"), this silhouette was achieved by wearing a rigid, boned corset. Helped by their maids, fashionable individuals usually changed clothes several times a day, wearing different outfits for morning, afternoon and evening.

Daytime clothes covered the whole body. Whether in dresses or separates, women wore high collars, puffed-out bodices, and full skirts, worn over layers of rustling petticoats. Clothes were generally made by hand and involved enormous amounts of labour. Some

dresses were embroidered with tiny flowers or draped with lace. Bodices or blouses were often (Feldman, 1992).

At work and play women wear the satins, silks, and tulle worn by ladies of leisure were impractical for the growing numbers of independent middle-class women who went out to work. Sensible suits, known as tailor-mades, were aimed at governesses, typists, and store assistants. Made of hard-wearing tweed, which did not show, tailor-mades were also worn by wealthier women for traveling. They were teamed with a blouse which could be changed and washed more often.

In the study of Herald and Bouvier (1992), wearing separates, rather than an all-in-one dress, was popularized in the United States by an illustrated character known as the Gibson Girl. Created by artist Charles Gibson, he represented the new, modern woman and was often shown taking part in activities such as bicycling or playing tennis. It was seen entirely every nook and cranny that businessmen wore black morning coats with pinstriped trousers. Tweed or checked three-piece suits, a matching jacket, vest, and trousers were also worn. All respectable men wore a hat outdoors, such as a derby, trilby, or even a straw boater.

On formal occasions, men still dressed in a top hat and frock coat, as they had in the 1800s. Originally based on a military coat, the frock coat was knee-length, came in at the waist, and was full at the back with pleats, buttons, and vents. It was worn with a vest and checked or pinstriped trousers.

In summer, people wore duster coats, silk or linen overcoats that repelled the dust. Goggles, veiled bonnets, or balaclava style helmets protected the eyes. In winter, travellers had to

cope with mud, wet, and cold. They wore heavy overcoats of tweed, leather, or fur and usually snuggled up under a thick, woollen traveling blanket.

In the year 1830 the sewing machine was invented, the sewing machine was used to make most clothes by the early twentieth century. Seamstresses usually worked extremely long hours for very low wages. Much of this “sweated labour” consisted of poor women who took in piles of sewing and worked from home. Other women and children worked together in factories known as sweatshops for their poor conditions. “Sweated labour” was most common in cities with a high population of poor, desperate immigrants. New York City, for example, became a centre of the garment-making trade. From the 1910s, the trade union movement worked to end sweated labour in the Western world, but the problem continued, as manufacturing moved to poorer parts of the globe.

In the 1920s, clothing reflected women’s changing status, becoming generally less restrictive and more practical. For women, a new, straighter silhouette became fashionable, with less emphasis on the breasts and hips. There was even a revival of the high-waist empire-line dress, originally made popular by the French empress Josephine in the early 1800s. Corsets were no longer so tight and waist-pinching and were worn with long drawers. Women also wore a bust bodice to support the bosom. The brassiere was patented in 1914 by the American Mary Phelps Jacobs. She is said to have constructed her first bra from two handkerchiefs and a length of ribbon (Cally, 1999).

2.3 Elements and Principles of Design

Throughout the world, Fashion and Design is considered as the art and application of various designs or natural beauty to clothing and other accessories necessary for human

dressings. Products of Fashion & design are influenced by cultural and social opportunities thus vary from place to place and from time to time. Fashion designers work in a number of ways in designing clothing and accessories such as ‘Kaba’ wear, various women dresses, shirts, trousers, bracelets and necklace for everyday life activities as well as for occasions. In literature, fashion has been established as a social phenomenon common to many fields of human activity and thinking and has always been a reflection of our society (Obinnim & AfiPongo, 2015). It has over the years transformed the image individuals and groups and has been instrumental in helping individuals and groups express their identity or even make a social statement a wider sense. As argued by Obinnim and AfiPongo, (2015), fashion has been used to portray the spirit of many generations. The fashion field has thrown a diverse set of people together to transform a creative vision into something tangible and profitable. According to Simmel, (1850) “fashion has the power that influences the world and has been and will be, through all the ages, the outward form through which the mind speaks to the universe”. Designers create original garments by appropriately using the components of design such that the outcome follows established fashion trends. A design is seen in two folds, thus a process and a product. As a process, design involves planning, organizing to meet a goal, being carried out to meet a particular purpose and as a product, it is an end result, an intended arrangement that is the outcome of that process or plan (Rajesh, 2009). The arrangements are done by using the elements and principles of design to create a visual image. Kothari (2004) reiterates that the elements and principles of design are important components of every design work and as such often discussed in almost every beginning design course with basic terminology for understanding the concepts of design.

Davis (2003) explained elements and principles as having distinct roles, though he sees the two as tools used to create desired visual effects. He relates the elements to ingredients and the principles as strategies to organizing the elements so as to hold interest and command attention. These are also employed in other creative medium such as architecture, music, film, theatre, and writing. They also have a base deep in humanity, affecting values, attitudes, cultures and ethnicities.

According to Anitha (2005), understanding how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing. Construction of garments should be designed considering three key characteristics: structure, function and decoration. It should be structurally appealing and appropriate for the customers need. Functionally, it should give the added value or function that the garment is expected to perform and decoratively, it provides a psychological feeling of well-being through beauty.

It is important that one knows both the potentials and the limitations of each element for proper usage in a design. Understanding how and why a person responds to the various elements & principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing (Hellen 2000). The principles of design are flexible, as demonstrated by the diversity of styles in which they are seen. Designing principles can be used to create, discuss, and evaluate garment designs, on and off the body.

2.4 Use of Elements of Design in Garment Construction

According to Mee and Sue (1999) the most basic use of elements in garment construction is to create both psychological effects and physical effects which should be carefully balanced for an appropriate appearance. It is observed that the use of elements of shapes of

unequal proportion such as oval or cone can create a visual interest in dress with the unequal proportions emphasizing in that direction. A short midriff yoke in a dress shortens and widens that area. Shapes with diagonal edges such as triangles and trapezoids, and parallelograms provide dynamism in dress but are less stable. Shapes with unequal sides of three dimensional natures is called form, they include Cylinder, cone, pyramid, bell, dome, barrel, box etc. Forms are generally created by combining two or more shapes. A form is a shape that has three dimensions: height, width, and depth.

As texture is the feel, drape and degree of stiffness and softness of the fabric, it also creates a visual effect upon the wearer. In furtherance, the wish to decorate or beautify the human body has been existed from the Stone Age when early man painted his face and his body. Even though the beauty standards have changed, the desire remained constant. The principles of design help in creation, expression in an artistic and pleasing manner. The principles of design as well as the elements such as Colour can be used to express various moods, personality features, and opinion about the wearer, etc. Response to colour is a highly individual matter. Each man, woman and child has a degree of colour sensitivity. Some people are more colour sensitive and react more violently to colours than others. People may actually become physically ill, excited, soothed or depressed by exposure to certain colours (Harold, Carr and Barbara, 1994).

In creating a design, one of the components which interact is the art elements. Art elements like line, texture and shape of the garment play a prominent role in dress design besides creating some visual effects on the physical proportion of the individual. The elements of the design provide a baseline for designing beautiful garments (Bray, 1994). They must be incorporated in a pleasing combination to achieve an appealing look in the garment.

Garment designing involves three main aspects: structure, function and decoration. A garment should be structurally valuable and appropriate as per the customer's need and the current day's fashion. Hence elements of design should be carefully and wisely utilized for achieving the desired effect.

The elements and principles of design are flexible and should be interpreted within the context of current fashion. Elements of design are those components which an apparel designer employs in designing the garments. A design can be defined as an arrangement of lines, shape, colours and texture that create a visual image. The principles of design are the guides that govern how elements are combined. The elements are therefore the raw materials in design that must be combined successfully. The elements are 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. The details may be differentiated by researchers, but included 'point or mark', 'line', 'shape', 'forms', 'space', 'colours', and 'texture' in this research.

2.4.1 The Element of Point or Mark

According to Jindal (1998), Figure 2.1 below point or mark is the smallest and most basic element. Often it is the personal 'handwriting' of the artist that can be natural or learned. These can vary in size, value, regularity or irregularity, and can be used alone or as a unit in a group which forms a line or shape in the image. Marks can be used to form a value or pattern (placed close together forms a darker value, further apart forms a lighter value), or to delineate space (larger means closer, etc.). A good example of the use of marks is the ink drawings of VanGogh. The Impressionist painters used what could be called patches; and the Pointillists, such as Seurat, used the dot.

Even though there is only one point or mark on a white blank page, it can catch our sight. If there are two points, we will make a connection and see a line. If there are three points, it is unavoidable to interpret them as a triangle; the mind supplies the connections.

These are called as grouping, or gestalt. Gestalt is the fundamental tool the designer or artist uses to build a coherent composition.



Plate 2.1: Element of points / marks

Element points / marks

2.4.2 The Element Line

The figure below indicates Line is the distance between two points joined together. It is a chain of dots joined together indicating direction. Line is the simplest and most important of the design elements and is incorporated into the other elements. All lines have directions, length and width. Line is the basic requirement for almost all designs. It provides the visual dimensions of length and width. When lines combine, space is enclosed and forms and shapes are defined (Brown, 1998).

Lines offer a path of vision for the eyes when a person is wearing an object/outfit with lines creating various illusions. The arrangement of lines in clothing design can cause to appear

a person look heavier or thinner than what actually he is. There are many kinds of lines- diagonal, undulating and spiral, dotted, perpendicular, dominating, straight, thick, horizontal, vertical, thin, thick, curved and zig-zag. Each line can create its own effects in dress designing.

Line is a fundamental element of design which establishes the outline of a garment. It is an extremely useful and versatile realistic tool that is made to function in both visual and verbal ways. Line leads the eye in the direction it is going, and divides the area through which it passes, thus providing a breaking point in space. It also defines a shape or a silhouette and conveys a mood or a character. Line can create visual illusions, such as height and width and also makes a figure look thin or thick. Line manipulates space: line divides space, encloses space, organizes space, pushes and pulls it, separates and contours it.

The figure below indicates that line can be used for creating different optical illusions. If used skillfully, these lines on a garment can conceal figure problems or exaggerate them. E.g., horizontal lines emphasize shortness because the eye moves side to side.

There are nine characteristics that each line possesses like path, thickness, evenness, continuity, sharpness, contour, consistency, length and direction. These aspects or characteristics of line give it a powerful role in dress designing. A line is a form with width and length, but no depth. Artists use lines to create edges, the outlines of objects. A line is created by the movement of the artist's pen.

The direction of a line can convey mood. Horizontal lines are calm and quiet, vertical lines suggest more of a potential for movement, while diagonal lines strongly suggest movement and give more of a feeling of vitality to a picture.



Plate 2.2: Well matched lines

Source: personal Shot, (2018)

2.4.3 The Element Shape

The picture below shows that shape is a flat space closed by a line and in clothing, it is defined as a flat, two-dimensional area enclosed by a line. When both ends of a line meet to surround space, the line forms a shape. Shapes have both physical and psychological effects based on the lines surrounding them. Space within the shapes and separating the shapes also has an effect. The word “shape” usually suggests geometric shapes and there are many shapes such as flat ones with equal sides - square, circle, pentagon, hexagon, and octagon; with unequal shapes such as oval, triangle, rectangle, diamond; equal sides; three-dimensional shapes such as sphere and cube. But pure forms are rarely seen in dresses; however, the garment shapes suggest these forms. For example, a flared skirt is visualized as a cone or a pant legs suggests tubular shape (Rajesh, 2009).

Shape is an area that is contained within implied line, or is seen and identified because of color or value changes. Shapes have two dimensions, length and width, and can be

geometric or free-form. Design in painting is basically the planned arrangement of shapes in a work of art. In a picture, the shapes that the artist has placed are considered the positive shapes. The spaces around the shapes are the negative spaces. It is just as important to consider the negative space in a picture as the positive shapes. Wolfe (1989) asserted that forms such as sphere, cone, box, dome etc. can be introduced structurally into garments through incorporation of puff sleeves, skirts, lehanga, and formal gent's suit. Some general guidelines to be followed in introducing the above are there should be harmony between various proportions and with the whole garment. The shape should not be either too concealing or revealing but should help to highlight the desirable features of the wearer. Form describes volume and mass, or the three dimensional aspects of objects that take up space. (Shape is two-dimensional) Forms can and should be viewed from any angles. When you hold a baseball, shoe, or small sculpture, you are aware of their curves, angles, indentations, extensions, and edges of their forms.

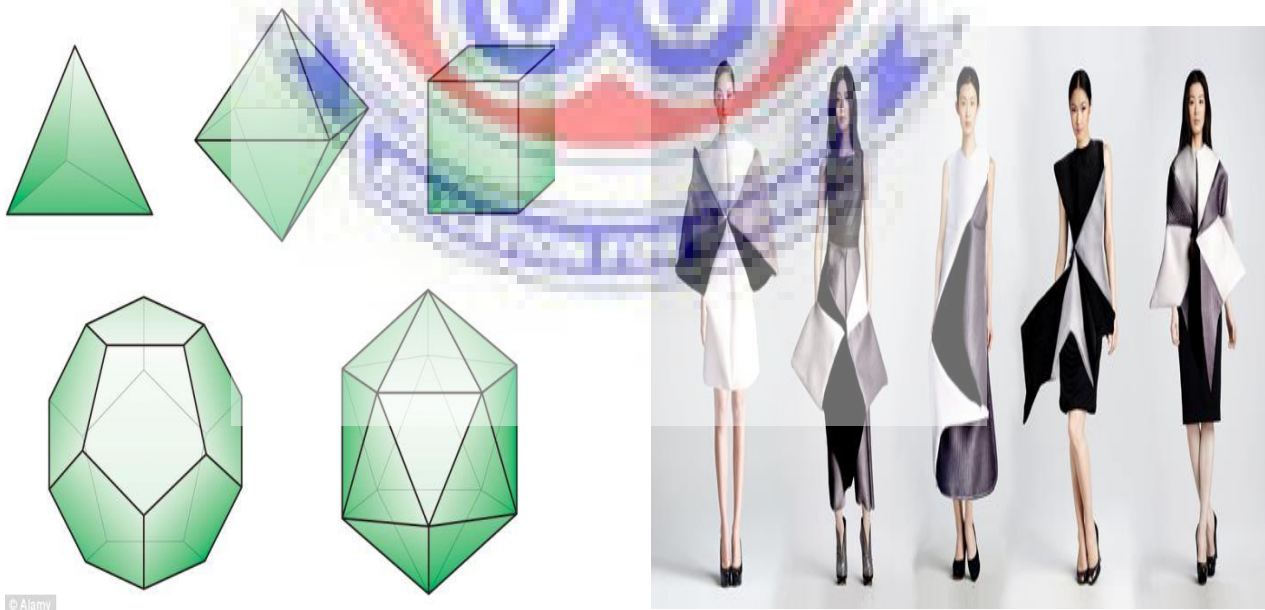


Plate 2. 3: Elements; Shape

2.4.4 The Element Colour

Colour is the visual element. Colour carries aesthetic, visual, and commercial value. The colours present in rainbow are available colours of spectrum called VIBGYOR, i.e., Violet, Indigo, Blue, Green, Yellow, Orange and Red. But there are only three basic colours i.e. Red, Yellow, Blue. By mixing the three basic colours, secondary colours are obtained. Tertiary colours are obtained from secondary colours. When all colours of light are absorbed, it gives black colour whereas if all colours are reflected back from some surface, it gives white colour. Red and yellow makes orange, Yellow and Blue make Green whereas Blue and Red makes Violet colours. Tertiary colours are made by mixing primary and secondary colours in equal colours. A colour can have visual, physical and psychological effect.

As stated by Anitha (2005), the principles of designing, or when we start off with a given design theme that first thing to occur to our minds is the colours and texture of the fabric. Every season or now and then a colour emerges in the fashion scene which is decided by the leading manufacturers, exporters and textile experts of the fashion world. Also while choosing a colour one must be utmost careful as colour creates the first impression and hence can glorify or destroy ones appearance. Even simple silhouette may be enhanced by using effective colour schemes. Colour is the most exciting design element as it is the first thing noticed in a garment attracted by consumers.

Colour is the major deciding factor. Colour is a property of light, a sensation, which occurs when light enters eyes. Colour enables one to express them-selves, to affect the feeling, and also reveal the personality of the wearer. Colour has the power to thrill and shock,

irritate or soothe, attract or repel. As texture is the feel, drape and degree of stiffness and softness of the fabric, it also creates a visual effect upon the wearer. Colour has three properties. The first is hue, which is the name of the colours. The primary hues are yellow, red, and blue. Secondary colours are made by mixing two primaries. Intermediate colours are mixtures of a primary and adjacent secondary colour. The second property of colour is value, which refers to the lightness or darkness of hue. The third property of colour is intensity, which refers to the purity of the hue also called "Chroma".



Source: Personal Shot (2018). Plate 2.4: Element of colour combination

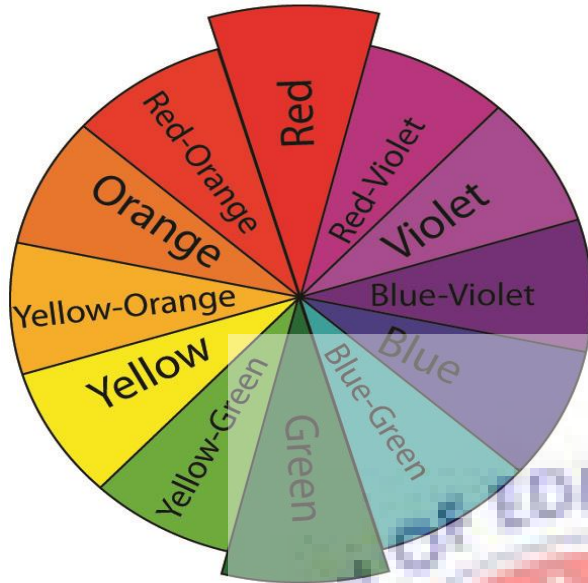


Plate 2.5: The twelve colour wheel

River stone colour wheel

2.4.5 The Element Texture

In view of Black and Cloud (2009), texture is the element of design that describes surface appearance and feel understood by sight as well as by touch. It also means the appearance of the fabric. It is quality of roughness or smoothness, dullness or glossiness, stiffness or softness. Some words to describe the texture of fabrics are: rough, smooth, dull, shiny, firm, crisp, fuzzy, bulky, dull, etc. Texture refers to the surface quality in a work of art. We associate textures with the way that things look or feel. Everything has some type of texture. We describe things as being rough, smooth, silky, shiny, fuzzy and so on. Some things feel just as they appear; this is called real or actual texture. Some things look like they are rough but are actually smooth. Texture that is created to look like something it is not, is called visual or implied texture.

Example texture may be used in a work of art to:

- create visual interest or a focal point in a composition
- to create contrast within a design composition
- to help visually balance a design composition

Texture is defined as tactile quality of a fabric. Texture has the definite physical dimensions of weight, size, bulk and shape. Texture therefore refers to the surface quality, both simulated and actual, of artwork.

Techniques used in painting serve to show texture, i.e. the dry brush technique produces a rough simulated quality and heavy application of pigment with brush or other implement produces a rough actual quality.

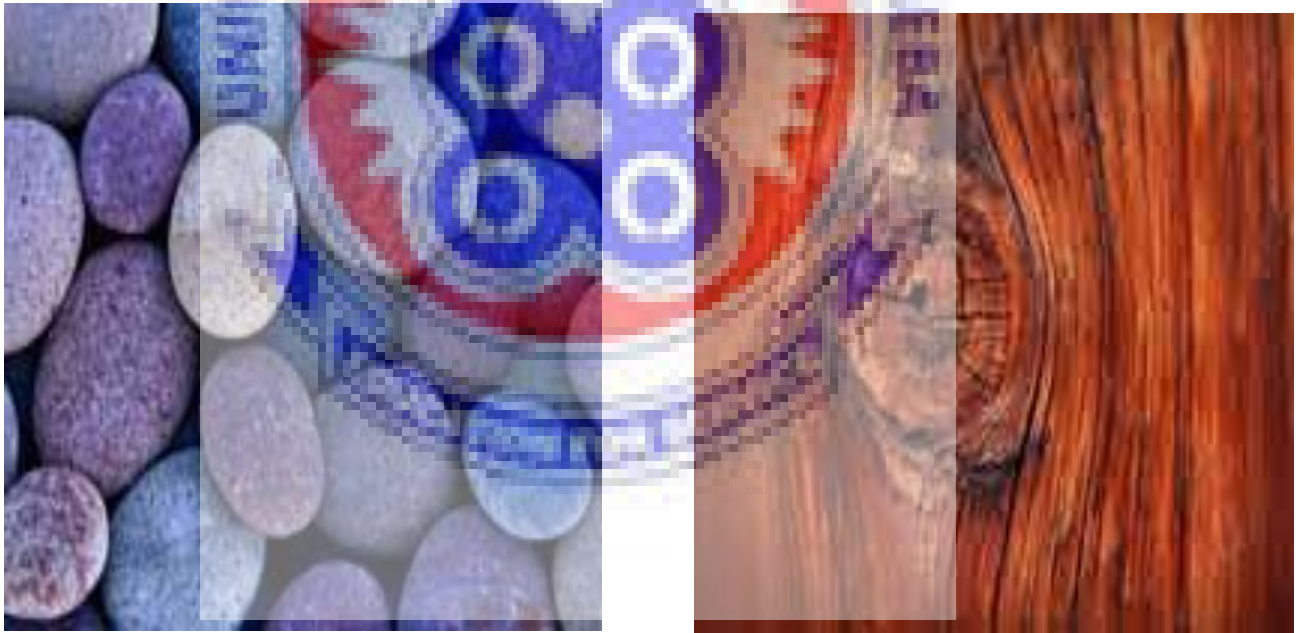






Plate 2.6: The Element: Texture

2.5 Use of Principles of Design

Like the elements, there are different types of principles of design use in garment construction some of which include proportion, balance, perspective, emphasis, variety, harmony, pattern, movement and repetition.

2.5.1 The Principles of Proportion

Proportion is sometimes called scale. Proportion includes the relationship of height, width, depth and surrounding space of each design. When all the parts work well together, the garment is well proportioned. Good proportion refers to pleasing relationship between the sizes of various design details in a fabric between the garments itself (Stone, 2013).

Proportion refers to the relative size and scale of the various elements in a design. The issue is the relationship between objects, or parts, of a whole. This means that it is necessary to discuss proportion in terms of the context or standard used to determine proportions.

2.5.1 The Principle Balance

Balance is a psychological sense of equilibrium. As a design principle, balance places the parts of a visual in an aesthetically pleasing arrangement. In visual images, balance is formal when both sides are symmetrical in terms of arrangement. Balance is informal when sides are not exactly symmetrical, but the resulting image is still balanced. Informal balance is more dynamic than formal balance and normally keeps the learner's attention focused on the visual message (Davis, 1996). There are three main types of balance, horizontal balance, vertical balance, radial balance.

2.5.2 The Principle Perspective

Perspective is created through the arrangement of objects in two-dimensional space to look like they appear in real life. Perspective is a learned meaning of the relationship between

different objects seen in space. For instance, in a question like: Is the dark rectangle in front of a circle, or beside a semi-circle? Perspective adds realism to a visual image.

The size of a rectangle means little until another object gives it the size of a desk, or the size of a building. Perspective can be used to draw the audience into a visual. Perception can be achieved through the use of relative sizes of objects, overlapping objects, and blurring or sharpening objects (Stone, 2013).

2.5.3 The Principle Emphasis

Emphasis is used by artists to create dominance and focus in their work. Artists can emphasize colour, value, shapes, or other art elements to achieve dominance. Various kinds of contrast can be used to emphasize a centre of interest. Emphasis in dress creates a focal point in a design; it is how we bring attention to what is most important. Emphasis is what catches the eye and makes the viewer stop and look at the image. Without emphasis, without getting the viewer to look at the image, communication cannot occur. Emphasis can be created by contrast. An element in contrast with something else is more easily seen and understood; something different attracts the eye. Any of the following elements can be contrasted in emphasis in dress

- Line (a curve in the mid of straight lines)
- Shape (a circle in a field of squares)
- Colour (one red dot on a background of grass and blacks)
- Value (a light or dark area in the middle of its opposite) and
- Texture (rough vs smooth).
- Contrast can also be created by contrasting orientation in space (horizontal, vertical, diagonal)

- Style (a geometric shape in an otherwise naturalistic image)
- It refers to something that stands out and grabs our attention.

Emphasis is also called as highlighting of specific area to make viewers to get the special attention of that area.

For example: if you think that your hand is beautiful you can emphasis it by wearing contrast colour for sleeve or cut inside the sleeve which represents the special design. There are also other ways to represent emphasis addition of embellishment, cut-outs, and ruffles and so on. Use of colour and its placement is another way to create emphasis, making some areas stand out more than others.



Plate 2.7: Showing Emphasis

Source: Kumar (2000).

Wedding gowns also create emphasis, highlighting a particular area. Knowing about emphasis, which can be part of the design itself or emphasis on the body because of the way a garment is designed can help any woman when she is selecting a garment or fashion

accessory. During the special occasion when wearing the dress the emphasis must be there to give satisfaction of wearing. Fashion designers should know about the value of emphasis in the dress before choosing and rock in this fashion trend.

It is appropriate to try different dresses with emphasis in different areas like neck, hip, slit open, sleeve etc. Be the trend setter and know about this aspect of design. (Kumar, 2000).



Plate 2.8: Showing Emphasis

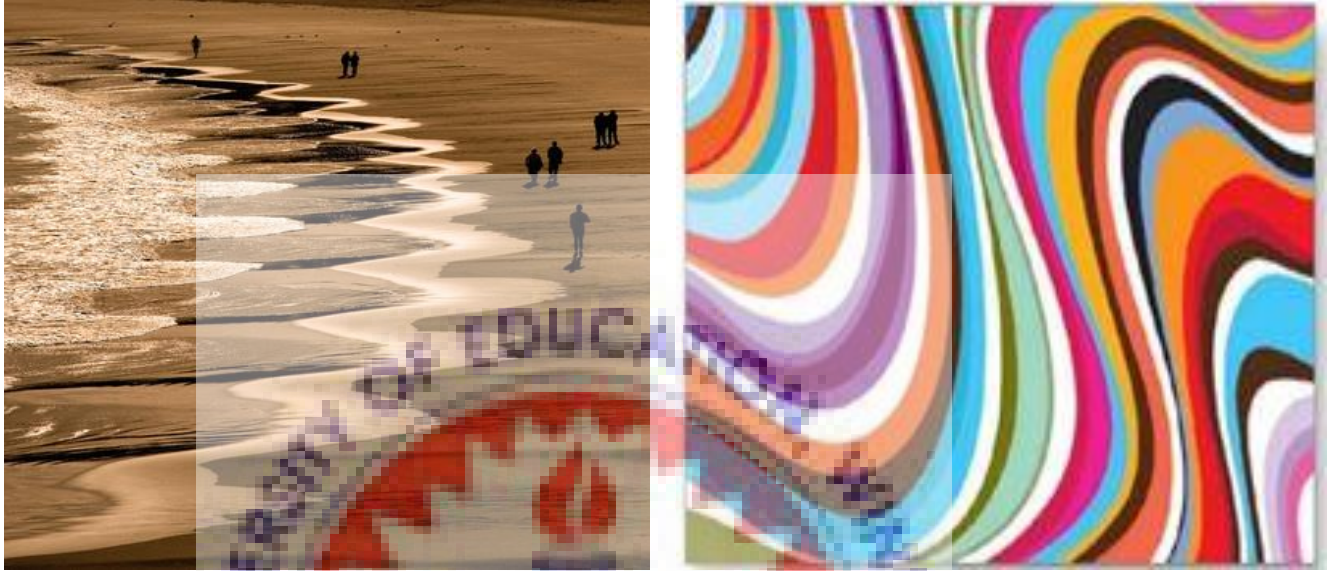
Source: Kumar (2000).

2.5.4 The Principle Movement

The way the artist leads the eye in, around, and through a composition. The path the eye follows. Motion or movement in a visual image occurs when objects seem to be moving in a visual image. Movement in a visual image comes from the kinds of shapes, forms, lines, and curves that are used.

Look at the two images above. The painting by Matisse is full of sweeping circular areas which move your eye around the picture (it is a good example of optical movement). The elements are flowing and circular and give you the impression of a calm quiet rhythm. The

line drawing on the right is more dynamic due to its incomplete nature and the feeling of motion is much more evident.



2.5.5 The Principle Pattern

Pattern uses the art elements in planned or random repetition to enhance surfaces or paintings or sculptures. Patterns often occur in nature, and artists use similar repeated motifs to create pattern in their work. Pattern increases visual excitement by enriching surface interest.

2.5.6 The Principle Repetition

Repetition works with pattern to make the artwork seem active. The repetition of elements of design creates unity within the artwork.

2.5.7 The Principle Rhythm

Rhythm is the repetition of visual movement of the elements-colors, shapes, lines, values, forms, spaces, and textures. Variety is essential to keep rhythms exciting and active, and to avoid monotony. Movement and rhythm work together to create the visual equivalent of a musical beat.

2.5.8 The Principle Variety

Variety provides contrast to harmony and unity. Variety consists of the differences in objects that add interest to a visual image. Variety can be achieved by using opposites or strong contrasts. Changing the size, point of view, and angle of a single object can add variety and interest to a visual image. Breaking a repeating pattern can enliven a visual image.

2.5.9 The Principle Harmony

In the view of Fox (1872) when design elements and principles work together successfully they create harmony. Unity is also called harmony in design. It is a pleasing visual unity, the relationship among all parts within a whole design. When a design has unity, it gives an overall impression, a feeling of belongingness to the composition that attracts and holds the attention of the observer and gives a balanced look to the design.

Harmony in visual design means all parts of the visual image relate to and complement each other. Harmony pulls the pieces of a visual image together. Harmony can be achieved through repetition and rhythm. Repetition reemphasizes visual units, connecting parts and creating an area of attention. Rhythm is the flow depicted in a visual. Rhythm helps direct eye movement. Patterns or shapes can help achieve harmony. By repeating patterns in an interesting arrangement, the overall visual image comes together.

Unity means the harmony of the whole composition. The parts of a composition made to work together as a total visual theme. Unity is the relationship among the elements of a visual that helps all the elements function together. Unity gives a sense of oneness to a visual image. In other words, the words and the images work together to create meaning. Elements of design described here are point, line, shape, form, space, color, and texture and information gathered about various design principles, like the balance, proportion, perspective, emphasis, movement, pattern, repetition, rhythm, variety, harmony, and unity. These elements and principles can be the basic knowledge and analytical frame work for a designer.

2.6 Learning the Use of the Elements and Principles of Design in Garment

Construction

Before a fashion designer can apply or use the elements and principles of Design in garment construct, he/she has to understand the design process. Within the design process, seven steps has been identified by Herald Jacqueline (1992) which are define, research, ideate, prototype, select, implement and learn.

Stage 1; Define Establishing What the Problem is

This is the first stage in any design process and almost always involves generating or receiving a design brief. A design brief presents the client's requirements for a job. These may be verbal or written, simple or complex. A brief contains a specific goal that is to be met by the design but it may also be couched in terms that have varying interpretations.

A brief may be as basic as 'we need a brochure that makes us appeal to 20–30-year-olds' or 'we need a brochure that makes us appear cool and stylish'. As a working relationship develops between a designer and a client over several jobs, a greater understanding of what

key terms mean is obtained. A designer need to interpret the brief and define what words such as 'stylish' and 'cool' mean. This ensures that both parties have shared expectations. This may involve questioning the validity of the brief's elements. For example, a brochure might not be the best way to reach out and appeal to 20–30-year-olds, and perhaps an online campaign would be more effective?

Writing and re-writing a brief Clients have varying experiences of design services. For this reason, the quality of the briefs that they provide will also vary. A brief needs to include anything that will allow the design team to initiate the design process. However, if it is not robust enough, it may need to be rewritten and reworked with the client.

Stage 2; Research Collecting Background Information

Once the brief has been defined and agreed, a designer starts to search for information that can be fed into the creative process at the ideate stage. This research can be either quantitative, with hard statistical numbers about the size and composition of target user groups, or qualitative, with information about what that user group buys or consumes and what their lifestyle is like. It may be pertinent to build a mental model of a typical user in order to enable the design team to obtain a good feel for what would appeal to them. This includes factors such as education, career, holiday destinations, musical tastes, and aspirations and so on.

A primary source of research is the feedback generated during the learning phase of projects previously undertaken with the same or similar clients. Such feedback provides a starting point with regard to what worked and what did not work with a specific target group. Secondary research is the information obtained from general secondary sources such as consumer market research reports. These provide the demographic breakdown and

historic performance of given markets and market segments, and provides a clear view of how a market is structured.

Stage 3; Ideate Creating Potential Solutions

During the ideate stage, the design team draws on the research gathered and the constraints established during the define stage. This information is used to create ideas with which to tackle the design brief. Designers use different methods to ideate. Ideation methods include brainstorming, sketching ideas, adapting a tried-and-tested design that already exists, taking a top-down analytical approach that focuses on the product, service or company or a bottom-up approach that focuses on the customer or user. Each method involves a varying degree of creativity and choosing which method to use will depend on factors such as how much money is available and how original the design needs to be.

At this stage, a design team might also choose to harness one of the multitudes of art and design movements or paradigms. A design brief can be given a modernist, abstract, constructivist or constructivist interpretation, for example. As the ideate stage progresses, it will become clear whether there are any misunderstandings or shortcomings in the definition stage and whether sufficient levels of research were carried out. Feedback can be sought throughout the design process to clarify points of doubt with the client and to address aspects that were ill-defined during the definition stage.

Stage 4; Prototype Resolving Solutions

The ideate stage generates a variety of potential solutions to the design brief. Prior to selection, it may be necessary to further work up the most promising of these solutions.

This will allow particular aspects to be tested and will provide a better basis for comparison at the selection stage. In such cases a prototype can be created.

A prototype can be used to test the technical feasibility of a design idea to see if it works as a physical object. Novel packaging or presentation ideas normally require the development of a prototype. A prototype can also test the visual aspects of the design by presenting them as they would be produced. This also provides the opportunity to test, where pertinent, a design in three dimensions. A prototype gives the design team and client the ability to visualise and handle a design concept, to get an idea of its physical presence and tactile qualities.

As a prototype aims to test particular aspects of a design solution, it must be made so that those aspects are present and can be effectively evaluated. To convey the idea of what it will look like, a prototype does not need to be made with the final materials. For example, architectural models are often made from whiteboard and aim to give a three-dimensional visualisation of a building design. However, if a particular print finish is stipulated, it may be pertinent to present this via a prototype.

Stage 5; Select Making Choices

The select stage is the point at which one of the proposed design solutions is chosen for development. The key decision criterion is fitness for purpose: does the design meet the needs and goals of the brief, and will it effectively communicate to the target audience to achieve those aims? The winning design is typically that which most closely meets the design brief, or a significant part of it. It may not be possible or desirable to meet all the requirements of a brief within a single design. For example, market segmentation

increasingly calls for different marketing and design solutions for different segments. Other factors, such as cost and time, are relevant in the selection process, but these may change as the process develops.

The budget available may not provide for the preferred solution and so a more humble option may be selected. However, budget and time constraints should be identified during the definition stage and must be considered throughout the design process. A studio may advance what it thinks are the best design solutions to the client, and while its opinion and advice are important, the client knows its business, market and clients best and will make the final choice. This could well be different to the designer's preferred choice. At the end of the selection process, the client will sign off the choice, thus initiating the next stage in the design process.

Stage 6; Implement Delivering the Solution to the Design brief

During this stage, the designer passes the design artwork and format specifications to those who will be supplying the final product. This might be a printer, web builder or fabricator. This moment provides a good opportunity to confirm the production specifications such as print quantity and what you expect to receive. For example, a printer is usually given some leeway to account for set-up in the different steps of the print process. This means an order for 100 flyers may not result in the receipt of 100. It may be more or may be less. By double-checking, everyone is clear about the level of expectation, and what the client expectations are.

The design team typically provides project management during this stage, in order to ensure that the end results meet design expectations, and to keep the project on budget and on time. Proofing may be necessary during implementation if a print job is involved. This

will ensure that what is printed is an accurate reflection of the artwork supplied. For websites and other electronic media, proofing means testing functionality as well as the visual appearance. This stage ends with the final delivery to the client of the finished job.

Stage 7; Learn Obtaining Feedback

The final stage in the process involves learning from what has happened throughout the design process. This is a feedback stage during which the client and design agency might seek to identify what worked well and where there is room for improvement.

Following the implementation, the client may begin to look for or receive feedback on how the product has been received by the target audience and how beneficial its effects on the target audience have been. Thus, a design firm can find out how the audience responded to the design.

The feedback generated at the end of the process becomes a learning opportunity for future projects. It forms one of the sources of information for define and research stages. Any problems with the design may have been because of inadequacies in the brief or lack of understanding of key points. Through the feedback process, designers and clients build up a shared understanding over time. This serves to facilitate the production of increasingly optimal solutions in the future.

Although the learn stage appears to be the last of the seven that have identified, it actually occurs throughout the design process. At each stage you should take stock of where you are, where you are heading, what's working and what's not. The ability to learn from each stage will enhance the development of design thinking, and will help to generate radical and successful designs.

2.7 Constraints Associated with the Use of Elements and Principles in Garment

Construction

2.7.1 Socio-economic factors and Considerations

It is obvious that, the constraints connected with the use of elements and principles are both economic and social. Spring (2012) in his analysis emphasize the need for subsidies with regards to investment, access to raw materials below international prices, free access to international markets, low labour costs and strong domestic demand the opportunities for textile and garment business in most developing countries looks extremely absent and difficult for operatives in the industry. The geographical location of an individual has a great impact on the choice of elements and principles associated with garment construction. The constraints for which one cannot plan marker as desired are as: the nature of the fabric, desired shape and style of garments, the requirements of quality cutting and the requirements of production planning.

2.7.2 Selection of Dress Design

The cost incurred and occasion for which the garment is designed is another constraint bedevilling most fashion and construction garment industries. The cost of apparel differs with Brand, Type of store like malls, stores, showrooms, quality of the raw materials used, as well as the value addition done to the garment (Gillow, 2003). It is better to select few garments that will serve all occasions and purposes and all season clothing. Colour, design, texture of the fabrics used should be suitable for the age and size of the child. Clothes for small children should stress simplicity and make adequate allowance for growth, self-help, ease of movement, ease of care and comfort, practicality, climate, safety and

developmental features of children during various stages but these ideas are lacking in most fashion designers and as such need to improve upon. Children growth is rapid and their clothing needs change quickly. Soft, durable garments are best for the baby's delicate, sensitive skin. Cotton, flannelette, challis, batiste, plisse, terry cloth and jersey are good. Blends of nylon, Modacrylics are suitable for children as they are easy to maintain and care but this thought cannot be conceived by the fashion industry hence a constraint (Gillow, 2003).

2.7.3 Choosing a right fabric and selecting style lines for different types of figures

According to Hendrickson (1996), different fabrics create different illusions to the figure of the wearer. Structure of the yarns, the way a fabric is woven and its finish will determine the texture and drape of the fabric. Bold prints, checks, thick pile, corduroy make the figure look bigger. Course fabric like jute and furs give an enlarging effect to the figure. Light weight fabrics like satin, linen, chiffon, crepe will cling to the body and show the body contours well. The bright reflection of satin makes an emphasis of every curve of the figure and appears to add size to the figure.

Stiff fabrics like organza, organza stand away from the body and add volume to the figure and must strictly be followed by fashion designers to achieve the desire goal in their daily activities, any deviation from the above constitute a constraint and will not yield good results.

Few people are as perfect as to general figure, shape of the face, coloring, etc., that they are able to wear almost any type of dress and look well. Many of us have certain peculiarities such as narrow shoulders, flat chest or round shoulders, a large bust, or our

face may be very square, so that care must be taken in the design and selection of their dress code (Ibid).

2.7.4 Identification of Figure Proportions and Figure Types

Everybody can dream of a standard figure but few will possess such ideal type of body. People who are celebrities in acting, modeling and advertising fields cherish and long to maintain such body types. Commonly every person will have one or the other figure problematic areas. A comprehensive knowledge regarding various figure types helps fashion designers and pattern masters to give better fitted garments (Marriot, 1992).



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology adopted in conducting the study and as such, it captures the research design, population, sampling frame, sample and sampling technique, the instrument of the study, data collection procedure, data processing and analysis procedures. It also explained the validity and reliability of the research instrument.

3.2 Research Design

Research designs are the type of inquiry within qualitative, quantitative and mixed method approaches that provided specific direction for procedures (Denzin and Lincoln, 2011). Sometimes the designs are referred to as strategies of inquiry. The nature of the current study especially the data required has influenced the decision of the study to consider a mixed method.

3.2.1 Mixed Method

The study adopted a mixed method which combined both qualitative and quantitative techniques to collect and analyse its data. These two methods have their own strengths and weaknesses but when combined for a single purpose can complement each other. According to Neuman (2014), the limitations of one of the method is usually complimented by the positives of the other method. Qualitative data was necessary because it allowed the researcher provide detailed description of solutions, events, people's interactions and observed behaviour, direct quotations from people about their experience, attitudes, beliefs and thoughts.

Qualitative analysis allows the use of in-depth interviews and observational techniques which enables the researcher investigate attitudes, beliefs and social contexts associated with human behaviour.

The views of these scholars gave credence to this approach or design and a consideration for this study. With respect to descriptive statistics, the clarity of the issue investigated becomes the yardstick for the use of such a method. The study considered descriptive statistics because of the numerical nature of the response obtained. Strauss and Corbin (1990) also supported the use of mixed method by arguing that qualitative and quantitative data complement each other as qualitative data may be used to illustrate or clarify quantitatively derived findings and vice versa. Consequently, the study considered the "convergent parallel design" advanced by Creswell, (2013; pp.38). This design was relevant because it allowed the study to collect and analyse qualitative and quantitative data simultaneously. Equally, results from the analysis are easily compared, interpreted and presented concurrently (Creswell and Clark, 2011).

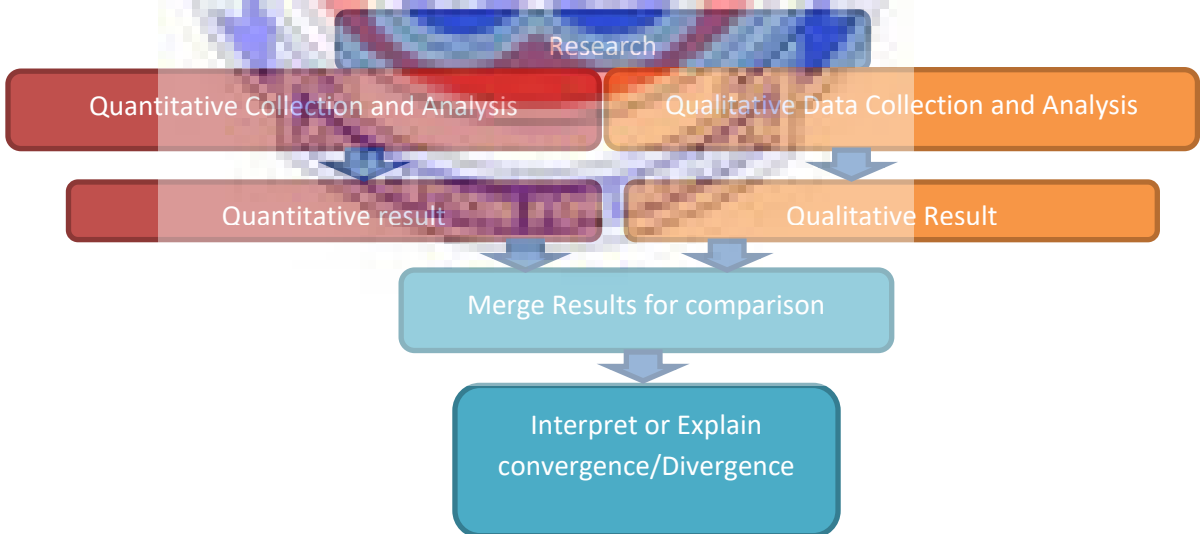


Figure 4.1: Mixed Method Convergent Parallel Design

Source: Creswell, 2013; Pp. 38

3.3 Population

The population referred to an aggregate or totality of all object, subjects or members that conform to a set of specifications (Polit and Hungler, 1999). In this study the population comprises tailors and dressmakers in the Wa Municipality of the Upper West Region of Ghana.

3.4 Sampling Technique and Sample Size

Aforo (2004) stated that, the first step in the process of selected sample is to consider a sampling design. It clearly means, all stages of the process involved in reaching the respondents. Henning (2004) is also of the view that, sampling is a process of selecting the research participants in a study.

The study adopted different strategies of both probability and non-probability sampling technique to obtain its units of analysis. This was necessary because of the differences in the characteristics of the target population (tailors and dressmakers). Purposive sampling technique was employed to select the communities used for the study. The sample size was obtained based on the number of tailors and dressmakers (sample frame) identified through preliminary investigation.

The study population comprised tailors and dressmakers in the Wa Municipality estimated at 3,000 (Association of Tailors and Dressmakers, 2018). This constituted the sample frame for the study. The sample size is obtainable via the formula $n = \frac{N}{1 + Ne^2}$ where “N” is the Sample frame and “e” the significance level or sampling error. Thus, with N=3,000 tailors and dressmakers, at 10 percent significance level which corresponds to 90 percent confidence level; and $e=0.1$, then $n = \frac{3000}{1 + 3000(0.1)^2}$ which is 100 (Frankel & Wallen, 2003). Convenient sampling was used to select members of the sample frame.

Fraenkel and Wallen (2003) stated that there is no any absolute clear-cut answer to what forms an adequate or sufficient size for a sample under study. They are of the view that, the best and obvious answer is that, a sample should be as large as the researcher can obtain with a reasonable expenditure of time and energy. In view of this, a sample size of 100 calculated from the formula above was considered for the study. Thus the study dealt with fifty tailors and fifty dressmakers who were available and willing to respond to the questionnaires presented to them.

The research adopted probability sampling methods for a specific group of tailors and dressmakers represented the population (Creswell, 2009). Purposive sampling was used to select some of the participants which included tailors and dressmakers. It was based on the judgment of the researcher taking into account that, those that were selected are the Masters of the dressmaker's shops who could give relevant information required for the study. This sampling method has been envisaged since the various dressmaker's shops that have been indicated by the tailors and dressmakers are in the best position to provide the needed information (Henning, 2004).

3.5 Sources of Data

The study combined both primary and secondary data sources in order to achieve it broader objective. The reason for the combination of these data sources is to enable the study offer adequate description, explanation and discussion of issues and concepts related to fashion and design. The combination of both primary and secondary data sources ensured interplay of ideas as argued in literature and findings from the analysis of primary data obtained from the field.

3.5.1 Primary Sources

Primary data is the type data collected for the first time directly from the field. Such data were obtained by this study through interviews and use of questionnaires from the selected respondents which included tailors and dressmakers in the Wa municipality. The study used primary sources for the purpose of increasing the consistency and reliability of results be obtained by the study. Similarly, the primary sources of data collection also have the tendency of checking biasness in views of previous works and current responses from respondents, hence helped to reduce inaccuracies by the end of the study.

3.5.2 Secondary Sources

A desk study approach was adopted to review the extensive literature on elements and principles of design. The review of secondary data provide comprehensive discussion on the various concepts behind or supporting garment construction. Like to many other studies, secondary data is very important to the discussions and understanding of issues related to fashion and design. To many researchers, secondary sources are relatively cheap and easy to access (Onwuegbuzie & Leech, 2005). With regards to this study, secondary data provided the various definitions, explanation on the various concepts and terms as well as the arugment advanced by different scholars on the topic. The secondary data has been used to provide the literature in the previous chapter. With these, it is important for the study to contact secondary data as it intends to explore extensive document on the subject matter and bring out the various gaps. The secondary data were obtained from scholarly articles and journals publication, conference papers and reports and other relevant published documents from authorities.

3.6 Data Collection Instruments

Different instruments and techniques were employed to collect the data from tailors and dressmakers considered as respondents for the study. These instruments included questionnaires, and semi-structured interviews

3.6.1 The Use of Research Questionnaires

A questionnaire is framework of questions designed by a researcher which can be administered by the researcher. These set of questions contained in a particular questionnaire are always directly related to the topic under which the research is being conducted. The researcher develop questionnaires based on relevant indicators that can help assess the effective use of elements and principles of design in garment construction among dressmakers and tailors in Wa Municipal in the Upper West Region. They contain both close and open-ended questions. The questionnaires captured the demographic characteristics.

3.6.2 Expert / Key Informant Interviews

This instrument involves the identification and interviewing of key relevant persons in the fashion and design industry. Individuals considered to be experts or key informants appear to be vested with knowledge concerning the topical area under study. They are the head of Tailors and Dressmakers Association in town and Clothing instructors at the technical institute. The key informants were contacted on individual basis and interacted with verbally. This was done in order to solicit first-hand information from them. An interview guide was used to facilitate the interaction.

3.7 Data Analysis and Presentation

Since the study considered a mixed method, its data was analysed using both qualitative and quantitative methods of analysis. Data from the survey was coded, captured and processed using the Statistical Package for Social Sciences (SPSS) software programmer. The data was analyzed using descriptive statistics and presented in form of frequencies tables and graphs. Narrations and quotations were also used to present the qualitative data.

3.8 Validity and Reliability of the Research Instruments

Like any other research, the validity and reliability of the research instruments used in this study was considered critical. According to Leedy (1980), validity is the degree to which a research instrument measures what it is supposed to measure whereas Nachmias and Nachmias (1981), argued that reliability is concerned with the extent to which a measure contains variable errors and these errors have to differ from observation and that vary from time to time for a given unit of analysis measured twice or more by the same instrument. Also, Abrahamson (1981) stated that reliability is the consistency of the information, the extent to which the same information is supplied when a measurement is performed more than once.

To ensure validity and reliability, the study pre-tested the questionnaire and interview guide which were later used to gather the data. Five questionnaires were printed and administered to three dressmakers and two tailors. The interview guide was also tested using a clothing instructor from Wa Technical Institute.

This was done in order to assess the appropriateness of the instruments in measuring the identified variables as well as establish the extent to which they could consistently measure

what they were designed to measure. Few challenges were identified and corrected before the final use.



CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter provides the data analysis and the discussion of the results. The chapter is divided into four sections which include demographic characteristics of respondents, how tailors and dressmakers understand the use of elements and principles in garment construction, the extent to which tailors and dressmakers use elements and principles in the construction of garments and the constraints associated with the use of elements and principles in garment construction among dressmakers in the Wa municipality.

4.1 Socio-demographic Characteristics of Respondents

The following socio-demographic characteristics of the respondents were considered; sex, age, occupation and educational status. The purpose is to determine how these socio-demographic characteristics influences the views of respondents on how tailors and dressmakers understand the use of elements and principles in garment construction, the extent to which tailors and dressmakers use elements and principles in the construction of garments and the constraints associated with the use of elements and principles in garment construction among dressmakers in the Wa municipality.

The demographic characteristics of respondents are central to the concept of ideas in making choice among the lot. For instance, people may be deficient in the choice of elements and principles because of their educational background, age or sex. Similarly, age, sex, educational levels, and many others influence may influence the choice of colours, lines, patterns, shapes, harmony etc. in garment construction in today's fashion world.

4.1.1 Sex distribution of respondents

The sex of the respondents was assessed and the results revealed that 71% of the respondents were females while 29% were males. This clearly indicated the dominance of females in the sewing industry in the Wa municipality. Though females dominated the fashion industry, the 29% of male respondents gave the study a representative view across both sexes.

4.1.2 Age distribution of respondents

The study also considered the age of the respondents and the results are shown in table 4.2. The respondents were of different ages which ranges from 18 years to 55 years and above.

Table 4.2: Age Distribution of Respondents

Group	Frequency	Percent
18-25	20	20.0%
26-35	60	60.0%
36-45	12	12.0%
46-55	8	8.0%
Above 55	0	0
Total	100	100.0

Source: Field Survey, 2018

From table 4.2, the results showed that 60% of the respondents were between the ages of 26 and 35 years. Also, 20% of the respondents were between the ages of 18 and 25. The results implied that majority of dressmakers and tailors in the Wa municipality were within the active labour force. Though young, the findings further revealed that most of them were not new in the fashion industry.

Also, 12% of the dressmakers and tailors contacted were between the age group of 36-45 whereas 8% of them were above 55 above. These classes of people have been in the sewing industry for long and were observed to be well experienced and knowledgeable in the activities of the fashion and design industry in the Wa municipality and beyond.

4.1.3 Educational Background of Respondents

Education is critical to the understanding and use of elements and principles of garment construction. Consequently, the study assessed the educational background of dressmakers and tailors who are using these elements and principles to produce garments for people.

The results are shown in table 4.3.

Table 4.3: Educational Level of Respondents

Educational Level	Frequency	Percent (%)
No formal education	64	64%
O' level	0	0
Secondary	36	36%
College	0	0
Total	100	100.0

Source: Field Survey, 2018

From table 4.3, the results showed that majority of the dressmakers and tailors in the Wa municipality had no formal education. This was evident as 60% of the respondents indicated that they had no education. This is not to suggest that dressmakers and tailors in the municipality had no formal training on dressmaking. They had undergone their required informal apprenticeship training for a number of years before joining the industry. This implies that the fashion industry, particularly the sewing industry in the Wa municipality

is full of dressmakers and tailors who no formal education. The remaining 36% of the respondents had secondary education.

A very significant observation made was that none of the respondents contacted had obtain tertiary education. This has actually affected by understanding of the theory of the elements and principles of garment construction.

4.1.4 Years in sewing as a dressmaker or tailor

The number of years’ dressmakers and tailors spend in sewing for people in one way or the other can influence their understanding and use of the elements and principles. Accordingly, the study assessed the year’s dressmakers and tailors have been sewing for people and the results are shown in table 4.4.

Table 4.3: Years’ Experience of Dressmaker and Tailor

Years in sewing	Frequency	Percent (%)
1-2	22	22.0%
3-5	61	61.0%
6-10	12	12.0%
10 above	5	5.0%
Total	100	100.0

Source: Field Survey, [June], 2018

The results on Table 4.3 showed that majority of the dressmakers and tailors had working experience between 3 and 5 years. This was evident as 61% of the dressmakers and tailors indicated that they have worked in the industry over 3 years.

The dressmakers and tailors with 1-2 years working experience recorded 22%. Thus quite a number of the dressmakers and tailors in the municipality are less experienced in the

sewing industry. Dressmakers and tailors with 6-10 years working experience also recorded 12% while's dressmakers and tailors with 10 years and above working experience recorded 5%. It seems that there are less a number of that well experience in the dressmaking industry in the municipality.

4.2 Understanding Elements and Principles in Garment Construction

In creating a design one of the components which interact is the art elements. Art elements like line, texture and shape of the garment play a prominent role in dress design besides creating some visual effects on the physical proportion of the individual. The elements of the design provide a baseline for designing beautiful garments. They must be incorporated in a pleasing combination to achieve an appealing look in the garment. Garment designing involves three main aspects - structure, function and decoration. A garment should be structurally valuable and appropriate as per the customer's need and the current day's fashion. Hence elements of design should be carefully and wisely utilized for achieving the desired effect.

The elements are 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. Consequently, the assessed the awareness level of the elements and principles by garment constructors in the Wa municipality. The results revealed that 32% of the respondents in the study community were aware of elements and principles as an important facet to the garment construction and according to them they are variables or tools that guide the tailors and dressmakers to take control over customers but some see it as basic most visible things that constitute a design and principles as the rules and regulations that governs the elements in a design.

The majority of respondents, thus 68% were not aware of the existence of elements and principles of garment construction. It also mean that majority of the respondents were not aware of the need for elements and principles of garment construction in the study community which is worry to the development of the garment industry.

During an interview session at Kambali a respondent argued that

“As for me I don’t see the need to learn about elements in garment construction before I can establish my own shop, because my master did not teach me anything like the beautiful application of garments that is why I don’t consider it valuable and again my customers do not disturb me about it”.

This however contradicts with the observation made by Bray (1994) who argued that the elements and principles of design are flexible and should be interpreted within the context of current fashion during training by all apprentices. Elements of design are those components which an apparel designer employs in designing the garments to create beauty and update the level of the dressing.

4.3 Level of knowledge of Elements in Garment Construction

The objective one of the study sought to find out whether the garment constructors thus tailors and dressmakers really have some level of knowledge regarding elements in garment construction in the Wa municipality. To achieve this the following responses were gathered from the tailors and dressmakers through questionnaire in the study area. The results pertaining their knowledge showed that 41% of the tailors and dressmakers contacted indicated that they are fully aware of the existence of elements in garments construction as they answered ‘yes’ or ‘I know’ to the question that was given though 59% of them are not aware of the elements and principles of design in the fashion construction

industry. Majority of the respondents are therefore do not know of the presence of elements and principles of design in sewing for their customers.

As shown in the demographic characteristics, the educational level of these respondents is low as most of them either do not have formal education or only attained secondary education which is not surprising with regards to the above outcome. During an interview at Konta, a dressmaker acclaimed that;

“The inability to read and write have greatly impacted on the usage of the elements in garment construction since I have no formal education the combination of the elements is a huge problem to me and I wish I can do it but not”.

This supported Anitha (2005) that the understanding of how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing. Construction of garments should be designed considering three key characteristics: structure, function and decoration. It should be structurally appealing and appropriate for the customers need. Functionally, it should give the added value or function that the garment is expected to perform and decoratively. It also provides a psychological feeling of well-being through beauty.

4.4. Importance of elements of design in the construction of garments

It is observed in the analysis that the elements in the garment and construction subsector is revered and accorded some level of priority by the tailors and dressmakers in the municipality and even beyond, this was seen during interview session with the respondents. This assertion can be seen in the table below using the Likert scale to rate the level of importance of the elements to the construction of the garments.

Table 4.4: Importance of elements of design to the construction of garments

Likert Response	Frequency	Percent
Very important	40	40
Important	42	42
Not important	18	18
Total	100	100.0

Source: Field Survey, [June], 2018

As shown in table 4.4, the results revealed that 40% and 42% of the respondents indicated the elements of design have some very important and important respectively, degree of essential in the delivery of nice and fitting dress for the prospective customers and also bring about job satisfaction to the tailors and dressmakers whereas 18 of the respondents constituting about 18%, think that the elements of design to the construction of garments is not important in their work.

4.5 Knowledge of principle of design in the construction of garment.

It is also important to note that, regarding the knowledge of principles (balance, proportion, emphasis, unity/harmony, perspective, movement, pattern, repetition and variety) in garment and construction 41 of the respondents indicating 41% asserted that they know and always consider principles in garment construction meanwhile about 59% of the respondents in the study community which represents the majority argued that they do not know principles in design and therefore do not apply in fashion design. This still implies that, a chunk of tailors and dressmakers in the Wa municipality pay little attention to the application of principles in garment construction.

The analysis also revealed that the importance of the principles cannot be overemphasized

in the garment and construction department. The table below shows a likert response on the importance of principles in garment construction.

Table 4.5: Importance of principles of design to the construction of garments

Likert Response	Frequency	Percent
Very important	41	41%
Important	46	46%
Not important	13	13%
Total	100	100.0%

Source: Field Survey, [June], 2018

As shown in the above table 4.5, 46% of the respondents acclaimed that the principles of design are important to their work, 41% rated very important whereas 13% indicated that the principles of design are not important to the construction of garment to customers in the Wa municipality. This clearly demonstrates that appreciable importance is given to the application of principles by the tailors and dressmakers in the catchment area of the study.

4.6 Differences Between Elements and Principles of Design

Designing process involves the combining of known design components in diverse ways to create new products. In creating a design one of the components which interact is the Art Elements. Art elements like line, texture and shape of the garment play a prominent role in dress design besides creating some visual effects on the physical proportion of the individual.

The elements and principles of design are flexible and should be interpreted within the context of current fashion. Elements of design are those components which an apparel designer employs in designing the garments. A design can be defined as an arrangement of lines, shape, colours and texture that create a visual image. The principles of design are the

guides that govern how elements are combined (Obinnim & AfiPongo, 2015). The elements are therefore the raw materials in design that must be combined successfully.

Principles of design are guidelines for the use of the elements of design to create attractive garments, different forms of expression in an artistic manner. They are used for creating, discussing & evaluating garment designs on and off the individual/ dress form. In order to arrange the elements of design well, principles like balance, proportion, emphasis and unity/harmony are essential.

As revealed in the analysis, the findings of the study showed that tailors and dressmakers do know the differences between elements and principles in their area of jurisdiction which is the fashion fraternity. This was revealed when the researcher tried to elicit responses as to whether dressmakers understand the differences between the elements and the principles of design. Out of the 100 respondents, 63% of respondents affirmed that there is difference between the elements and the principles of design though 37% of them indicated that there are no differences between the elements and the principles in garment construction within the Wa municipality.

During a focus group discussion one of the dressmakers claimed that;

“Elements are the most basic things that constitute a design while principles of design are the rules that govern the work of art, another respondent puts it that “elements of design are most visible things that come together to form a design while principles of design are the things that govern design”.

The study falls in line with findings of Davis (2003) who observed that elements and principles as having distinct roles, though he sees the two as tools used to create desired visual effects. He relates the elements to ingredients and the principles as strategies to organizing the elements so as to hold interest and command attention

4.7 Level of Education and Training obtained on the elements and principles

From the analysis of the data obtained from the field, the results showed that out of the 100 respondents contacted, 55% of them claimed that they do not undergo education and training on the elements and principles of design in garment construction but 45% of the respondents asserted that they have undergone education and training to equip them better placed in the garment and construction industry. Based on the field data, one can say that majority of tailors and dressmakers in the municipality have no or little education and training with regards to elements and principles in the garment industry. The education and training according to the respondents was gained through formal education such as fashion and design, textiles technology and host of others in the vocational and technical institutes.

4.8 Uses of elements and principles in garment construction

For the best of garment and fashion as a whole, it is crucial for dressmakers and tailors to use standard elements and principles. With the uses of elements and principles of design in sewing garments for customers in Wa municipality, the results showed that 48% of the respondents attested that they use elements and principle of design in constructing garments whereas 52% indicated that they do not use these design elements and principles. This results in the wrong construction of garments as shown in appendix I, II. The most basic use of elements in garment construction is to create both psychological effects and physical effects which should be carefully balanced for an appropriate appearance. It is important for dressmakers and tailors to know both the potentials and the limitations of each element for proper usage in a design. Understanding how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing. The principles of design

are flexible, as demonstrated by the diversity of styles in which they are seen. Samples as shown in appendix II, III, IV. Designing principles can be used to create, discuss, and evaluate garment designs, on and off the body.

4.9 Level of usage of elements and principles of design

Data from the field indicates that, majority of the respondents in the study do not actually involve in using elements and principles of design in sewing garments for their customers, with the resultant effect being that, it is potential ground breaching conflict between dressmakers and their customers. About 52% of the respondents attested to the fact that they do not consider using elements and principles of design in sewing garments while 42% of the respondents in the sampled population saw the need to inculcate the concept in constructing garments for their customers.

During an interview session at Wapaani a respondent claimed that;

“Because they are not important to my work, and that will not help bring accuracy, beautiful designs and good shape to conform the body, I can sew to please my customers without them”.

Another dressmaker located at the Wa central market revealed that;

“People have different forms and shapes, therefore considering elements and principles bring out the person shape and form”.

This is reiterated in literature that there are different elements of design such as line, form, colour, texture which greatly influence the clothing decisions. In the view of Mee and Sue (1999) the most basic use of elements in garment construction is to create both psychological effects and physical effects which should be carefully balanced for an appropriate appearance. It is revealed also that shapes of unequal proportion such as oval or cone can create a visual interest in dress with the unequal proportions emphasizing in

that direction. A short midriff yoke in a dress shortens and widens that area. Shapes with diagonal edges such as triangles and trapezoids, and parallelograms provide dynamism in dress but are less stable. Shapes with unequal sides of three dimensional natures is called form, they include Cylinder, cone, pyramid, bell, dome, barrel, box etc. Further analysis of the responses revealed that majority of the respondents considered the use of shape as prominent followed by colour, line and form in the category of the elements with the rest being insignificant. Again in the aspect of principles variety is seen premium, closely followed by balance and the rest.

4.10 Effective use of elements and principles in garment construction by the tailors and dressmakers

It is important that dressmakers and tailors make effective use of the elements and principles of design if they want to produce the best of garments for their customers. Responses on the effective use of elements and principles were analysed and the results revealed that 42% of the respondents were of the view that there is effective use of elements and principles in garment construction among tailors and dressmakers whereas 58% of sampled population argued vehemently that tailors and dressmakers failed to effectively apply the elements and principles in garment construction. Meanwhile the respondents significantly believe that the application of these elements and principles of design can promote garment development in the Wa municipality. This is supported in literature that, understanding how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in promoting garment designing and development (Hellen, 2000).

4.11 Constraints Associated with the Use of Elements and Principles in Garment Construction

It is an established fact that, the seeming constraints associated with the use of elements and principles of design are both economic and social in the study community and are therefore not strange in sight of the respondent. Out of 100 respondents contacted 52% indicated that they did encounter complains from their customers in connection with the elements and principles but 48% of the respondents asserted that they always receive complaints from their customers in their field of duty. In effect, it means that majority of the customers are quite aware of the presence of the elements and principles of design in garment construction hence confronting tailors and dressmakers for desired results.

Table 4.6 showing the associated challenges confronting the effective use of elements and principles

Elements	Challenges	Principles	Challenges
Point/ mark	Incorrect marking	Balance	Garment will not fit well
Line	Style lines not fitting to the figure	Proportion	It will not fit well
Shape	Not well shape	Emphasis	Beauty will disappear
Form	When wrong form is used	Unity/harmony	Orderly design will vanish
Space	Not enough allowance	Movement	Boredom
Colour	Not matching colours	Repetition	Mis-match if similar elements are used
Texture	Wrong texture is used	Variety	If not well used will create monotony

Source; Field Survey, [June], 2018

From table 4.6, the results showed that the different elements and principles of design have different challenges associated with their use. For instance, the result showed that point/mark as an element has incorrect marking which has affected its use among dressmakers and tailors. It is obvious from the table that, the elements and principles of design by far help to make a design attractive and construction of garments need time to study the style and the figure of the customer before executing the work.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

Chapter five is the final chapter of the study and as such, provides the summary of key findings of the study. The chapter also presents the conclusions of the study from which it made recommendations capable of improving the effective use of elements and principles among tailors and dressmakers in Wa Municipality. The study made its conclusions based on its key findings in relation to available literature. Also, the recommendations are made based on the revelations of the study and it is hoped that the recommendations will be relevant to policy makers and future researchers especially in the effective and appropriate use of elements and principles of design in the garment and fashion subsector.

5.1 Summary of Findings

Different scholars consider different elements or indicators in their studies concerning the effective use of elements and principles in garment construction. This study considered the demographic characteristics of respondents with the view of understanding the different opinions expressed by different people in respect to the use of elements and principles. It considered the views of tailors and dressmakers and fashion designers in esteem to the application of elements and principles of design.

From these individuals, the study presented data on the sex, age, educational background and capacity of respondents. Data obtained on these characteristics assisted in understanding elements and principles in garment construction, uses of elements and principles of design in the industry and the constraints associated with the use of elements and principles in garment construction. Based on the demographic characteristics, the study

revealed that the Wa Municipality has more women who sew fashion and dressmaking in all corridors than their male's counterpart who really engage in tailoring and dressmaking. This can be drawn from the fact that in all spheres of the municipality women can be seen in shops sewing but the males can only be seen along the main roads. The educational background of the respondents greatly influenced their understanding on the specific issues to consider at the garment industry. Majority of the respondents constituting tailors and dressmakers had no formal education though some had obtained secondary school certificates. It is interesting to note that those who have higher qualifications (Diploma/Degree/Master's) were much concerned about the bookish type of education to the neglect of vocational training and technical programs where they can empower themselves skilfully for self-employment.

5.2 Understanding elements and principles of design in garment construction

It is obvious that in creating design, the basic component which runs across the entire drafted garment is absolutely the art elements. Notably among the art elements is line, form, texture and shape of the garment which play a prominent role in dress design besides creating some visual effects on the physical proportion of the individual. The elements of the design provide a baseline for designing beautiful garments and the elements are invariably the components or parts which can be isolated and defined in any visual design or work of art. They can simply be put as the structure of the work, and can carry a wide variety of messages.

It is evident from the findings that 32% of the respondents in the study community were aware of elements and principles of design as an important facet to the garment construction and according to them they are variables or tools that guide the tailors and

dressmakers to take control over customers but some see it as basic most visible things that constitute a design and principles as the rules and regulations that governs the elements in a design. Majority of the respondents were not aware of the existence of elements and principles of design in garment construction. Similarly, be concluded that, majority of the respondents were not aware of the need for elements and principles of garment construction in the study community which is concern to the development of the garment industry.

5.3 Level of knowledge of elements in garment construction

The findings showed that 41% of the tailors and dressmakers in the study area concluded that, they are aware of the actuality of elements in garments construction whereas 59% of them are not aware of the elements in the construction industry. This clearly showed that majority of the respondents therefore do not know of the presence of the elements and principles of design and as such could not apply them in sewing for their customers. As shown in the demographic characteristics, the educational level of these respondents is low as most of them either do not have formal education or only attained secondary education which is not surprising with regards to the above outcome.

5.4 Knowledge on the Differences between elements and principles

Elements of design are those components which an apparel designer employs in designing the garments. A design can be defined as an arrangement of lines, shape, colours and texture that create a visual image. The principles of design are the guides that govern how elements are combined. The elements are therefore the raw materials in design that must be combined successfully.

The findings of the study showed that majority (63%) of respondents affirmed that they know the difference between the elements and the principles of design though 37%

indicated that they did not know the differences between the elements and the principles in garment construction.

5.5 Uses of elements and principles of design in garment construction

The understanding of how and why a person responds to the various elements and principles of design and knowing how to control and use them effectively for a good design is an important aspect in designing. The findings showed that, majority of the respondents in the study do not actually use the elements and principles of design in sewing garments for their customers and the fact is that they do not have knowledge on these elements and principles. Those who have knowledge on these elements and principles, 52% of them attested to the fact that they do not consider using elements and principles in sewing garments while 42% of the saw the need to adopt them in constructing garments for their customers.

5.6 Constraints associated with the use of elements and principles of design in garment construction

It is an established fact that, the seeming limitations associated with the use of elements and principles are both economic and social in the study community and are therefore not strange in sight of the respondent within the municipality. Recognition of the challenges bedevilling the application of elements and principles of design, 52% indicated that they did encounter complains from their customers in connection with the elements and principles.

On the other hand, 48% of the respondents asserted that they did not receive complaints from their customers in their field of duty. In effect, both the fashion designers and the customers are quite aware of the presence of the elements and principles of design in

garment construction hence customers confronting tailors and dressmakers for desired results.

5.7 Conclusion

The fashion and design industry of the Wa municipality is characterised with dressmakers and tailors who are less experienced. But from the findings of the study, it was observed that most dressmakers and tailors in the municipality have made every effort to design clothes which are functional as well as aesthetically pleasing to their customers. They usually consider who is to wear the garment and the occasion in which it will be worn. Though dressmakers and tailors in Wa municipality know and use elements and principles of design in garment construction, they do not use it adequately and effectively. It therefore means that most dresses in the municipality are deficient and lack the effective use of elements and principles of design.

As important observation from the findings, dressmakers and tailors in the municipality also use elements and principles of design knowingly and unknowingly as the findings, dressmakers and tailors could not tell when and how they use them. Based on the findings, most dressmakers and tailors in the municipality do not have much working experience in the sewing industry. The findings conclude that majority of the respondents within the industry are female with few males into garment construction activities as a result of the nature of the job. It was also appreciated that most of the respondents have no formal education and majority were single and youthful. The elements include line, shape, form, space, colour and texture with the principles being movement, balance, proportion, emphasis, variety and pattern. Again it was revealed that majority of the tailors and dressmakers do not use the elements and principles even though it is imperative for them

to use it. It was also revealed that there were various challenges confronting the tailors and dressmakers which include irregular power supply, lack of sewing machines, ineffective and inefficient management, high level of illiteracy among others.

5.8 Recommendations

Base on the outcome of this study, even though much have been dealt into the issues of effective use of elements and principles of design, it is important to appreciate that, there are other areas that need to be addressed. The study therefore makes recommendations for the following;

- There is the need for standard practices to be improved. Consequently, the study recommends that government together with Dressmakers and Tailors Associations should institute course or programmes with standard practices to tailors and dressmakers as most of them often fail to go through any vigorous training during apprenticeship and therefore have no knowledge on the application of the elements and principles of design.
- The study also recommends that government and its agencies such as MASLOC should provide financial support to viable fashion designers to enable upgrade their knowledge and skills in the garment construction industry.
- The Association of Tailors and Dressmakers should also institute awards and exhibitions to showcase their products, designs and styles to the general public. This may encourage apprentices to be innovative in coming out with modern styles and design.

- Finally, the study recommends future researchers can look into motivational strategies to achieving effective use and application of the elements and principles of design to the development of the garment industry.



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APPENDIX I

UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION

SCHOOL OF GRADUATE STUDIES AND RESEARCH

QUESTIONNAIRES

Claudia Kyiileyang Viiru is my name, a student of University of Education. As a partial fulfilment of my Masters of Mechanical Technology degree, I am conducting a research into *“The Effective Use Of Elements And Principles of Design In Garments Construction Among Dressmakers And Tailors In The Wa Municipality In The Upper West Region”*. Your response to this questionnaire is highly important as it will enhance the credibility of my thesis. I hope it will not take you more than 10 minutes to complete the questions. I will like to assure you that your response will be treated under the strict ethics of anonymity and confidentiality. I sincerely would like to thank you very much for accepting to participate in this survey.

SECTION A

DEMOGRAPHIC CHARACTERISTICS

Please tick the appropriate box

1. Sex

Male [] Female []

2. Age

18-25 [] 26-35 [] 36-45 [] 46-55 [] Above 55 []

3. Marital Status

Married [] Divorce [] Single []

4. Level of formal education

Basic school level [] Middle school level [] Secondary school [] Illiterate []

University graduate []

SECTION B

UNDERSTANDING ELEMENTS AND PRINCIPLES IN GARMENT

CONSTRUCTION

1. How long have you been sewing?

Less than 1 year [] 1-5 [] 6-10 [] Above 10 years []

2a. Are you aware of the elements and principles in garment construction?

Yes [] No []

2b. If yes, what do you think these elements and principles are? Explain

.....
.....
.....

2. The following are considered as **Elements** in garment construction. Which of them do you know of? Choose your response in the table below by ticking the appropriate box.

Elements	I know	I do not know
Point or mark	[]	[]
Line	[]	[]
Shape	[]	[]
Form	[]	[]
Space	[]	[]
Colour	[]	[]
Texture	[]	[]

3. In your opinion, rate the level of importance of the elements to the construction of garments. Rate by ticking the appropriate response based on the scale: **1=Very Important, 2=Important, 3=Not Important**

Elements	1	2	3
Point or mark	[]	[]	[]
Line	[]	[]	[]
Shape	[]	[]	[]
Form	[]	[]	[]
Space	[]	[]	[]
Colour	[]	[]	[]
Texture	[]	[]	[]

4. The following are considered as **Principles** in garment construction. Which of them do you know of? Choose your response in the table below by ticking the appropriate box.

Principles	I know	I do not know
Balance	[]	[]
Proportion	[]	[]
Emphasis	[]	[]
Unity/Harmony	[]	[]
Perspective	[]	[]
Movement	[]	[]
Pattern	[]	[]
Repetition	[]	[]
Variety	[]	[]

5. In your opinion, rate the level of importance of the principles to the construction of garments. Rate by ticking the appropriate response based on the scale: **1=Very Important, 2=Important, 3=Not Important**

Principles	1	2	3
Balance	[]	[]	[]
Proportion	[]	[]	[]
Emphasis	[]	[]	[]
Unity/Harmony	[]	[]	[]
Perspective	[]	[]	[]
Movement	[]	[]	[]
Pattern	[]	[]	[]
Repetition	[]	[]	[]
Variety	[]	[]	[]

6. Is there any difference between the elements and principles in garment construction?

Yes [] No []

- 7a. If yes, how are the elements different from the principles in garment construction?

Explain

.....

.....

- 7b. Did you undergo any education and/or training on the elements and principles of design?

Yes [] No []

8a. if yes, what education and/or training did you undergo? Please explain

.....
.....
.....

8b. What institution/enterprise provided the education and/or training? Please list the names.

.....
.....
.....



SECTION C

USES OF ELEMENTS AND PRINCIPLES IN GARMENT CONSTRUCTION

1a. Do you consider the elements and principles in sewing garments for your customers?

Yes []

No []

1b. if yes, why do you consider them?

.....

.....

1c. if no, why don't you consider them?

.....

.....

2. Which of the following **Elements** in garment construction do you consider or use when sewing for your customers? Select your response in the table below by ticking the appropriate box.

Elements	Consider	Do not consider
Point or mark	[]	[]
Line	[]	[]
Shape	[]	[]
Form	[]	[]
Space	[]	[]
Colour	[]	[]
Texture	[]	[]

3. Which of the following **Principles** in garment construction do you consider or use when sewing for your customers? Select your response in the table below by ticking the appropriate box

Principles	Consider	Do not consider
Balance	[]	[]
Proportion	[]	[]
Emphasis	[]	[]
Unity/Harmony	[]	[]
Perspective	[]	[]
Movement	[]	[]
Pattern	[]	[]
Repetition	[]	[]
Variety	[]	[]

4. How often do you use these elements and principles in sewing garments? Select by ticking the appropriate response based on the scale: **1=Very Often, 2=Often, 3=Not Often**

Item	1	2	3
Elements	[]	[]	[]
Principles	[]	[]	[]

5. Apart from these mentioned on the tables, what other appropriate elements and principles do you consider when sewing garments for your customers?

- a.
- b.
- c.
- d.

6a. In your opinion, do you think it is advisable for all tailors and dressmakers to use elements and principles in the construction of their products?

Yes []

No []

6b. If yes explain your response

.....
.....
.....

7. Generally, do you think there is effective use of the elements and principles in garment construction among tailors and dressmakers in the Wa municipality?

Yes [] No []

8a. In your opinion, do you think the use of these elements and principles promotes garment development in Wa municipality?

Yes [] No []

8b. if yes, can explain how you think the use of these elements and principles has or can promote garment development in the Wa municipality?

.....
.....
.....

SECTION D

CONSTRAINTS ASSOCIATED WITH THE USE OF ELEMENTS AND

PRINCIPLES IN GARMENTS CONSTRUCTION

9a. Generally, do you receive complaints from customers with regards to the garment you have constructed?

Yes []

No []

9b. if yes, what are the complaints you have been receiving from your customers?

.....

.....

.....

10a. Do you confront challenges during the construction of garments for your customers?

Yes []

No []

10b. if yes, what are the challenges you confronted?

.....

.....

.....

11 What are the challenges associated with use of the following **Elements** in garment construction? Provide your response in the table below.

Elements	Challenges
Point or mark	
Line	
Shape	
Form	
Space	
Colour	
Texture	

12. What are the challenges associated with the use of the following **Principles** in garment construction? Provide your response in the table below.

Principles	Challenges
Balance	
Proportion	
Emphasis	
Unity/Harmony	
Perspective	
Movement	
Pattern	
Repetition	
Variety	

10 General comments on the use of elements and principles in garment construct

.....

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Thank you.

APPENDIX II

Pictures showing misuse of elements and principles of designs in garment construction by tailors in Wa municipality



APPENDIX III

Researcher teaching and applying the element of shape in constructing a garment



APPENDIX IV

Pictures demonstrating the construction and use of strips in fabrics



APPENDIX V

Picture showing the principles of movement of lines, repetition, Unity and pattern



APPENDIX VI

Pictures showing researcher administering the questionnaires to Dressmakers and Tailors

