EXAMINATION AND REMODELING OF STRUCTURAL AND DECORATIVE DESIGNS ON LADIES' GARMENTS IN KADUNA METROPOLIS

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AUGUST, 2015

EXAMINATION AND REMODELING OF STRUCTURAL AND DECORATIVE DESIGNS ON LADIES' GARMENTS IN KADUNA METROPOLIS

A DOCTORAL THESIS

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA – NIGERIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD.) IN INDUSTRIAL DESIGN

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AUGUST, 2015

DECLARATION

I declare that this thesis titled: "EXAMINATION AND REMODELING OF STRUCTURAL AND DECORATIVE DESIGNS ON LADIES' GARMENTS IN KADUNA METROPOLIS" has been written by me, and it is a record of my own research work. It has not been previously presented partially or wholly for the award of a higher degree in any institution anywhere. All quotations are indicated and the sources of information are duely acknowledged through appropriate citations and references.

_____	_____	_____
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CERTIFICATION

This thesis titled: "EXAMINATION AND REMODELING OF STRUCTURAL AND DECORATIVE DESIGNS ON LADIES' GARMENTS IN KADUNA METROPOLIS" written by AFOLABI MARY ADEBOYIN meets the regulation governing the award of the degree of PhD (Industrial Design) of Ahmadu Bello University, Zaria-Nigeria, and it is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This thesis is dedicated to the memory of my late parents – Pa Moses Adeteju Adejumobi and Madam Grace Jiariogbe Adejumobi, they gave me education, the undebatable inheritance.

ACKNOWLEDGEMENTS

I give thanks to God Almighty for the enablement He has given me to complete this research work. May His name be exalted forever (Amen).

I wish to thank specially my supervisors – Dr. W.B. Gwari, Dr. P.O. Ada, Professor A.R. Saliu and Dr. M.F. Ahuwan for their corrections, criticisms and valuable advice on how this research work could be successful. Your contributions and sacrifices are highly appreciated. May God bless you. (Amen). My appreciation goes to the Head of Department, Dr. Vershima Alkali for his timely advice and encouragement. May God continue to guide and keep you (Amen). My sincere thanks to Professor Salihu Maiwada for providing some materials I used in this thesis, may God meet your needs and bless you. (Amen). Special thanks to Dr. J.I. Azi, the P.G. Co-ordinator, for his encouragement and advice on the speedy completion of this thesis, may God reward you. (Amen).

My sincere thanks to my classmates in the Ph.D class, Department of Industrial Design, Ahmadu Bello University, Zaria - Dr. E.A. Alemaka and Mr. Sunday Ogunwole for arranging tutorial classes on statistics during our course work. I also appreciate Dr. Ruth Gadzama, my dear friend, classmate and room-mate since I registered for the programme.

I acknowledge the support and encouragement of my colleagues in the Department of Textile Technology and Fashion Design, Kaduna Polytechnic, Kaduna. I want to thank specially, Mrs. Aisha Hassan, Mrs. Maryam Ahmed, Mallam Abdulrahaman Isa, Mr. O.K. Raji and the Head of Department, Mallam Adamu Bappa. I am grateful to my Reverend, Rev. Niyi Odewole of the Baptist Chapel, Barnawa, Kaduna and all my friends in the church - Dr. Maryamu Madami, Mrs. Mary Yerima, Mrs. Cynthia Zafi and Mrs. Cecilia Yusuf. To Pastor and Mrs. Alalade and Engr. and Mrs. Oke, I want to say thank you for your prayers and encouragement.

I am indebted to my siblings, Dr. David Oyinlade Adejumobi and Mrs. Serah Adebimpe Olabisi for their prayers, support and encouragement. My appreciation to Mrs. Nike Adejumobi, my brother's wife for her prayers all the time. May God bless you. (Amen). To Prince Niyi Afolabi (JP), my brother in-law and his wife, Mrs. Modupe Afolabi, I want to thank you for your prayers and calls always and for your words of encouragement. May God attend to your needs too.

To my lovely children; Dr. Abimbola, Engr. Folakemi and Pharmacist Oluwaseun, thank you for your prayers, encouragement and financial support during the long ASUP nation-wide strike – I appreciate you. To the baby of the house, Oluwatosin, thank you for cooking for daddy whenever you are on semester break; I also thank you for encouraging me always and for your prayers. I am grateful to my in-laws, Dr. David and Engr. Emuobor, for their prayers, encouragement and financial support. Finally, to my dear husband and friend, Prince Engr. Fola Afolabi, thank you for your support, prayers and encouragement all the time. You are really a husband in a million, may God continue to keep, guide and reward you. (Amen).

DEFINITION OF OPERATIONAL TERMS

A dressmaker - Specializes in custom-made women clothes: day, cocktail, and evening dresses, business clothes, suits, sports clothes, and lingerie.

A fashion designer – Conceives garment combinations of line, proportion, colour, and texture. While sewing and pattern-making skills are beneficial, they are not a pre-requisite for successful fashion design. Most fashion designers are formally trained or apprenticed.

A seamstress - Sews ready-to-wear or mass-produced clothing by hand or with a sewing machine, either in a garment shop or as a sewing machine operator in a factory. She (or he) may not have the skills to make (design and cut) the garments, or to fit them on a model.

A Textile designer –Designs fabric weaves and prints for clothes and furnishings. Most textile designers are formally trained as apprentices and in school.

Accessories – Articles worn or carried to complete a fashion look, such as jewelry, scarves, hats, hand bags or shoes.

Aesthetics – The theory or philosophy of the perception of beauty.

Apparel – Clothing, not necessarily fashionable.

Appliqué A cut-out design, applied to another piece of fabric by stitching, embroidery or adhesive.

Bias cutting - A technique of cutting on the 'cross' between weft and warp.

Block pattern – Master pattern made to a set of individual measurements, or in standard sizes for mass production. Consists of skirt, bodice (front and back) and sleeve. These five sections are completely plain, having only the basic darts.

Blouse Separate garment covering the top part of the body. Can be fastened down the back, front, side and shoulders. Worn tucked in at the waist or as over – blouse, can be frilly and feminine or severely tailored according to taste.

Boutique – French word for a small shop with unusual clothing atmosphere.

Casing A small hem with an opening so that tape, elastic or ribbon can be inserted.

Clothing - A form of dress.

Construction - The putting together of a garment cut and make.

Contemporary – Current, up to date.

Culture - A people's way of life, a state of intellectual and artistic development; that which defines a people.

Darts A means of shaping materials to fit the body, stitched folds, tapered to a point which should end towards the fullest part of the bulge.

Decorative design (Applied) An addition to a garment in the form of trimmings e.g. buttons, beading, appliqué, embroidery, band, piping, lace, ribbon, flowers, etc.

Design An arrangement of lines, shapes, cloth, texture and colour to give a distinctive overall effect.

Designer – A creator and innovator of fashion.

Direct measurement – A method of taking measurements directly from a figure and applying them to the draft.

Draping – A method of making a pattern by draping fabric on a dress form.

Embroidery – Ornamentation done with the needle onto fabric.

Fashion – The prevailing style of any giving time, implies change in style.

Finishing – The final handwork or final touches done to a garment.

Grading – A means of decreasing or increasing pattern sizes.

Interfacing – Shaped pieces inserted between two pieces of cloth to give shape.

Interlinings – Pieces of fabric inserted between the main body of garments and the lining to give extra warmth or body shaping.

Line – An appeared manufacturer's collection of styles. Also visual direction in a design caused by seams, details or trimmings.

Over locking – A machine stitch which over sews and locks the edges of material used to prevent fraying of raw edges.

Pleating – The creasing and pressing of material into folds.

Proportion – The relation of one part of a design to another, an important principle of garment design.

Quilting – A method of sewing two layers of materials together with a soft interlining, patterned effect are produced.

Ready to wear – Apparel that is mass produced.

Shirring – Several rows of machine made gathers which are evenly spaced and are left in a garment as a structural design feature.

Silhouette – Outline of a garment.

Smoking – A decorated form of gathering. The gathers are formed by hand sewing and embroidery stitches are worked over the tubes of material formed by the gathering threads.

Structural design – Constructed details such as pleats, gathers, tucks, frills, shirring, etc, used on garments, these are joined or placed on garments by seaming or stitching.

Style – Certain characteristics that distinguish a garment from other garments, subdivision within a fashion.

Sequins - Disk – shaped beads used for decorative purposes.

Fabrics – Cloths made from textile fibres by weaving, knitting, felting, crocheting, laminating or bonding.

Tucks – A fold of material of even width which is kept firmly in position by a line of running stitches or machine stitching.

Yoke – A shaped pattern piece, which forms part of a garment, usually fitting around the neck and shoulders.

ABSTRACT

This thesis titled "Examination and Remodeling Structural and Decorative Designs on Ladies' Garments in Kaduna Metropolis" was undertaken to address the production problems in garment making in terms of techniques, materials, equipment and tools used in placing structural and decorative designs on ladies' garments by fashion designers and tailors in Kaduna metropolis. The aim of this study was to create awareness on how structural and decorative designs can be appropriately selected and placed on ladies' garments, while the objective of the study was to investigate the level of awareness of fashion designers and tailors on the use of elements and principles of design in garment production. The population of this study was made up of staff and students of the Department of Textile Technology and Fashion Design, Kaduna Polytechnic, Tudun wada, Kaduna, selected fashion designers and tailors located at Unguwar Rimi, Kakuri, Barnawa and Gonigora, all in Kaduna Metropolis. The researcher adopted the simple random sampling technique for the study. A random sample of two hundred (200) respondents was selected from the research areas. Forty (40) structured questionnaires were given to respondents in each of the selected areas. The research is descriptive and participatory. The methods used to elicit information for this study were oral interview, direct observation, photography and structured questionnaires. Data were collected, frequencies and percentages were used to analyse the variables. The researcher produced some garments according to one of the objectives of the study to remodel garments produced by respondents. Based on the data analysis, the following findings, conclusions and recommendations were made respectively: Though many of the respondents exhibited high skill in garment making, they had limited knowledge of the application of the elements and principles of design in garment production. Despite the fact that there was total commitment on the part of fashion designers and tailors in producing fashionable garments, less attention was given to proper selection of structural and decorative designs as well as proper placement. The Bank of Industry should give fashion designers and tailors soft loans so that they can team up to establish small scale fashion businesses. The teaching of entrepreneurship education should be directed towards fashion design and clothing technology for self employment; this will help students to be knowledgeable in techniques of generating business ideas and various operational techniques of managing fashion designing businesses.

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CHAPTER ONE

1.0 INTRODUCTION

1.1. Background of the study

Cloth is a material made by weaving together threads of cotton, wool, nylon, and silk that is used to make clothe, (Webster, 2012). Yarn is produced by spinning raw fibres, such as wool, flax, cotton or other materials to produce long strands twisted with other fibres. Yarns are woven into fabric. Textile fabrics or cloth are formed by weaving, knitting, crocheting, knotting or pressing fibres together (Adamtey, 2008). Douglas (2012) also stated that fabric refers to any material made through weaving; knitting, crocheting or bonding that may be used in the production of further goods such as garment. Before fabrics are constructed into garments with selected structural and decorative designs, consideration must be given to the structural and applied designs of fabric for garment construction in order not to distort the structural and applied designs on fabric.

In Nigeria today fashion designers abound, designing for all categories of people because it is mandatory to wear clothes. Designers also make efforts to beautify clothes by placing structural and decorative designs for enhancement of aesthetics on garments to improve productivity, increase patronage and marketability (Frings, 1987). However, considerations are not given to structural and applied designs on fabrics, while structural and decorative designs are wrongly selected and placed.

As observed by Nkeonye (2009), designs on fabrics provide variety, beauty and aesthetic appeal. They may be grouped into two classes; structural and applied designs. In selecting structural and decorative designs for placement on garment parts, such as necklines, yokes, front bodice, sleeves, hemlines, among others; consideration should be given to the structural and applied design of fabric which are in different categories. As

observed by Nelms (1976), fabrics which are laid in one direction are those with pile or brush surfaces; in planning the placement of structural designs, one – way fabric designs are cut according to the direction of pile or brush surfaces, the same consideration is also given to plaids, strips and other geometrically shaped fabrics when placing structural designs such as pleats and tucks. The author also observed that it is not advisable to apply princess seams and long horizontal darts on plaids and stripe fabrics during construction, fabrics with such designs are usually more appealing when sewn without applying details. Hollander (1993) also suggested that, when applying princess seam, vertical darts and decorative designs on plaids and stripes should be avoided.

According to Butterick (1971), a plaid is a design of woven or unprinted colour bars that intersects at right angles, the arrangement of these bars may be even or uneven; therefore, structural and decorative designs should be determined and selected appropriately, inappropriate selection may affect the outcome of a garment. A plaid is even when colour bars and intervening spaces are identical in each direction; it is uneven if the plaid fails to match in one or both directions. Nelms (1976) noted that, stripes also may be even or uneven, each stripe type can be handled as the same method as a corresponding plaid, when placing structural designs on garment parts. The author affirmed that, even plaids either square or rectangular are the easiest when sewing, the author stated that, the best garment parts to place decorative designs on are pockets, yokes and collar edges, though, a rectangular plaid may be more difficult to match where seaming is bias; an even plaid is suitable for a garment with centre opening, even plaid may also be cut on bias; while uneven plaid require extra care. The author also stated that, placement of structural designs has fewer style possibilities.

Craig (1973) affirmed that, if plaid is uneven crosswise, decorative designs could be placed in one direction like napped fabrics. When plaid is uneven lengthwise, the

repeat would not have a centre from which the design can be balanced in both directions, therefore, placed structural designs goes round the body in one direction. The author also stated that when the garment is worn, a type of balance can be established; a dominant vertical bar or block can be made at the centre for placement of structural designs. On diagonals (twill weaves) the author stated that, some fabrics have perceptible ribs as typified by gabardines; structural designs on these is handled like any plain weave, while diagonal printed stripes require careful structural design for placement on garment parts.

Nelms (1976) stated that, border print is a fabric designed with a marginal design, running lengthwise along one edge; this could be in two ways, one is to run the border vertically, placing centre back and centre front seams together, while selecting the appropriate structural and decorative design for placement, the second method is to place the border at the garment hem, omitting hem or leaving allowance at the selvedge, precautions should be on how to effectively cut-out border print fabric for aesthetics, appropriate structural and decorative design details can be applied artistically for enhancement.

Details of structural and decorative designs for surface embellishment according to Knight (2008), include machine embroidery, (digitizing) which is achieved by using cards and discs that are bought with numerous embroidery designs, ready to sew with computer software, free hand machine embroidery, sometimes called fabric painting, which is normally hooped, while a darning foot is lifted and the feed dogs are dropped to allow for free movement of the hoop holding the cloth hand embroidery, which is achieved by the use of simple decorative hand stitches and good choice of coloured thread, such as cross and herringbone, stitches, appliqué which is a decorative technique, in which fabric pieces are cut and stitched unto fabric or garment by hand or machine, quilting, a decorative method of holding two or more layers of fabric together with hand

or machine stitches, patch work, the art of joining pieces of fabric together by hand or machine stitches. The author affirmed that lace, beads and ribbon can be stitched on the edges or body of a garment, to add interest and texture. Singer (2000) also, stated that beadwork on fabric embellishes the surface of a garment, creating a focal point. This view was also supported by Rempel (2000) who stated that beading is one of the world's oldest arts, it is also one of the newest for surface embellishments, beadwork on fabric add texture and glamour to clothing. Other structural and decorative design for placement according to Knight (2008), Dorling (1996) Frings (1987) include stones, fringes, bands, buttons, drawn threads, gathers, pleats, ruffles, shirring, smoking and top stitching

The researcher however, is of the opinion that in placing structural and decorative designs on fabric for surface embellishment, points to be considered among others should include fibre content, weave structure, surface texture, fabric colour, as well as structural and decorative design details. For example, surface texture inherent in the weave of a fabric would naturally affect the placement of structural and decorative designs, the tighter the weave, the smoother the surface, the less the designs placed will be distorted. It is also worthy of note that for good result, structural and decorative designs can be achieved on lightweight fabrics, as well as fabrics that are too busy with motifs and designs.

1.2 Statement of the Problem

Adequate and professional selection and placement of structural and decorative designs on garments by fashion designers and tailors seem not in place in Kaduna metropolis. The same observation is made on consumers of fashionable garments as per the quality of designs that are produced for them.

In most cases, fashion designers ignore designs on fabric, while cutting and placing decorative and structural designs during construction; thereby, distorting designs on fabric. Nkeonye (2009) stated that during weaving, beautiful designs are embedded on cloths, while some are applied after weaving is completed using different techniques and methods so that the fabric will look beautiful and appealing.

The problem of this study therefore is to look into how fashion designers and tailors can artistically cut-out fabric, style and select appropriate structural and decorative design materials for the production of beautiful and befitting garments, which will attract attention, enhance the look of the wearer, and at the same time give a feeling of dignity, substance and affluence among his or her peers in the society.

1.3 Aim of the Study

The aim of the study is to create awareness to fashion designers and tailors on how structural and decorative designs can be appropriately selected and placed on ladies garments.

1.4 Objectives of the study

The objectives are to:

i. investigate the level of awareness of fashion designers and tailors on the use of elements and principles of design in garment production.
ii. identify tools and equipment used for the production of structural and decorative designs by fashion designers and tailors.
iii. find out whether fashion designers and tailors can identify trims for enhancing garment parts.
iv. investigate whether fashion designers and tailors can identify structural materials for placement of designs on garment parts.

v. find out how fashion designers and tailors source structural and decorative design materials.

vi. investigate the stitches and seams used by fashion designers and tailors for the production of structural and decorative designs.

vii. find out techniques that fashion designers and tailors employ in producing structural and decorative designs.

viii. investigate the methods that fashion designers and tailors employ in placing structural and decorative designs on garment parts.

ix. find out finishing processes in garment making.

x. remodel garments produced by respondents.

1.5 Research Questions

i. what are the elements and principles of design in garment production?

ii. what are the tools and equipment used for the production of structural and decorative designs by fashion designers and tailors?

iii. what are the trims used for the production of decorative designs by fashion designers and tailors?

iv. what are the structural materials used for the placement of structural designs on garment parts by fashion designers and tailors.

v. how can fashion designers and tailors source structural and decorative materials?

vi. what are the stitches and seams used by fashion designers and tailors for the production of structural and decorative designs?

vii. what are the techniques fashion designers and tailors employ in producing structural and decorative designs?

viii. what are the methods fashion designers and tailors employ in placing structural and decorative designs on garment parts?

ix. what are the finishing processes in garment making?

1.6 Justification of the Study

Fashionable dressing is growing in popularity for various social, economic and psychological reasons. The love for fashionable dressing by the masses is one of the factors responsible for innovation in garment making and the high esteem in which aesthetically designed apparel is held and appreciated.

Knight (2008) stated that embellishment ideas can accent and enhance garment parts for aesthetics. Frings (1987) also observed that decorative details are supplies used to adorn garments for aesthetics, while Weber (1990) observed that decorative designs can create a new mood on a garment, the author further stated that lace can add feelings to garment; rickrack gives a more casual look; braids and ribbons can be tailored or dressy, piping used around the yoke of a garment gives a western look, while embroidery and appliqué can create very colourful accents.

The choice of the research topic was inspired by the quality of garments worn by students to class in the Department of Textile Technology and Fashion Design, Kaduna Polytechnic, Kaduna. Fashion design students came to class wearing garments that were wrongly cut, poorly seamed with some of the motifs on fabric distorted, while structural and decorative designs were not properly applied on garment parts. With her observation in class, this was extended to the main campus, market places, ladies within the researcher's vicinity and later, it was extended to the media (in particular the television). It was discovered that just few people wore garments that were properly designed in accordance with the elements and principles of design in garment production.

Based on the researcher's curiosity, she decided to visit some fashion designers and tailors in some selected places located in Unguwar Rimi, Kakuri, Barnawa and

Gonigora. These areas were selected because they are inhabited by different categories of people with diverse educational background, religion and culture.

Simple cut of garment fabric embellished with trims, variety in design, aesthetic appeal and additional finishing details can attract attention and meet the social, economical and psychological clothing need of the masses. Thus, the high demand for foreign fashionable garments as a result of lack of artistic creativity and aesthetics on locally produced garments by some fashion designers and tailors, as well as increase in importation and patronage of second hand boutique, popularly known as "bend down market" by the masses, is a motivating factor for this study.

1.7 Significance of the study

The study has educational, economical, historical, social, aesthetical, cultural and technical importance.

Educationally, it is hoped that the result of the study will serve as a reservoir of knowledge, by increasing the number of available literature in the application of decorative and structural designs on garment parts, which involves the use of trims, embroidery, cuts and stitches. The study will create awareness to fashion designers and lovers of fashionable garments as a result of the improvement on how fabrics are cut-out and styled, using structural and decorative designs and how the beauty and aesthetics of the fabric is maintained, when the cut-out fabrics are being decorated for admiration by viewers, fashion designers will be knowledgeable in the selection of appropriate structural and decorative designs that will compliment the garment under construction, as well as the appropriate placement of the design details, this study will also create awareness to fashion consumers, they will know what to look for on garments; furthermore, the study will be an inspiration to fashion designers as designs and styles evolve according to fashion trend in the Nigerian society.

Economically, structural and decorative design materials as well as fabrics for construction can contribute in no small measure to the economy of the country. Frings (1987) stated that another way of making money from fashion business is the establishment of small and large scale fashion accessory businesses; it is hoped therefore, that the result of this study will motivate people to establish sewing accessory businesses where designers can source for raw materials for the application of structural and decorative designs on garments. Designer's creativity in the appropriate placement of structural and decorative designs and patronage by consumers of fashionable garments will create jobs in the fashion business, small and large scale industries can improve production as a result of demand for well designed garments. Garment industries can engage in producing spare parts and the sale of machines, tools and equipment for designing fashionable garments, this can reduce the problems of unemployment in the society.

Nigeria's foreign exchange will be conserved as a result of the patronage people will give to home-made structural and decorative fashionable apparels; this will also boost the economic power of designers.

Historically, the study will unveil the fashion trend in Nigeria as a result of the development of the appropriate placement of structural and decorative designs on ladies' garments among fashion designers and consumers in Nigeria. According to Waddel (2004) designers look at the past for ideas and designs that can be modified for contemporary times, this study will serve as a source of inspiration for future fashion and style development, garments produced taking into consideration the structural and applied designs of fabric for the appropriate placement of structural and decorative designs can also serve as a historic costume which is referred to as historic period.

Socially, the result of this study will encourage fashion designers to make new customers as a result of patronage by consumers. Perhaps, fashion designing is one of the socializing professions in Nigeria today as a result of contact designers make with people "normal people must wear clothes, either rich or poor, young or old". Clothing is one of the three basic necessities of life hence, there can be no social life without clothing (Otite and Ogionwo, 1979).

A good example is the wearing of "Aso ebi" common clothe worn by a group of people during occasions to show status, wealth, solidarity and to add glamour to occasions; designers make friends with customers because of the contact they make as a result of this noble profession.

The result of this study will help fashion designers to meet with celebrities, top politicians and well placed individuals in the society. Popular well skilled fashion designers are privileged to wine and dine with Presidents, Ministers, Governors, Commissioners, and their spouses because of the quality of garments designers produce.

Aesthetically, appropriate placement of structural and decorative designs on garments can add to the beauty of a garment if the designs on fabric for garment construction is not distorted, while appropriate selection and application of structural and decorative designs for surface embellishment can also produce special effect on garments (Knight, 2008). Poor selection and inappropriate placement of designs on garments can cause poor patronage while appropriate selection and placement can also make garments made with cheaper fabrics beautiful and appealing to the eye, Frings (1987). Some structural and decorative details have specific appeal on certain segments of ladies apparels, for example, lace trims, shirring, gathers, ruffles and bias bindings are more attractive and appealing to the gift maker. Appropriate selection and placement of structural and

decorative designs can embellish plain fabrics and garments. It is hoped that the result of this study will add to the aesthetics and quality of a well structured garment.

Culturally, handcrafted textiles like weaving, tie-dye, "Adire", Batik, fabric printing, and painting are all ancient cultural heritage. These materials are made into garments. (Muyiwa, 2009) In most cases, decorative designs are applied on garments during construction, these handcrafted textile garments can be designed and used for many contemporary fashion trends, if structural and decorative designs are properly selected and placed appropriately on garment parts, they can be promoted and preserved in the Nigerian traditional society.

Technically, structural and decorative design skills can be developed and enhanced in the appropriate selection and placement of design details on fabric for garment production. The National Policy on Education (2004) defined Technical Education as that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge. Its emphasis is the use of hands and brain. Technically, the study will aid designers to acquire the right skilled manpower for small and large scale garment industries.

1.8 Basic Assumptions

1. It is assumed that interesting structural and decorative designs can be skillfully applied on garments if the right tools, materials and equipment are used.
2. The aesthetics and beauty of fabric can be enhanced after applying structural and decorative details. Fabric can also be designed artistically for placement of structural and decorative designs.
3. In the selection and placement of structural and decorative designs on garment parts, the application of the elements and principles of design should be employed.

1.9 Scope and Delimitation of the Study

The scope and delimitation of the study is examination and remodeling structural and decorative designs on ladies garments in Kaduna metropolis.

The study covered some selected staff and students of the Department of Textile Technology and Fashion Design, Kaduna Polytechnic, Tudunwada, Kaduna, selected fashion designers and tailors located at Unguwar Rimi, Kakuri, Barnawa, and Gonigora. All in Kaduna Metropolis.

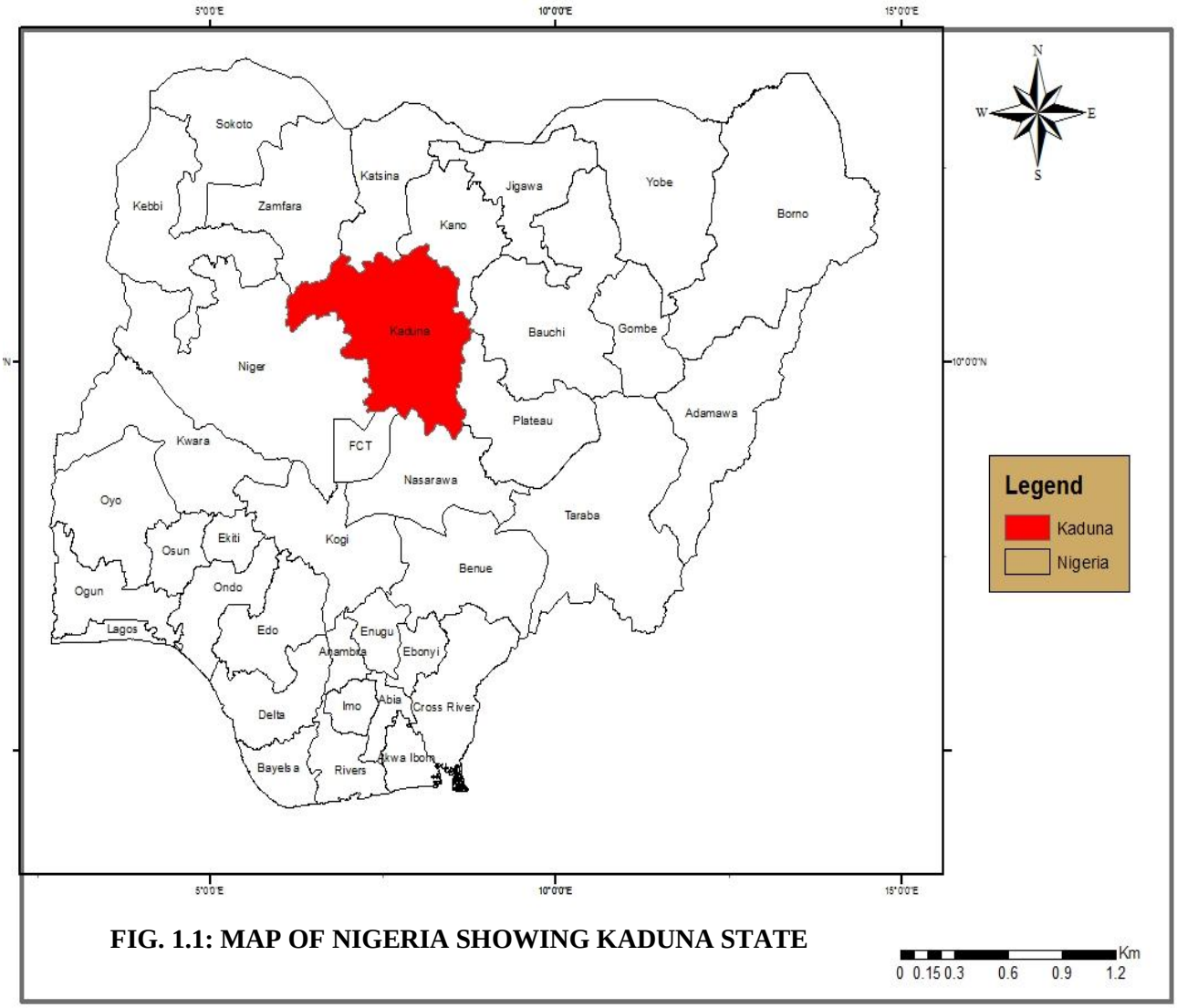


FIG. 1.1: MAP OF NIGERIA SHOWING KADUNA STATE

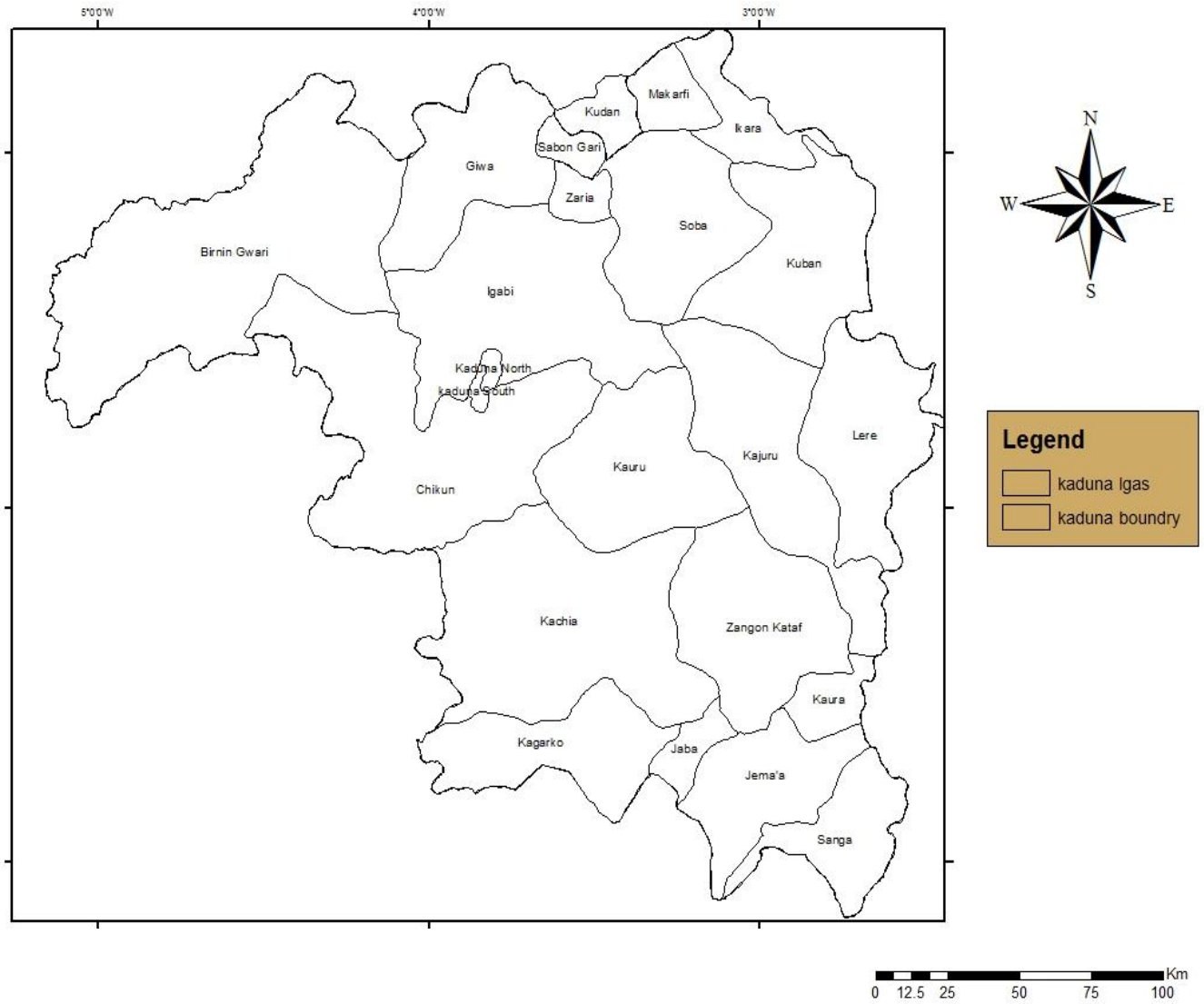


FIG. 1.2: MAP OF KADUNA SHOWING LOCAL GOVERNMENT AREAS

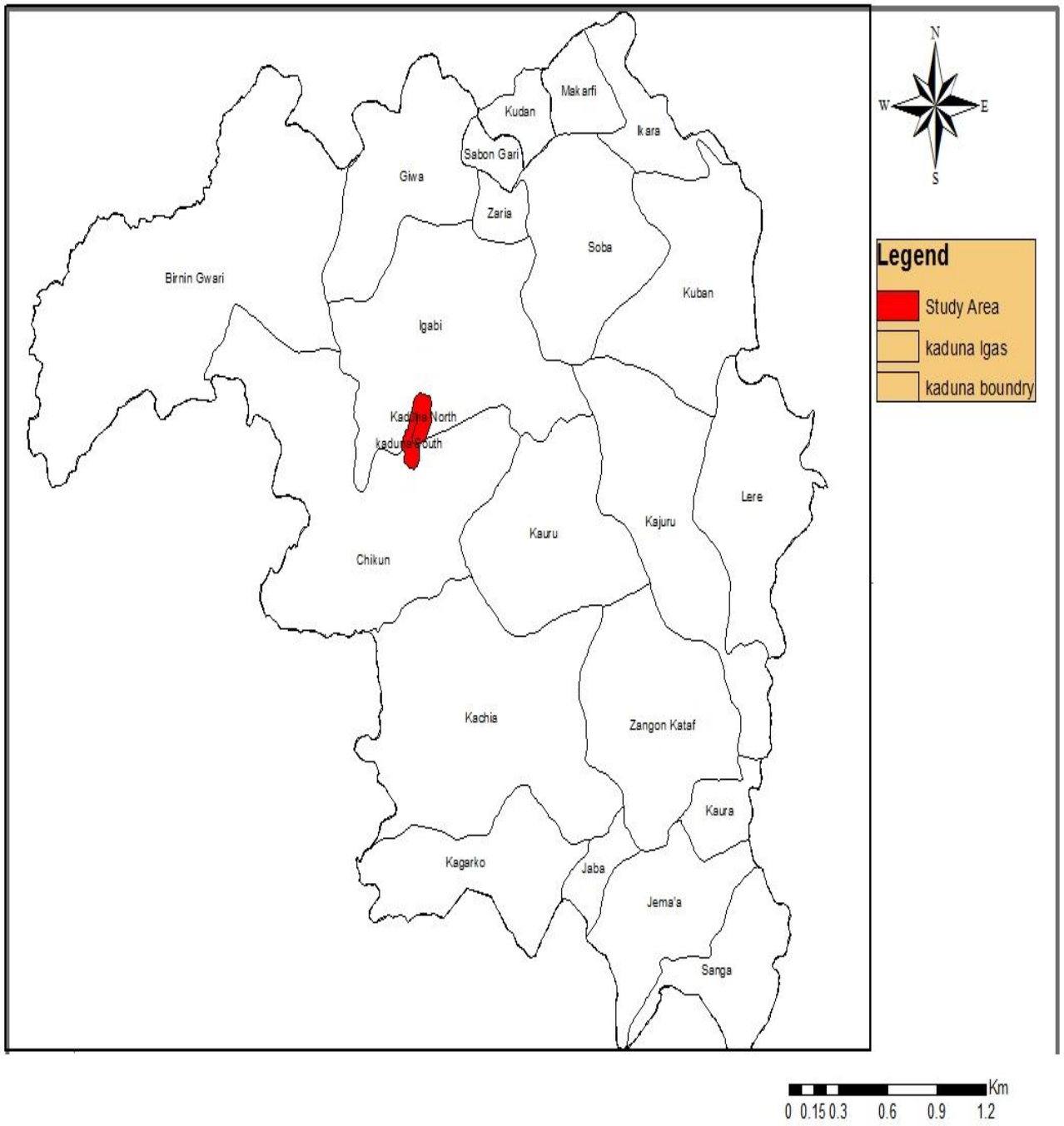


FIG. 1.3: MAP OF KADUNA SHOWING LOCAL GOVERNMENT AREAS OF STUDY

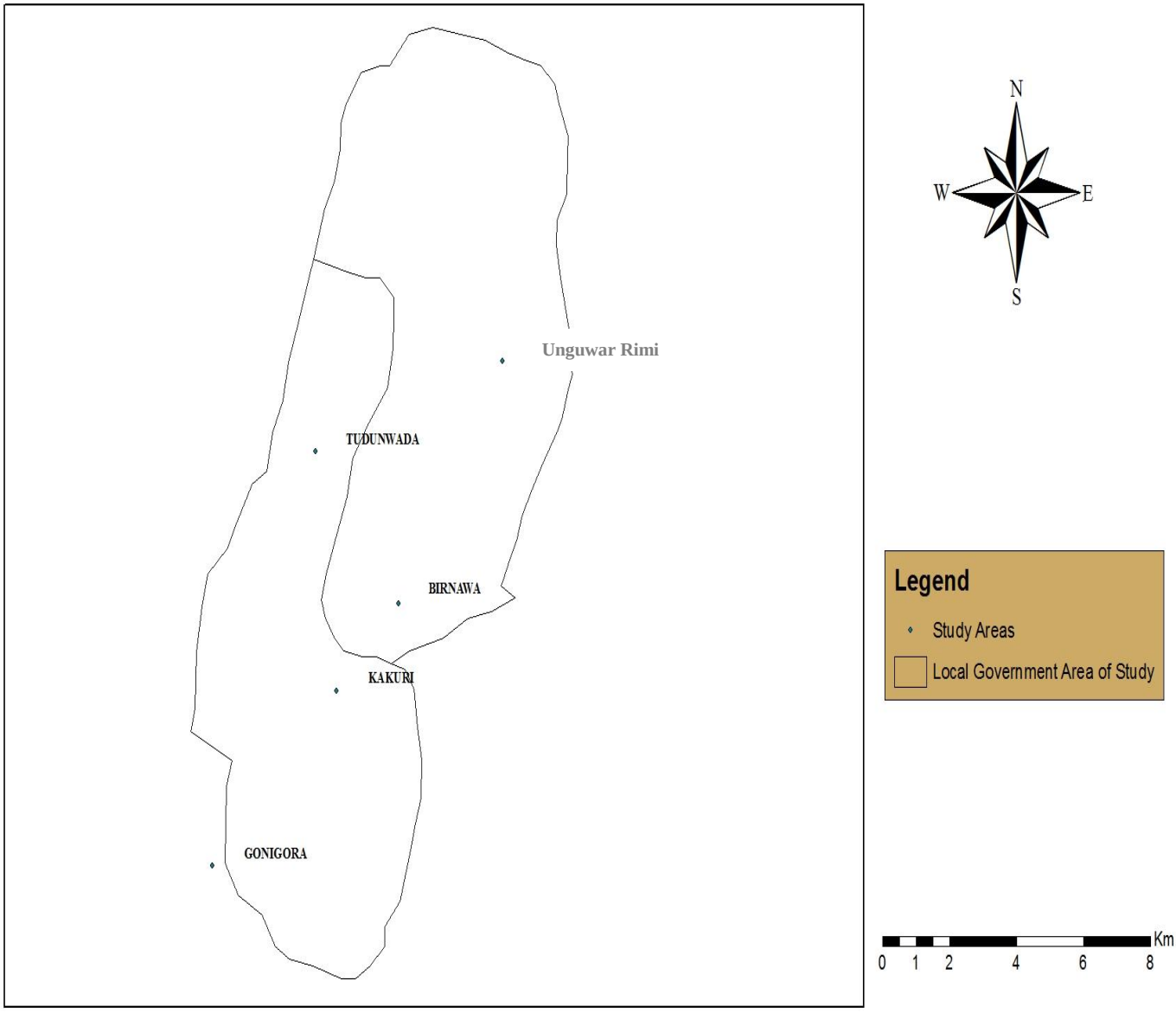


FIG. 1.4: MAP OF KADUNA NORTH AND SOUTH SHOWING SAMPLE AREAS

1.10 Limitation of the study

Fashion designers and tailors were not willing to release their garments during the fieldwork because they were owned by clients.

1.11 Conceptual Frame Work

Sturm *et al (*1973) formed the conceptual framework upon which this research is established. The authors stated that, design as it relates to clothing deals with the attractive combination of the elements of design according to design principles. Clothing, which are pleasing to the eye conforms to these principles. Attractive clothing has high artistic value as a beautiful painting or an elegant building. Each garment can be unique, expressing creativity, while conforming to the high standard of quality design.

The elements of design as related to clothing include colour, line, shape, texture and fabric design; the authors stated that as in any form of art, the degree to which the application of these design elements adheres to design principles, determines the success of a design. The interrelationships of these design elements can be controlled in such a way as to produce aesthetically pleasing garments. The researcher shares in the philosophy of the authors which was set to create and design garments that are beautiful and appealing to the eyes; based on the elements and principles of design.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

2.1 Introduction

A review of related literature is centered on the following topics which are pertinent in this study: These are Historical Development of Structural and Decorative designs on garments, structural and decorative designs, Clothing, Embroidery, Paper Pattern, Stitches and Seams, Clothing Construction, Fashion Designing, Elements and Principles of design, Commercial Patterns and Fashion Accessories.

2.2 Historical development of structural and decorative designs on garments

Techniques employed in garment embellishment have been on for ages. According to Crill, *et al.* (2009), decorations and designs on garments emanated from different places across the globe. Such garments evolved from different eras, few of which pre-date the nineteenth century, the years that saw elites in different parts of the world embracing either complete or partial western dress styles.

However, Xibao (1984) revealed that for decades, visitors to south Florida have been struck by the novel and colourful dress of the Seminole Indians. It was reported that, intricate designs adorn most garments. Patchwork clothing was considered to be Seminole's traditional dress which flowered around 1920.

Museum (1977) observed that women's garments consisted of full floor length; skirts were gathered at the waist line with long sleeved blouse attached to cape and ruffle on the shoulder; to complete the woman's outfit, she wears as many strings of glass beads as she could. Xibao (1984) stressed further that Seminole women later developed a new decoration technique of the famous patchwork; early designs were blocks or bars alternating patchwork which was rapidly adopted as a way to further embellish the early already made colourful clothing.

Xibao (1984) also affirmed that evidence of patchwork and piercing of small pieces of fabric together to create a larger piece and quilting layers of textile together, has been found throughout history. The earliest example has been located in Egyptian tombs, about 5000 years ago, while Holstein (1973), stated that in America, patchwork enjoyed widespread revival during the great depression. Clothing recycled into patchwork declined in the United States after World War II. Guerrier (1992) also stated that, patchwork embellishes the surface of a fabric. The author stressed that the idea of making something beautiful and useful from materials which may be discarded or cost little are in vogue, especially in today's climate of conservation and recycling.

According to Wooster (1972), patchwork is the joining of pieces of fabric to form a larger unit of fabric. The interesting characteristics of any patchwork are the designs that joined the fabric pieces together. The author affirmed that the idea of patchwork originated from the development of needle and thread, the techniques had been widely used in Mongolia, Egypt and India. The art of patchwork can be seen on clothing, blankets and carpets among others.

Holstein (1973) recorded that, during the 12^{th} century Mongolians used patchwork to make clothing for extreme winter clothing. The author noted that patchwork has its beginning in the dawn of time, dating back to when clothing was first considered a good idea. Animal skins were stitched together to make clothing with patches applied to worn garments for decoration.

Diji (2005) observed that, another form of decoration on garments is the use of sequins. These are disk-shaped beads used for surface embellishment which are available in a wide variety of colours and geometrical shapes. The author affirmed that, evidence exists that gold sequins were being used as decoration on clothing in the Indus valley as early as 2,500 B.C. Kerwin (2002) stated that, coins known as sequins were used for

centuries throughout the Mediterranean, especially near Persian Gulf. In the cultures where these sequins circulated, the custom of stitching sequins on women's clothing, head-dresses, face veils and over the hips originally arose as a way of displaying the family's wealth. Douglas (2004) noted that, the ancient custom of displaying family wealth led to the use of sequined fabric and trims in modern fashion.

Other forms of decorations on fabric include pleats and tucks. According to Brooks (1957), a pleat is a type of fold formed on a fabric; it is commonly used in clothing to gather a wide piece of fabric to a narrower circumstance. The author stated that pleats are categorized as pressed; they are heat-set into a sharp crease, or unpressed, resulting in soft rounded folds. Pleats sewn into place are called tucks.

Cumming, *et al* (2010) stated that, Accordion pleating is a form of tight pleating which allows the garment to expand its shape when the wearer moves. Accordion Pleat is also used for some dress pleats such as pleating the end of the elbow, with the fullness of pleat gathered closely at the cuff. The authors reported that this form of pleating inspired the skirt dancing of Loie fuller, accordion pleats may also be used to produce hand fans.

Brooks (1957) observed that, box pleats arc knife pleats and back to back. Box pleats create more fullness, as they also create a bulkier seam, while inverted box pleats have the "Box" on the inside rather than the outside. Carl (1963) stated that, cartridge pleats are used to gather a large amount of fabric into a small waistband or armscye without adding bulk to the seam. This type of pleating allows the fabric of the skirt or sleeve to spring out from the seam. Arnold (1985) noted that, during 15th and 6th centuries, this form of pleating was popular on garments of men and women. Cartridge pleating was resurrected in the 1840's to attach the increasingly full bell-shaped skirts to the fashionable narrow waist. Carl (1963) stated that, fluted pleats are very small, rounded or pressed pleats used as trimmings. Arnold (1985) also observed that, fluted pleats are

crisp pleats set in silk fabrics by designer, Mariarno Fortuny in the early 20th Century, using a secret pleat-setting process which is still understood. Honey comb pleats are narrow rolled pleats, which are used as foundation for smoking. The author stated that, knife pleats are used for basic gathering purpose. They form a smooth line, rather than springing away from the seam they have been gathered to. Knife pleats can be recognised by the way they overlap. Kohler (1963) observed that organ pleats are parallel rows of softly rounded pleats that look like the pipes of a pipe organ. These are made by inserting one or more gores into a panel of fabric.

Owen and Gale (2004) observed that plisse pleats are narrow pleats that are set by gathering fabric with stitches, wetting the fabric and "setting" the pleats by allowing the wet fabric to dry under tension. This technique was found in the 10th century Viking graves in Brika. Rolled pleats, as stated by the author, created tubular pleats which run the length of the fabric from top to bottom. This is achieved when a piece of fabric to be pleated is pinched and rolled until it is flat against the rest of the fabric, forming a tube.

As observed by Brooks (1957), Watteau pleats are one or two box pleats found at the back neckline of 18th century gowns. In late 19th century, tea gowns were produced, used by costume historians in reference to these styles as portrayed in the paintings of Antoine. It is worthy of note that clothing features pleats for practical reasons, that is, to provide free movement to the wearer, as well as for stylistic reasons.

Verily (1986) noted that, traditional dresses are always influenced by garments from neighboring states or countries, therefore, no one can tell the origin of garment embellishment or source of the structural aspect of dress design. Max (1990) stated that, international and local designers who favour indigenous and classic garments, embrace new designs which are later embedded in indigenous styles, in some cases, older styles

are re-worked into new details with the aid of new technology. However, these new discoveries are still relevant to individuals own community today.

Dorling (1996) stated that decorative designs applied on garments include gathers, tucks, pleats, quilts, embroidery, frings, braids, sequins, appliqués and topstitching among others. These are borrowed designs from foreign already-made garments which are either new or sourced from the second hand market (bend down boutique). Such designs are adopted and applied on most locally made traditional garments.

The following figures depict applied and decorative designs. These emanated from variety of places around the globe and from different eras, few of which pre-date the nineteenth century.

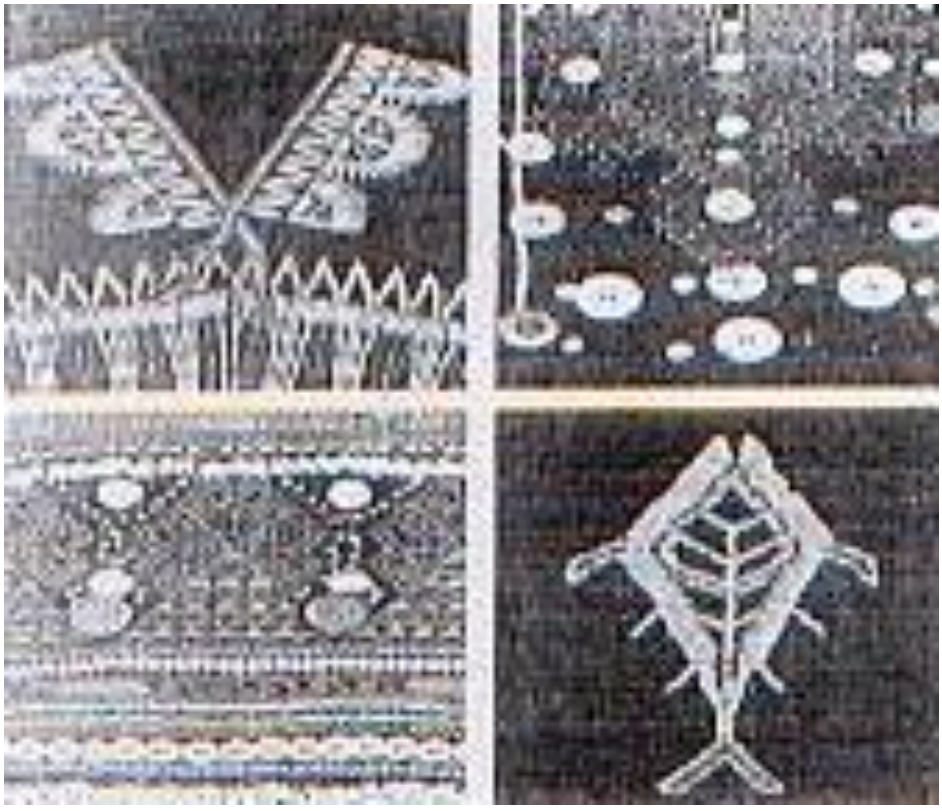


Fig. 2.1: Women's tubular dress of cotton, with applied glass beads and shells.
Indonesia (East Sumba) mid 20th Century)
Source:- Crill *et al.,* (2009) World Dress: Fashion in detail



Fig. 2.2: Women's gown pleated and embroidered with cotton Hungry (mezokovesd) second half of 19th century
Source: - Crill *et al.*, (2009) World Dress: Fashion in detail



Fig. 2.3: Women's skirt decorated silk, cotton and wool, China (Hoklo people) 1980, Valery M. Garret Collection
Source: Crill *et al.*, (2009) World Dress: Fashion in detail

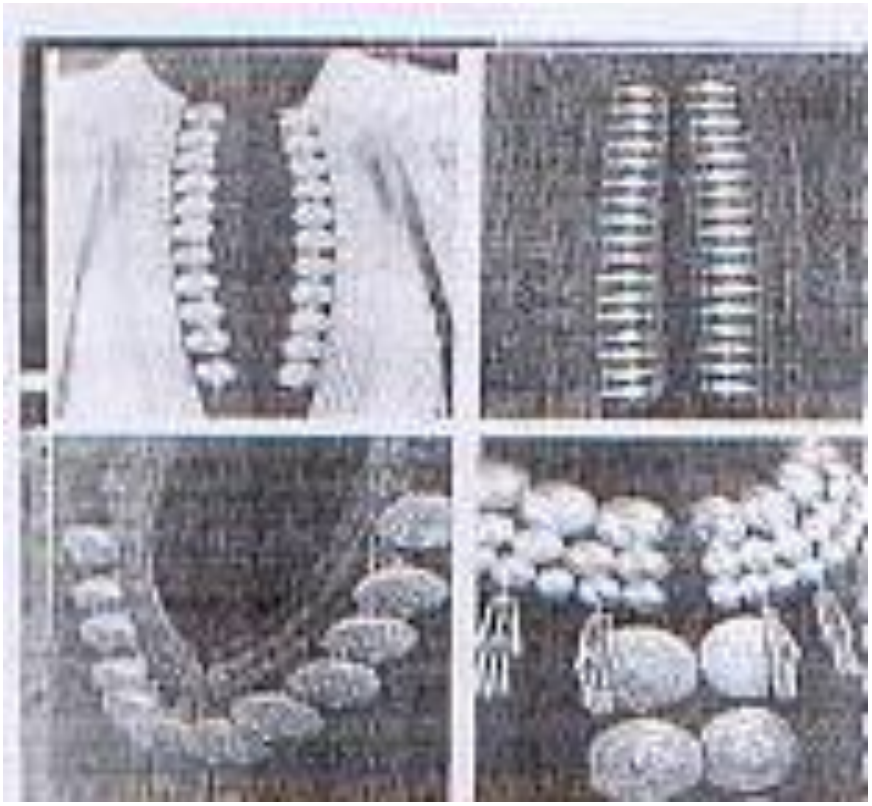


Fig. 2.4: Women's Shirt (Kurta) with embroidery and embellishment, Pakistan (Indus Kohistan, North-West Frontier Province mid 20th Century) Source: Crill *et al.*, (2009) World Dress: Fashion in detail

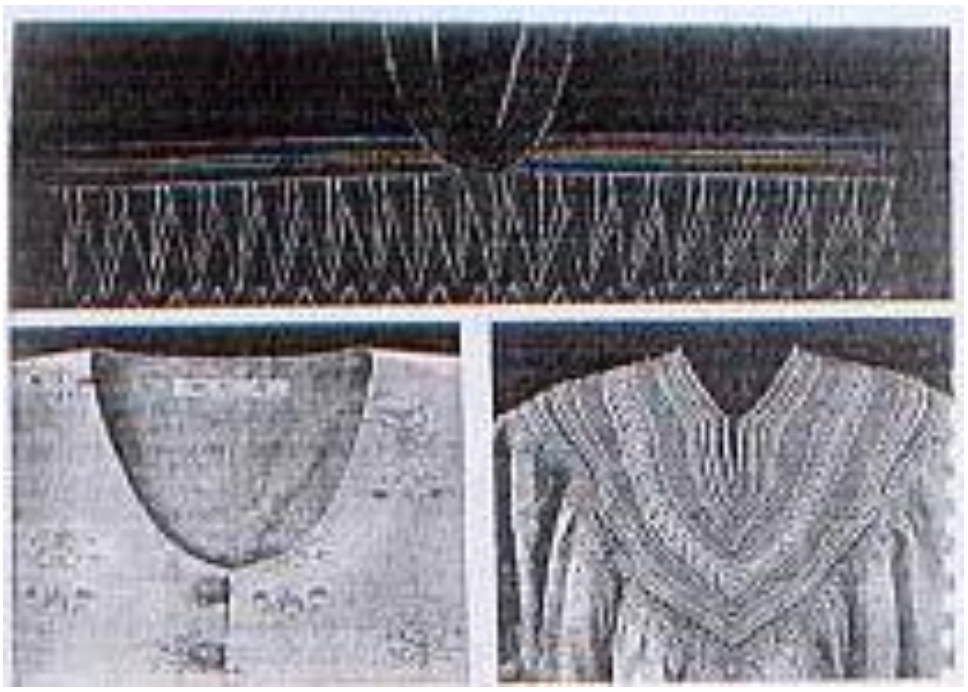


Fig. 2.5: Women's Shirt (Kurta) with embroidery and embellishment, Pakistan (Indus Kohistan, North-West Frontier Province mid 20th Century) Source: Crill *et al.*, (2009) World Dress: Fashion in detail

2.2.1 Structural and Decorative Designs

As observed by Okafor (2001), structural design is formed when garment pieces are joined together by seams, darts, pads and pleats.

Abling (1997) also stated that, structural design is formed by stitching pieces like collar, cuffs, yokes, and pleats together. Frings (1987) also stressed that, sketching is the first part of the design process; it is the fundamental tool used to communicate seams, darts, pockets, zipper, topstitches or buttons. It is not only an artistic pleasure, but also a phase during which functional and structural design is executed. The author stated further that, design relates to the size and shape of an object and that the attributes essential to designs are simplicity, good proportion and appropriateness of materials used. Simplicity in this context refers to lack of ornamentation. Hollander (1993) stated that, every part of a piece serves a purpose in structural design: good proportion is necessary, materials selected for a design should be chosen for the intended purpose without sacrificing the aesthetic goal. Knight (2008) observed that the structural design of a garment allows it function. It determines the texture, notions, construction lines and shapes as well as the fit of the garment. Gawn and Derke (1975) and Frings (1987) also stated that, design of a garment determines the fit; where and how it will open and close, movement, protection, air circulation and safety consideration. However, the most successful designs are those that meet their functional criteria and purpose.

According to Wolfe (1989), decorative design is a surface enrichment of a structural design, and that any line, colours or materials that have been applied to a structural design for the purpose of adding a richer quality to it, constitute its decorative design. Okafor (2001) noted that, decorative design is a surface enrichment added after the basic structure such as buttons, lace and frills are made. Tate (2007) stated that, decorative design is made after the dress is stitched by placement of buttons, frills, lace,

pleats and tucks; or by embroidering with different colours, patch work or dying. Kefgen (1971) affirmed that for a dress design, different lines, curves, colours and textures are used. The author stressed further that, these elements should be blended in such a way as to make the design attractive to achieve a good design. Knowledge of basic principle of art is essential, more also, elements of art are used on the basis of this principle that guides designers in the proper use of various elements.

According to Knight (2008), some decorative ideas for garment embellishment include topstitching, decorative machine stitching, machine and hand embroidery, appliqué, beading, patchwork, quilting, drawn thread, piping, couching, fringing, gathering, pleating and smoking among others.

2.3 Clothing

Mckelvey (1996) observed that, textiles is the term given to all fabrics, whether they are in one piece or made-up into clothing or other items. Craig (1973) stated that, clothing refers to any covering for the human body that is worn, while wearing of clothing is exclusively a human characteristics and is in all societies.

Clothing has been used by human kind from the earliest times to fulfill many purposes. Okafor (2001) stated that every society's dress provides the means of physical protection of the human body against weather and insect bites. Flugel (1976) suggested that the type of clothing worn depends on functional considerations. Clothing can serve as protection from elements; can also enhance safety from hazardous activities by providing a barrier between the sun and the environment. Clothes can provide a hygienic barrier, keeping toxics away from the body and limiting the transmission of germs. Clothing also protects people against many things that might injure the uncovered human body. Roberts (2008) noted that clothes perform different social and cultural functions such as individual occupation and sexual differentiation as well as social status. Weekes (l997)

observed that, in almost all societies, clothing serves as a symbol of wealth, prestige, occupation and sex, and that forms of dress include ritual and traditional costumes, casual clothes, occupational dresses, fashionable dresses as well as costume for both sexes and different ages. Goldman (2005) noted that, there are four primary factors in clothing which are identified as comfort, fashion, feel and function.

Harry (1968) also noted that in hot climate, clothing provides protection from sunburn or wind damage, while in cold climates its insulation properties are generally more important. Clothes act as protection from elements including rain, snow and other weather conditions, as well as from the sun. Clothes also reduce the level of risk during sporting activities or work.

Okafor (2001) stated that, ancient man probably wore no clothes, thus they used fire to keep themselves warm. Later they covered themselves with leaves and used skins of animals to protect their bodies from insect bites and weather. Robert (2008) reported that, to archaeologists and anthropologists, the earliest clothing likely consisted of leaves, grasses of leather and fur. The author argued that, knowledge of such clothing remains inferential since clothing deteriorates quickly compared to stone, bone, shell and metal artifacts. Carl (1963) also explained that clothing of the early man was used for ritual, ornamentation .and protection.

As reported by Robert (2008) Archeologists have identified very early needles of bone and ivory about 30,000 BC, found near Kosteki, Russia in 1988, as well as dyed flax fibers that could have been used in clothing in a prehistoric cave in the republic of Georgia, dated back to 36,000 B.C. Scientists are skill debating when people starting wearing clothes; as such, the date of the origin of clothing remains unresolved. However Lawler (1989) recorded that the world earliest cloth was discovered in a prehistoric village near the River Tigris in South – Eastern Turkey and has been carbon dated to 7000

B.C. It is rare for textiles to survive from that period, called the Neolistic or New Stone Age. Craig (1973), in support of McJimsey (1963) stated that the origin of clothing remains obscure since actual garments do not survive in archeological deposits. The author however stated that, from discovery of bone needles, there is evidence that sewing existed as early as 10,000 B.C.

Barnett (1997) observed that, from earliest times, some plants as well as animal skins were used to produce fabrics. The author also noted that, Egyptian mummies which have been exhumed from burial ground, were found wrapped in binding of cotton and linen. She stressed further that Egyptians produced fabrics ranging from coarse sack cloth to fine and transparent linen dresses which date back to 2,800BC. Howell (1980) observed that, early humans changed their way from being nomadic and started to live in settlements. At a stage, cultivation of cotton and sewing began. Hollander (1993) reported that although sewing was regarded as a woman's work, there were larger workshops where mass fabrics were produced by working men. McKelvey (1996) stated that clothing design in the earliest time was simple, and took into account the effect of the weather.

2.4 Embroidery

Embroidery is a textile art and other handcraft of decorating fabric on materials with needle, thread or yarn. Miller and Lubell (1965) referred to stitches as another word for embroidery, the author stated that embroidery is as old as needlework and the needle work is as old as man's earliest civilization; needle of bone and bronze have been found in the ancient tombs of Egypt dating from 5000 BC. Waddel (2004) observed that the art of embroidery has long been associated with the dress trade and even in the past with the tailors profession.

Rogers (2005) defines embroidery as the embellishment of a fabric with designs worked in thread with needle. Baker (1991) also stated that embroidery is often used as a design feature to decorate fabric.

As observed by Ahuwan (2010), the art of embroidery has existed for centuries and has integrated many aspects with visuals that employ fabrics, threads and needles to express ideas. The author stated that, history has it that embroidery of other countries are identified by design appearance as exemplified as follows: -

- French embroidery is silky with small designs
- Japanese hand embroidery is lavish on Kimono and has large designs
- Philippine has small designs
- Mexican drawn work is worked in lacy spider web
- Chinese hand embroidery is fine and is worked on delicate plain fabric in silk, satin, damask or in gauge fabrics.

  Due to observation by the researcher, embroidery work on garments in Kaduna where the researcher resides is done successfully on brocade fabrics, of recent, it has been observed that, heavy machine embroidery on "Ankara" printed cotton fabrics on ladies blouses, is the current trend in Kaduna metropolis.

2.4.1 Machine embroidery

According to Knight (2008), many contemporary embroidery is stitched with a computerized embroidery machine, using patterns digitized with embroidery software. In machine embroidery, different types of 'fills" add texture and designs to finished work. Machine embroidery is used to add logos and monograms to business shirts, caps, sportswear, gift items and team apparels; decoration of household linens, draperies and decorated fabrics that mimics the elaborate hand embroidery of the past are presently in vogue.

2.4.2 Bead Embroidery

According to Rampel (2000) embroidering beads onto clothing or other fabrics and leather objects is a time – honoured craft. Bead embroidery can enhance and embellish clothing to create effects, ranging from counter – culture to haute couture; it can adorn yokes of dresses, skirts, blouses as well as waist band areas, collars, cuffs, sleeves and pockets. It can also decorate vests, T-shirts, jackets, belts, hats, scarves, shoes and bags. Seed beads, bugle beads and large beads can be used to create embroidery designs on edgings and fringes. Embroidery can be made directly onto a garment or other articles, it can also be made on a piece of cloth which can be sewn on an article. This method is called appliqué, a French word meaning to apply or put on.

Singer (2000) also stated that, beadwork punctuate the surface of a fabric with texture and dazzling colours, creating a focal point on a garment while beads dispersed broadly over the fabric surface serve as a subtle accent, both machine sewing and hand stitching techniques are used for beadwork, machine sewing is used to couch and strung beads onto fabric for outshining edging or free – form lines. Knight (2008) also affirmed that, beads could be hand sewn to fabric individually in rows, using special stitches to create a desired effect; it is also possible to machine-stitch individual beads with holes large enough to accommodate the machine needles; this makes it possible to incorporate beads into free – motion machine embroidery.

2.4.3 Embroidery: An African heritage

According to Alakija (2008), embroidery is an aesthetic stamp of the African outfit. Modern designs are given exotic embroidery patterns. The history of embroidery in Nigeria dates back to centuries, although it is not indigenous to the country, it has however become an integral part of the mode of dressing of the Nigerians.

According to Ogundiyile (1985), the art of embroidery has been practiced extensively by the Hausa people and powers have been attached to various embroidery works worn by the Emirs. The Hausas wear long robes and caps that are heavily embroidered for ceremonial occasions.

Hearthcote (1979) stated that the Hausa people of Northern Nigeria have long been known for their production of voluminous robes, known as "babban riga" which are hand embroidered in a range of embroidery stitches, these are mainly done by men in styles and designs, using cotton and silk yarns. Maiwada and Renne (2007) stated that the Northern town of Zaria city is renowned for the production of elaborately embroidered robes worn by men throughout Nigeria, known as "babban riga". The authors stated that these garments are made in the old walled section of the town called Zaria city. The authors stated further that in Zaria, the production of extensively embroidered "babban riga" was primarily by commission of local wealthy patrons of royal (sarauta) class, while new styles of robes and materials used, including embroidered patterns were introduced through the long distance movement of people, either by strangers travelling through a particular kingdom by traders or by those who have travelled to Mecca on "hajj" who brought robes back with them. Maiwada and Renne, (2007) also stated that the production of embroidered robes expanded greatly during the nineteenth century after the establishment of the Sokoto caliphate by Shehu Dan Fodio in 1809. The authors however stressed that it was precisely during the 1970 that a few women began to embroider not only caps, but "babban riga" in the 1970s, with many Zaria city men moving into machine embroidery work during the 1960s and afterwards, the continued demand for lighter – weight hand-embroidered robes was filled by women who learned to do this work from their brothers, husbands, as well as from young boys who hand-embroidered when visiting women's homes during the 1970s and early 1980s.



Plate I: A man producing a woman's embroidery gown using soldering iron

Source: Maiwada and Renne (2007) Textile History. The *Journal of the Pasold Research Fund Ltd.*

As observed by Jefferson (1974) Gorgeous voluminous robes intricately embroidered garments, are symbols of prestige and rank in the Nupe and Hausa societies. The author observed that, three types of stitches were used primarily by the Nupe and Hausa embroiders; the chain stitch, button-hole stitches and couching. The stitching is done with imported or indigenous silk thread on imported or hand-woven cloth.

De Negri (1976) also observed that Yoruba men have also used some embroidery on clothing, especially on the neckline of traditional "Agbada". There are other types of embroidery designs. These are used on bedspread, table cloth or wall hangings.

Machine and hand embroidery add beauty, elegance and aesthetics to garments, when they are strategically placed on "Babban riga" "Booboo" Kaftans and household items.

2.5 Paper Pattern

According Simplicity (1987) pattern of a garment is the blue print on which the basis of the fabric is cut and that patterns can be prepared using brown paper and news paper for rough drafts, while strong paper can be used for a parmenat basic blocks.

Campbell (1999) defined drafting as a system of drawing patterns on paper with mechanical precision on the basis of body measurements, Tuit (1976) also defined pattern drafting as a method of obtaining patterns by working from measurements of a figure according to a set of instructions, and drawing a shape on paper or card. Armstrong (1987), in support of Tuit (1976), also stated that pattern drafting is a system of pattern making that depends on a series of form or figure measurement to complete a paper pattern.

Aldrick (1985) affirmed that, designers frequently employ one of the three pattern creation methods. The flat pattern method which begins with the creation of a shape on a block; the sloper, usually made of a lightweight cardboard or tag board without seam allowances or style details. Once the shape of the sloper has been refined by making a series of mock-up garments called toiles, the final sloper can be used to create patterns for many styles of garments with varying necklines, sleeves and placements of decorative and structural designs.

According to Morton (1965), pattern drafting is the primary preparation for creating garments. During drafting, the initial measurements and adjustments are done on paper. After drafting, paper is placed over the drafted patterns, seam allowances are added. These are later cut-out and placed on actual fabric for garment making, while slopers are later produced and kept for future production.

Armstrong (1987) also stated that another alternative, is to work directly on a dress stand; either by using a cheap fabric such as calico or muslin, which can be later

used as a pattern to cut the fabric. This system is known as modeling. Modeling is a method of making a pattern by manipulating muslin to create a style on a dress stand. The author stressed that, to a dressmaker with creative ability, this method of producing a pattern can be satisfying; and to model successfully, a dressmaker must have a sense of proportion, line, and a keen sense of accuracy.

As observed by Tuit (1976), there are two stages in pattern drafting, the making of a set of five basic patterns known as “block patterns” or ‘blocks’ and secondly, the adaptation of the style required in pattern drafting. Basic pattern set consists of front and back bodice, skirt, trouser and sleeves. These are drafted for each figure, and developed without design features. The basic set are traced for the adaptation of the blocks to the style required.

Banne (1972) and Tuit (1976) report that, the basic pattern is a simple design free of fashion details. It has the minimum number of seams and structural darts that are necessary to fit the body curves. Apart from full scales, basic patterns are also available in different scales.

Campbell (1999) stated that, paper patterns from different designs can be drafted, manipulated for various styles and stored. The author further stated that the master plan with alternations can be produced, and stored later use to develop other styles.

Aldrich (1995) noted that, free hand method of pattern making is a method whereby tailors or designers mark styles on fabric or paper and cut. This method lacks precision though, it is time saving. It is worthy of note that several fitting faults normally occur in garments made using this method. The author stressed further that, designs produced using free hand cutting are always difficult to repeat, when orders are made. For other methods, pattern and markings are normally kept for future production and references. Intricate designs are not easily obtainable using freehand method, and where

designs are made, a lot of fabric is wasted before perfection is achieved. Pattern drafting is an integral part of the garment industry. As observed by Butterick (1971), patterns are the major master plan of any dress making project. The designers are guided by the construction symbols to make sewing easier and accurate.

2.6 Stitches and Seams

As observed by Butterick (1977), exhibiting some stitches and seams on garments can be creative. Some of the hand stitches for clothing construction are basting, padding saddle, whipping, diagonal, feather and back stitches among others. Tacks are also done during construction for markings. Bar-tack, a straight re-enforcement tack is also used at the end of a hand worked button hole or at the corner of pockets. Top stitching at the right side of the fabric contributes to a special decorative touch on garments. Some of the special seams include top stitch seam, lapped, welt, slot, corded and piped seams among others. Since the wrong side of a garment is as important as the right side, all seams should be finished using the most suitable methods.

As observed by Knight (2008), a seam finish helps the seam allowances by supporting the garment shapes and prevents raveling. Seam finish techniques include hand overcast, which is suitable for most fabrics. Turned under method is used for lightweight fabrics and plain woven synthetics, while pinking is good - for firmly woven fabrics that does not ravel. The edges should be pinked with pinking or scalloped shears; machine zigzag could be used for fabric that tend to ravel easily, while zigzag stitches are used to re-enforce raw edges. Smaller zigzag stitches are used for lightweight fabrics while larger stitches are used for bulky fabrics.

2.7 Clothing Construction

According to Vogue (1977), clothing construction can be compared to the classic art of sculpture. While the sculptor is involved in manipulating clay, carving or casting a

form, clothing construction is involved with touching, appraising and working with fabric that will be molded and shaped into a three-dimensional design. A designer, therefore uses the fabric to manifest his or her ideas about fashion.

Mazumdar and Vatsala (2004) reported that, clothing construction is one of the basic functions of fashion designing; and for effective construction of cloths, adequate knowledge and skills in sewing for converting fabric into garment is essential. Jewel (2000) affirmed that, selection of a good sewing machine with various functions for piping, ruffling, pleating, binding darning, hemming, making buttonholes, and attaching fasteners among others should be acquired; while the application of the principles and elements of clothing construction, adequate knowledge of sewing techniques and methods, as well as the selection of appropriate sewing accessories and pressing techniques, as well as paying attention to final details in clothing construction is necessary in order to produce attractive garments.

Gawn-and Derke (1975) noted that garments are designed considering three major aspects-structure, function and decoration. Kefgen (1971) observed that clothing should be structurally effective and appropriate for consumers need, while functionally, clothes should portray the activity a person performs while wearing it. Decoratively, the garment should fit the wearer. However, Davis (1980) observed that, the above three aspects are fulfilled in a garment when the elements and principles of design are appropriately put in place Wolfe (1989) observed that eyes move from colour and silhouette to the design of a garment and two types of designs that are important in dress making are the structural and decorative designs.

2.7.1 Garment Trimmings

According to Adamtey (2008), in clothing, trimmings are all other materials used in garment designs apart from the fashion fabric, selection of suitable sewing threads,

press studs, elastic, hooks and eyes, zips, buckles and buttons is mandatory. Nelms (1976) also stated that decorative and ornamental trimmings include ribbons, laces, tringes, beading, tucking, braiding and also making use of printed fabric to accent a garment; the author further stated that ornaments include jewellery, buckles, flowers, tassels and rouleaux. These are applied to give emphasis to a particular area on a garment, for beauty. However, if trimmings must be used, they should harmonise with the garment fabric.

2.8 Fashion Designing

According to Waddell (2004), design means to have a mental plan, make a preliminary sketch or delineate an idea or concept in advance or realization. Nelms (1976) also defined fashion design as the art of the application of design and aesthetics or natural beauty to clothing and accessories. Fashion deals with a world of illusion. Frings (1987) stated that, the fashion designer conceives an idea, experiments with several alternatives in a sketch form, makes a choice from the conceived idea, produces a pattern from the sketch and designs a toile from a cloth sample before manufacturing. Cater (1977) observed that, design ideas sometimes originate on the drawing board, starting with an idea for a Silhouette. Davis (1980) affirmed that, designers sometimes experiment by sketching on paper, considering design elements two dimensionally, and at the same time imagine how the garment will look three dimensionally, before it is made up in a fabric. McJimsey (1963) stressed that, for a designer to design well, he or she needs to have knowledge of fashion and be able to make-up garments, have a good taste, knows how to select colours, c1oth textures and the application of principles of design. The principles of design are the guidelines for the use of the elements of design. They are used for creating and evaluating garment designs. For proper arrangement of the elements of design, application of principles like balance, proportion, emphasis and unity/harmony are essential. As observed by Tate (1987), the principles and elements of design are specific

guides that help to create attractive garments. The author noted that, to design a dress, different lines, curves, colours and textures are used.

2.9 Elements and Principles of Design

2.9.1 Elements of design

Design as it relates to garment production deals with the attractive combination of the elements of design according to design principles. The principle of design guides the designer on how the elements are combined in a design, the success of a design is determined by the degree to which the application of these design elements adheres to this principles.

According to Okeke (1990), design can be described as an arrangement of materials to produce a certain result. Oguntona (1986) stated that the term design in broad concept has implication for most human behaviour, especially with respect to manipulation of structural elements. The author stressed further that with the creation of man himself, when various anatomical pieces were molded and structured into what we know as human body; to the author, design means planning, order, structure and organization to enhance effective operation.

According to Swami (2011), a design is a deliberate or well considered plan, it is defined as an arrangement of lines, forms, space, textures and colours; it involves choosing these elements and arranging them in order to get a good result. Weber (1990) stated that "building blocks" which designers use to put their creation together are called elements of design which include line, shape, space, texture and colour.

Adamtey (2008) observed that in clothing, elements of design are applied basically in two major areas, these are structural and decorative; while Frings (1987) stated that it is mandatory for a designer to incorporate in each garment a pleasing combination of all the elements of design, which are colour, fabrication, line, shape, and

detail. Swani (2011), Adamtey (2008), Weber (1990) and Frings (1987) all gave the following information on the elements of design as follows:

A line is a series of points connected together to form a narrow path, lines compose shapes, or forms, and may be vertical, horizontal, diagonal zigzag or curved.

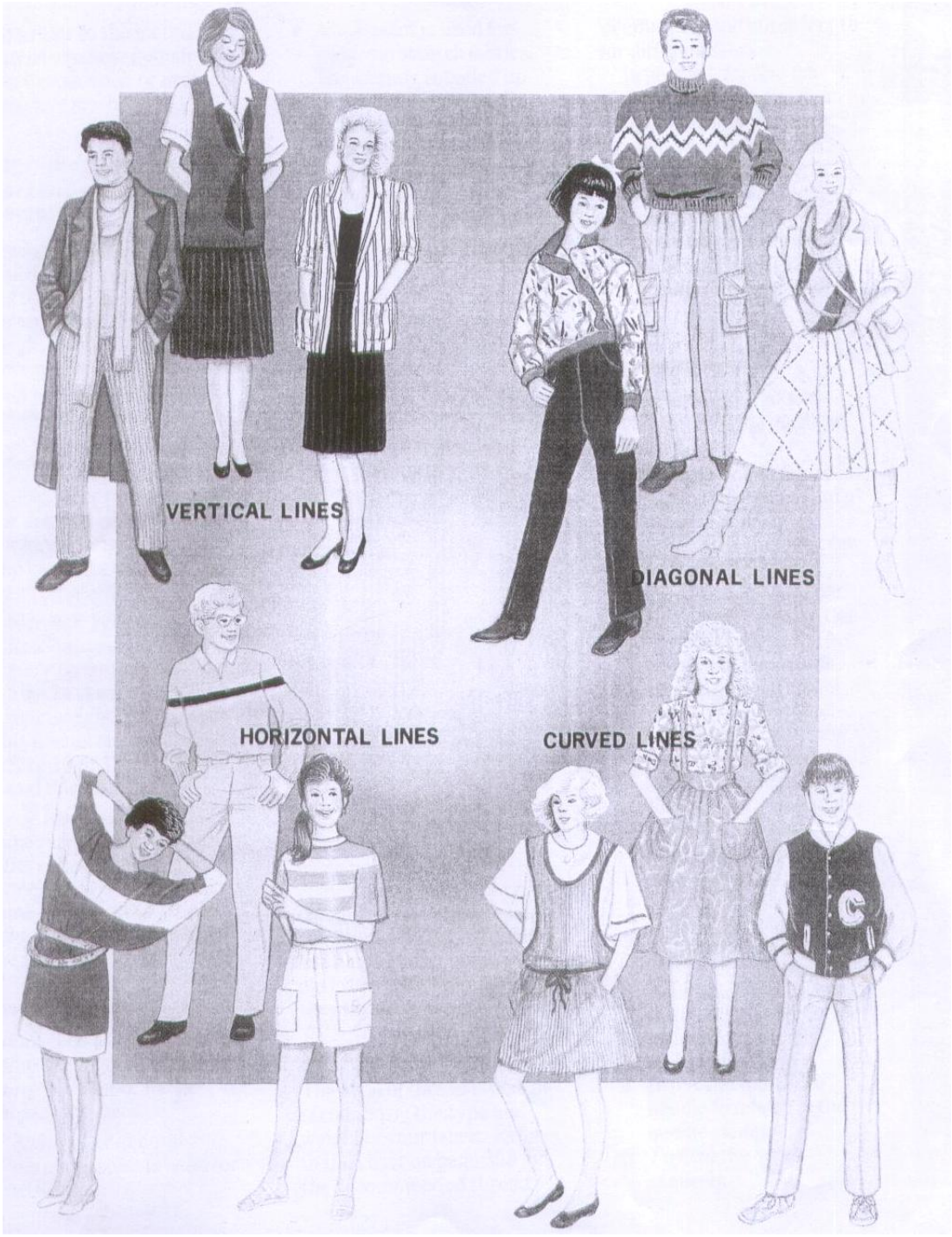


Fig. 2.5: Vertical, Horizontal, Diagonal and Curved Lines in the art of clothing
Source: Weber, J. (1990).

The authors stated that on dress design, there are many lines within the silhouette of a costume; some of the lines are structural, while others are decorative. Weber (1990) observed that structural lines are formed by sewing different parts of a garment together; they include seams, darts, tucks, gathers, pleats and necklines, armholes, waistness and hems, while decorative lines are created by adding trims such as braids, edging and buttons to a garment, both structural and decorative lines can create strong illusions; the bolder the line, the more emphasis they create.

Frings (1987) stated that line is an important element of structure. Line determines the direction of visual interest in an entire garment; details such as seams, openings, pleats, gathers tucks, topstitching and trims contribute to the line direction of a garment. The author stressed that lines have power to create moods and feelings. Vertical lines suggest stability; horizontal lines are lines at rest; they suggest repose, quiet and calm; soft curving lines express grace, while diagonal lines imply powerful movement and vitality. Zigzag lines create excitement. Lines also create optical illusions; these are lines that fool the eye, making things to be what they are not.

Adamtey (2008) stated that shape is the form or appearance of an item when lines are combined; another function of line is to create shape. Shape as an element of design can be applied to selection of neck opening for various facial types. Shapes are also divided into spaces by seams, openings, pleats and tucks. Frings (1987) stated that a good silhouette is composed of parts that in themselves have interesting shapes; there are square, round, oval, rectangular and triangular shapes, the author also observe that the finishing touches a designer adds to a garment are the details; these include trims and structural designs; she however stated that the best results are obtained by using the principles of design in their application.

As observed by Okeke (1990), the concept of colour is one of the most important and striking element of design; the colour of cloths people wear registers on the mind; as such, they are easily remembered and described by the colour of garment worn.

Colours convey many messages, they act as symbols, influence mood, and create optical illusions. Common colour schemes include monochromes, analogous, complementary, split complementary triad and neutrals.

Craig (1973) and Frings (1987), Tate (2007) gave the following information on possible colour combination. Monochromatic colour scheme employ varying values and intensities of one hue, (mono means one and chrome means hue or colour); textural variety is needed to create interest.

Analogous colours lie side by side on the colour wheel; if used together, the authors stated that these colours present rhythmic exciting effect on a garment. Complimentary colours are opposite each other on the colour wheel. The contrast makes both colours more intense; complimentary colours may be used in equal amounts or one colour may merely accent the other. The authors also stated that a triad is a combination of three colours equally distant on the colour wheel, in garment making; this colours are unusual colour combination, except in the production of stage costume.

Colour can also create illusions. Frings (1987) stated specifically that a garment in one colour can add to the illusion of height, while warm, light or bright colours advance visually, making a design seem larger. Intensity and value contracts according to the author are frequently used to disguise figure problems. (Camouflage).

Swarmi (2011) stated that the word texture has its origin from Latin “Textura” meaning weaving, the author also observed that the word is invariably used to mean the surface or quality and the feel tactile property of the substance (fabric) for practical and decorative purposes; texture and character of a fabric depends on fibre, yarn and weave as

well as the applied design or any superimposed pattern such as embroidery. The author stated that textures can be smooth, rough, fine, coarse, supple, stiff, estrous, dull, metallic, stony, transparent or opaque. Textures however affect colour, drape and silhouette.

Adamtey (2008) in his contributions stated that textures can be used to advantage in clothing design to create interesting feeling; for example a slim figure can add bulk to the body, thereby increase in body size while hiding undesirable dimensions of the body.

2.9.2 Principles of design

Principles of designs according to Swami (2011) are the results of using the elements, the principles of design are the recipe of a good art work. The author stated that the principles combine the elements to create an aesthetic placement of things that will produce a good design.

The principles of design are the rules which govern the use of the elements of design. Tate (2007) stated that the principles of design serve as guidelines for combining elements. Designers may be able to analyse problems in garment making in terms of balance, proportion, rhythm, emphasis and harmony. In garment design, emphasis is the focal point. It is the quality that draws a viewer's attention to an outstanding design.

Frings (1987) stressed that well planned emphasis will lead the eye quickly to the centre of interest; emphasis can be achieved with line, colour, texture, trims, structural details and accessories. The author stated that rhythm can be achieved through repetition of lines, shapes, colours, textures and trims. Different ways to use rhythm which is necessary to create interest in garment making include uniform rhythm, unequal rhythm, progression or gradation, continuous line movement and radiation.



Fig. 2.6: Emphasis in Dress Design
Source: www.extension.iastate.edu/publication.2010

Craig (1973) observed that harmony is the pleasing arrangements of all the parts of a garment. Weber (1990) also observed that harmony is achieved when the design elements work well together. The colours, lines, shapes, spaces and textures should all belong. Balance is observed as a result of equal distribution of weight from a central point, balance can be achieved by maintaining equal amount of interest in either direction; types of balance according to the author are – formal or symmetrical, informal or asymmetrical and radial balance. Balance in fashion design can be achieved with the use of features such as seams, decorative and structural designs.

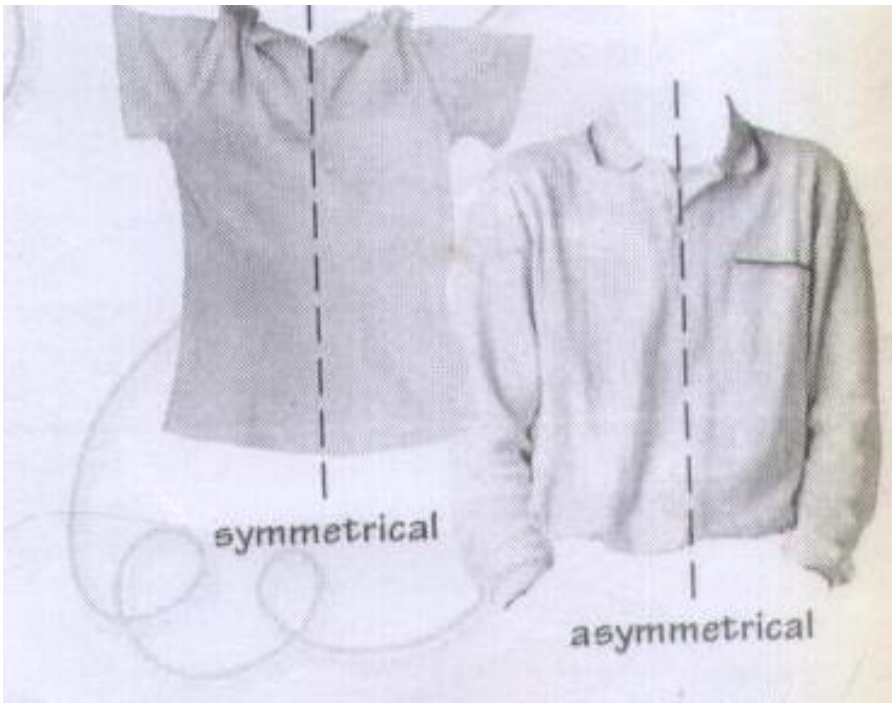


Fig.2.7: Balance in Dress Design
Source: www.extension.iastate.edu/publication.2010

Proportion in fashion design as observed by Tate (2007) is the principle that holds all the size of various components of a garment together, while the principle of unity in garment making enhances each element, thereby contributing to a harmonious production.

Oguntona (1986) observed that application of design principles is an indispensable tool which no designer can afford to discard. Structural and decorative designs are achieved through the effective manipulation of the elements and principles of design. For perfect garment design, understanding elements and principles is critical in the appropriate selection and placement of structural and decorative designs.

2.10 Commercial Patterns

According to McCalls (2008), Commercial Patterns are full scale paper patterns prepared on the basis of standard measurements, which are usually produced on tissue paper and packed in an envelope with many pieces of patterns. Brookrnan (1965) observed that commercial patterns were used by individual and industries to produce

garments and accessories as early as 1854. Janeaten (1986) opined that commercial patterns are designed to be disposable tools for garment creation process. The author affirmed that commercial patterns include paper outlines of dress styles and notes, explaining construction guidelines and table of measurements.

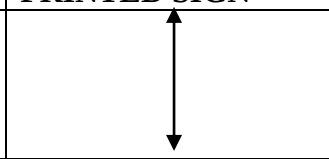
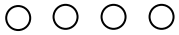
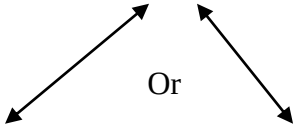
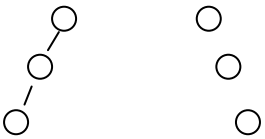
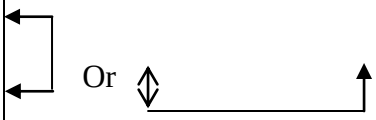
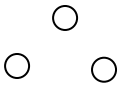
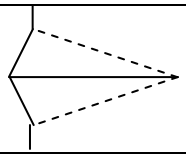
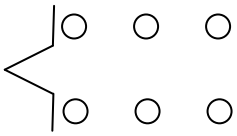
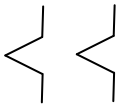
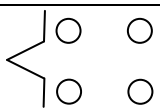
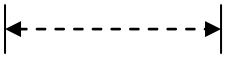
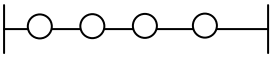
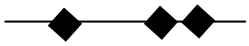
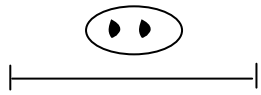
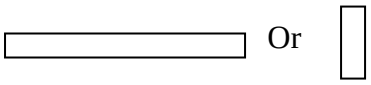
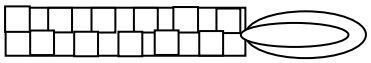
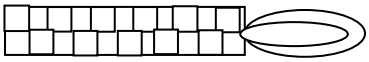
Knight (2008) noted that using a commercial pattern is a common method of creating garments and that a wide range of pattern designers that keep up with the latest trends include Vogue, Butterick, McCalls, Burda, Simplicity New Look and Kwik sew. Butterik (1977) observed that, a range of garments can be made from standard measurements. According to Simplicity (1987) stated that the pattern consists of 3 main parts – the envelope which shows a diagram of the garment the instructional sheet explaining how to put items together and the pattern itself which is normally printed on tissue paper.

Aldrick, (1985) further explained that commercial patterns for ladies and children are usually styled according to bust measurements, while pants and skirts are sized according to hip and length measurements, the author stated that information are normally written on the pattern envelope for direction; and that such information include garment details, grain line on each pattern size, centre front or back, style number or code of patterns, pattern pieces, cutting information notches and seam allowances among others.

2.10.1 Construction Markings

Presented below are the guide points for putting together and sewing garments. Some patterns have many of these markings while others have a few depending on the design details of a style. (Campbell, 1999).

Table 1: Construction Markings, Source: Campbell (1999)

S/N	PRINTED SIGN	PERFORATED SIGN	MEANING
1			Lengthwise or warp direction grain of fabric
2			Weftwise or widthwise grain of fabric
3			Bias on fabric
4			Place on fold fabric
5			Dart
6			Pleat or pleated dart
7			Gather
8			Balance marks or matching notches
9			Button and button hole horizontal type
10			Central line of fabric or fold line
11			Zip fastener
12			Position of button

2.11 Fashion Accessories

According to Impey (1998), fashion accessories are items that are used to complement an outfit. Cumming *et a*l (2010) also defined fashion accessory as an item which is used in a secondary manner to complement the wearer's outfit. The authors observed that the term came into use in the 19th century, and since then, fashion accessories have been used to complement outfits which are chosen specifically to complement the wearer's look. Frings (1987) also stated that accessories are decorative items that complement garments, and for a total fashion look, accessories such as Jewelry, gloves, handbags, hats, belts, scarves, wrist watches sunglasses, stockings, ties, leggings and tights coordinated with apparel are needed. Baker (1991) also stated that accessories are important design feature on fashionable garments all over the world, and that accessories such as wrist and headbands play an important part in the overall look of the wearer.

Cummings *et al* (2010) observed that fashion accessories are categorized into two areas, those that are carried and those that are worn. Carried accessories include canes, hand fans, swords, handbags, parasols and handkerchiefs among others, while accessories that are worn may include boots and shoes, sandals, slippers, cravats, ties, hats, gloves, muffs, Jewelry, watches, shawls, scares, socks, bonnets and stockings among others. Detachable accessories can also include lapel pins. One of the favoured forms of semiotic distinction is fashion because; fashionable cloth accessories and body adornment are easy for others to observe at a glance. For instance items such as branded handbags, footwear, jewelry are important status symbols, while head ties and hats send instant signals and aspire social status.

As observed by Impey (1998), accessories play one of the most vital roles when it comes to stamping designers identity on an outfit. Haliru in Sunday Trust Tambari of

20th December, 2009, page 3 observed that one of the most important points in fashion is for an individual to be able to co-ordinate an outfit with accessories, while infusing personal style according to fashion trend.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods and procedure used to carry out this study. According to Nworgu (1991), a research design is a plan or blue print which specifies how data relating to a given problem should be collected and analysed. It provides the procedural outline for the conduct of any given investigation. As observed by Sambo (2005), a research process involves seeking empirical data with which to test a hypothesis.

In order to achieve this, the researcher formulated a data gathering plan called a research design. The design usually consists of the methods of data collection and how the data will be analysed. This research design enables the researcher to adequately manage the concepts and ideas which are turned into variables when they are translated into a set of values. Variables are empirical concepts that can take two or more values. According to Sambo (2005) most researches in education try as much as possible to establish a relationship between one or more variables. If the relationship is that of cause and effect, the variable that is supposed to be the cause is the independent variable, while the variable that is supposed to be the effect is the dependent variable. Ndagi (1999) affirmed that, independent variables are the conditions or characteristics the researcher manipulates in order to determine their relationship with the observed state of affairs, though there may be many independent variables in the same study, not all are necessarily manipulated. The author stressed that, the independent variables that are manipulated in a research are sometimes referred to as treatment and that one can only describe an independent variable or treatment variable by looking at the study being carried out because this depends on the variable of study.

Ndagi (1999) also defined dependent variables as the characteristics that are being predicted when statements of hypothesis are made. They may change as the researcher manipulates the independent variables. There are four major types of variables. These are Dependent, Independent, Intervening and Extraneous variables.

Dependent variables also known as criterion variables is the variable whose variation the researcher observes. Independent variables are suppose to explain any variation observed in the dependent variables; in which case, a direct cause and effect relationship between these variables are established. Intervening variables are those characteristics that cannot be controlled or measured directly though they have an important effect on the outcome of the research under study. The relationship is usually not a simple one of cause and effect; they intervene between the cause and effect. These variables are anxiety, fatigue and motivation among others.

Extraneous variables are those that prevent; attributing all the changes in the dependent variables to the independent variables. These are characteristics such as intelligence, sex, age and personality. These variables, the researcher may not be able to control. Therefore, independent variables whose levels are set directly are called manipulated variables, active variables or treatment variables.

The research study is descriptive, a case study of fashion designers and tailors in some selected areas in Kaduna Metropolis. The strategies of this study, therefore include preliminary preparation, fieldwork, selection of population, sample and sampling techniques, description of instruments and the procedure for data collection and analysis.

3.2 Research Design

The research is a case study of fashion designers and tailors involved in the production of ladies garments in some selected areas in Kaduna Metropolis. They are staff and students of the Department of Textile Technology and Fashion Design, Kaduna

Polytechnic main campus, Kaduna; selected fashion designers and tailors located at Unguwar Rimi, Kakuri, Barnawa and Gonigora, all in Kaduna Metropolis. The research is descriptive. It involves investigating, recording, documentation, collection of data, analysing and interpreting data. This research procedure is strongly recommended by (Nworgu, 1991).

The research is both descriptive and participatory. (Action research). The strategies of this study include fieldwork, selection of population, sample and sampling techniques, description of instruments and the procedure for data collection and analysis Waters-Adams (1997) stated that descriptive research is a study designed to depict participants in an accurate way, while Obien (1998) defined action or participatory research as a research either initiated to solve an immediate problem or a reflection process led by individuals to improve issues and solve problems. In essence, the purpose of action research strategies is to solve a particular problem and to produce guidelines for best practice (Obien 1998). The researcher therefore adopted the action research method which is participatory to produce garments based on the elements and principles of design.

3.3 Population of the study

The population of this study was made up of staff and students of the department of textile technology and Fashion Design, Kaduna Polytechnic, Tudunwada, Kaduna, selected fashion designers and tailors located at Unguwar Rimi, Kakuri, Barnawa and Gonigora.

3.4 Sample Size and Sampling Technique

Respondents for this study were randomly selected. The major aspect that dealt with, was selected staff and students of the Department of Textile Technology, Kaduna Polytechnic and the selected areas of study. As observed by Ndagi (1999), sampling can

be employed as a scientific method of reaching an entire population in research because it may not be practically possible to reach out to an entire population under investigation.

A random sample of 200 (two hundred respondents), therefore were selected from the research areas. Forty (40) structured questionnaires were given to respondents in each of the selected areas. The researcher adopted the simple random sampling technique for this study. It was assumed that samples taken from these areas would constitute a valid source of information to be collected and analysed.

The researcher also took photographs of completed garments with structural and decorative designs for documentation because fashion designers and tailors were not willing to release their customers' garments as samples.

3.5 Survey Instruments and Data Collection

The methods used to elicit information for this study were: Oral interview, direct observations, photography and structured questionnaires. A trained assistant was employed to help the researcher to book appointments with the respondents and to interpret in case of language barrier, and to assist in recording information during discussion. The researcher and the research assistant took photographs of completed garments and sewing equipment for documentation.

Data collected were analysed using frequencies and percentages to describe information elicited from respondents. The researcher produced some garments according to one of the objectives of the study to remodel garments produced by respondents.

CHAPTER FOUR

4.0 PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter presents analysis and research findings of this study. Results obtained were put into tables which were converted into charts. Frequencies and percentages were used to analyse the variables. The statistical package (SPSS) 20th edition was used to carry out the analysis. A total of 200 respondents were the sampled population for the study. Due to the nature of the data which was exclusively qualitative, frequencies and percentages were used to analyse the variables. The first section presents the data analysis of the bio data, variables of age, marital status, sex and educational qualification, while the second part presents answers to the research questions with the variables corresponding to each research question. For emphasis, the outcome of some of the variables are presented in charts.

4.2 Analysis of Bio-data

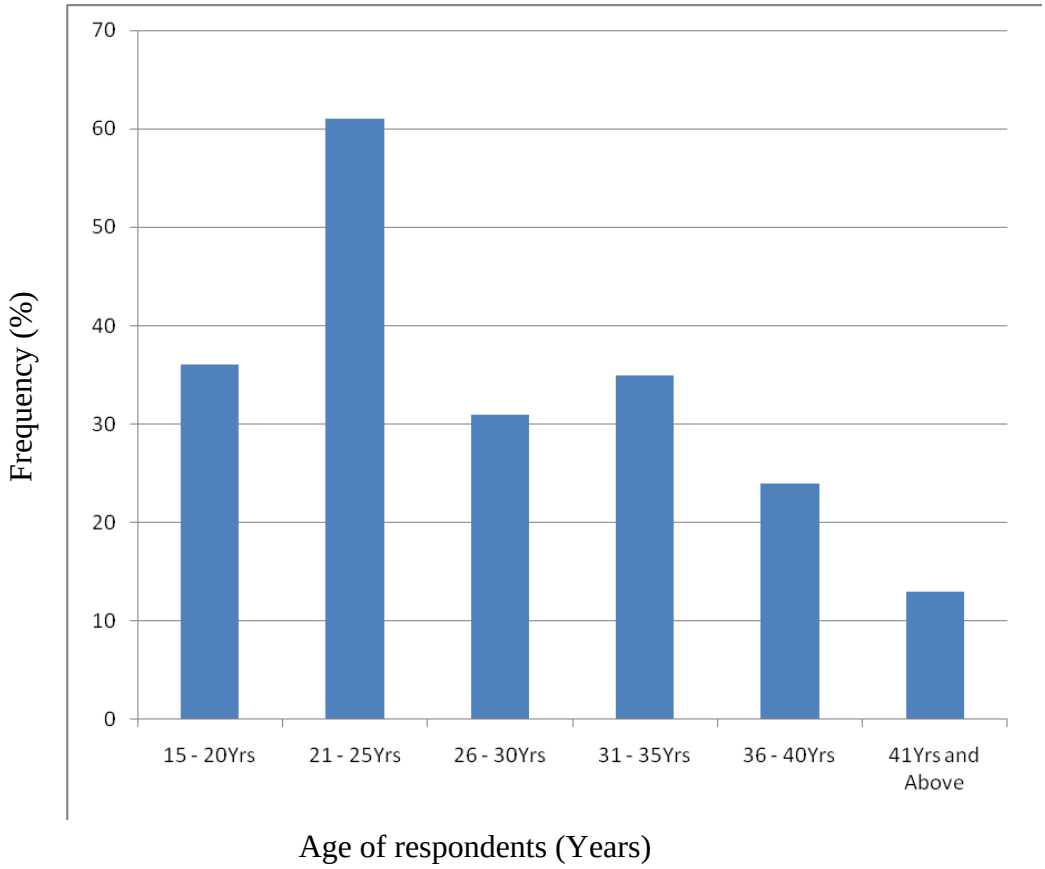


Figure 4.1: Age distribution of respondents

Regarding the respondents' age, 36 (18.0 %) were within ages 15-20 years. While 61 (30.5 %) fell within ages 21-25 years, 31 (15.5 %) were within the age bracket of 26-30 years, 35 representing 17.5 % were within 31-35 years, while 24 (12.0 %) were within ages 36-40 years, the remaining 13 representing 6. 5% fell within ages 41 years and above. In summary, majority of the respondents were found within ages 15 up to 35 years old. Specifically, the highest proportion of respondents were between ages 21-25 years old.

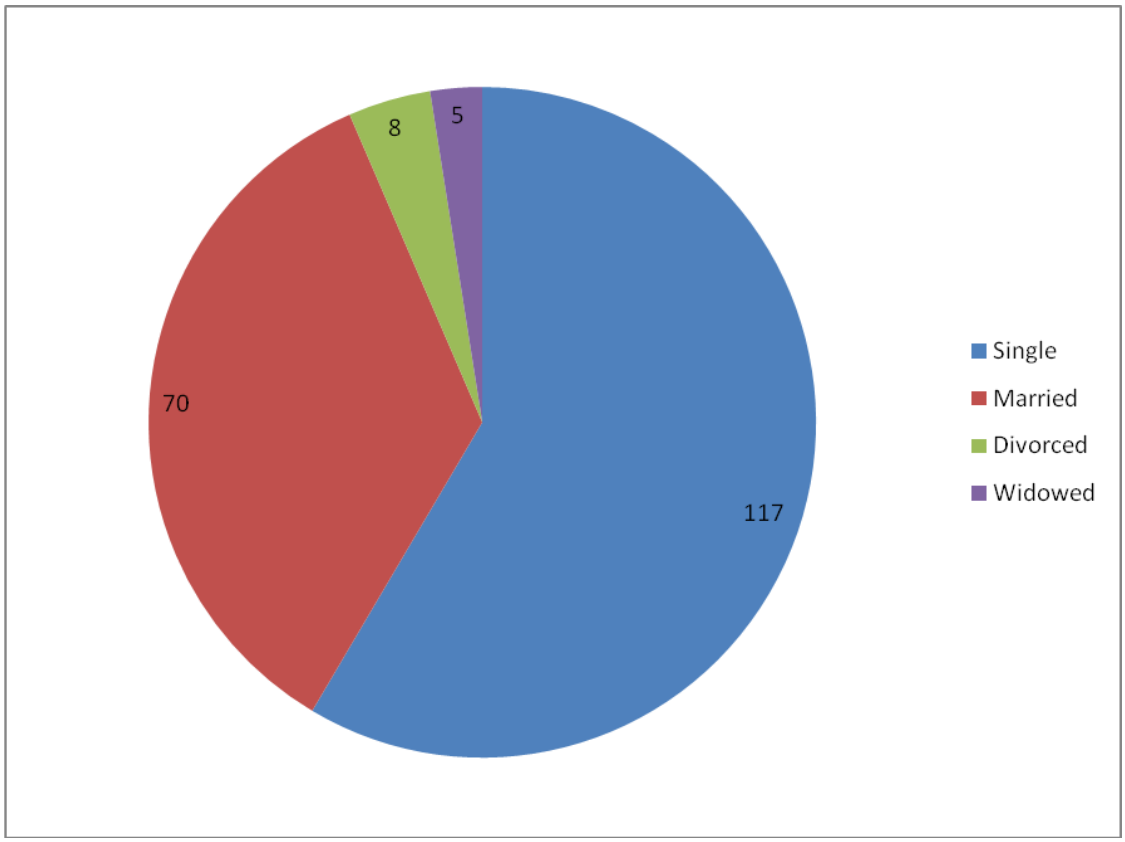


Figure 4.2: Pie-chart of respondents marital status

On the marital status of the respondents, a total of 117 representing 58.5 % were singles, 70 (35.0 %) were married, while 8 (4.0 %) were divorced, the rest 5 (2.5 %) were widowed, the overwhelming majority of 117 (58.5 %) of the respondents in this study were single.

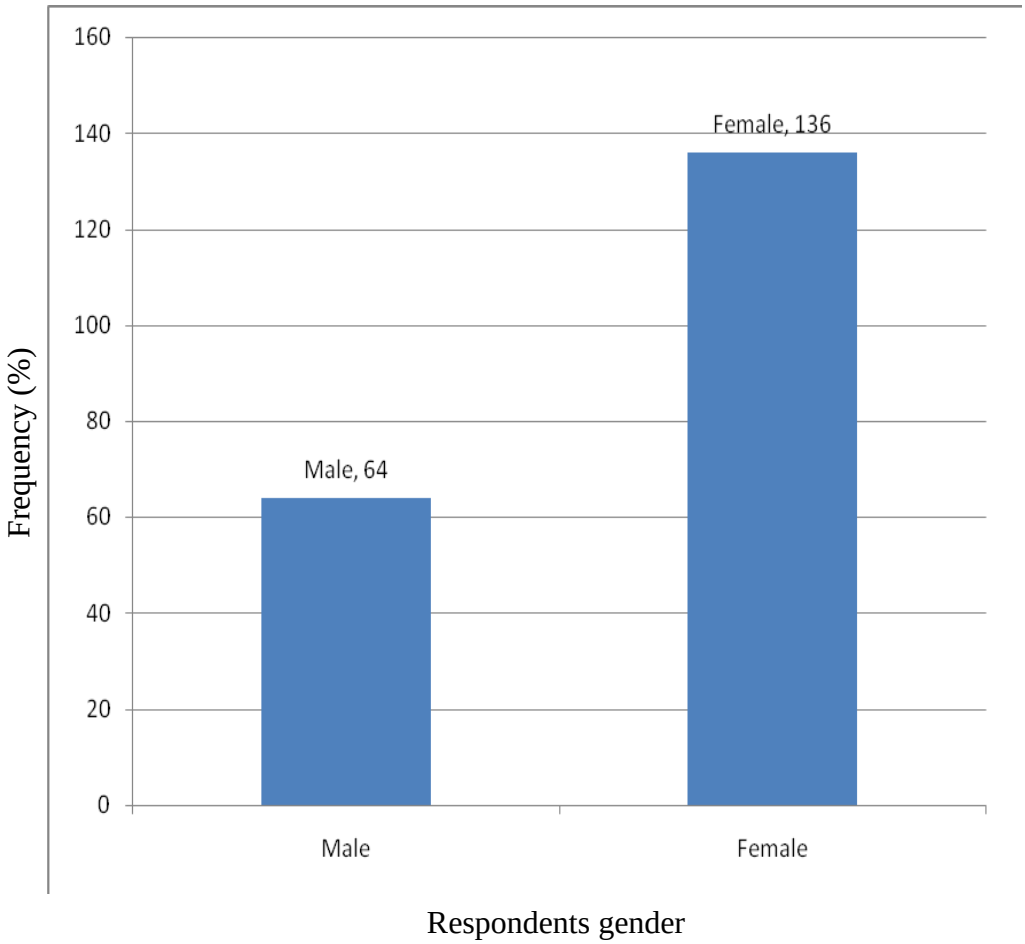


Figure 4.3: Respondents Gender

Regarding the gender status of the respondents in this study, 64 (32.0 %) were male, while the remaining 136 (68.0 %) were female. This implies that most of the respondents in this study numbering 136 (68.0 %) were female.

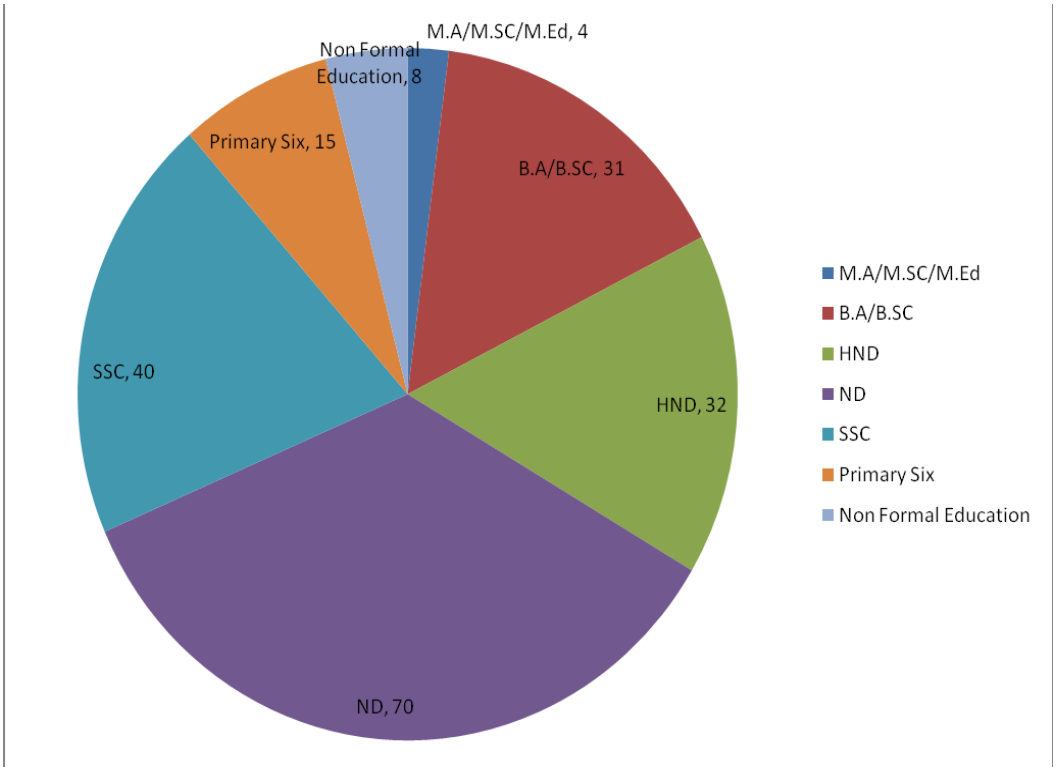


Figure 4.4: Pie-chart of educational Status

On the academic qualification of the respondents, it was observed from the above chart that 4 (2.0 %) possessed the MA/MSC/MED, 31 (15.5 %) had BA/BSC as their academic qualification, while 32 (16.0 %) had HND qualification 70 (35.0 %) had ND, while 40 (20.0 %) had SSSC certificate, 15 (7.5 %) others possessed the primary six certificate, the remaining 8 (4.0 %) did not have any formal education. This shows that majority of the respondents numbering 102 (51.0 %) possessed the middle tertiary form of education.

4.3 Response to Research Questions

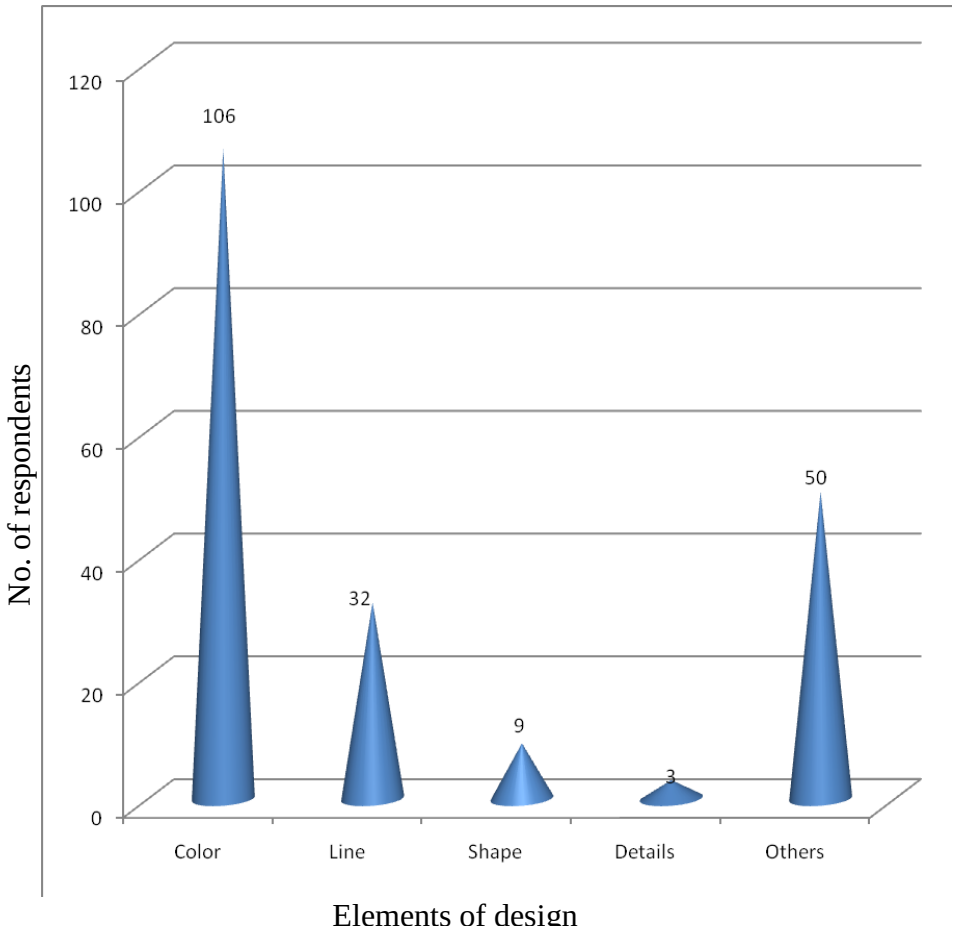


Fig. 4.5: Elements of design in garment production

On the of elements of design in textile as related to fashion design, 106 of the respondents representing 53.0 % chose colour, 32 (16.0 %) selected line as the element of design in textiles as related to fashion design, while 9 (4.5 %) chose Shape, 3 (1.5 %) chose details as elements. The remaining 50 (25.0 %) chose other elements of design in textile as related to fashion design. The outcome of this chart therefore revealed that colour was the main element of design in garment production, an overwhelming majority of 106 (53.0 %) were of this choice.

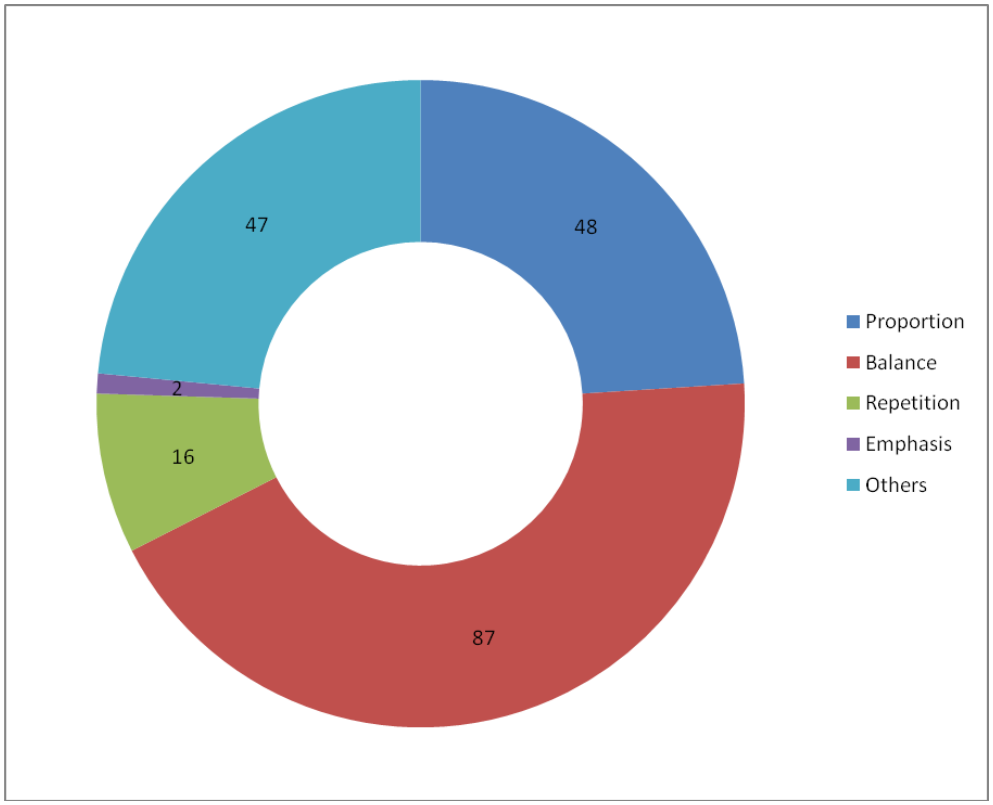


Figure 4.6: Donut chart on the principles of design in garment production

Regarding respondents' view on the principles of design in garment production, 48 (24.0 %) chose proportion, while 87 (43.5 %) selected balance, 16 (8.0 %) selected repetition 2 (1.0 %) selected emphasis, the remaining 47 (23.5 %) chose other principles of design in garment production, majority of the respondents chose balance as the principle of design.

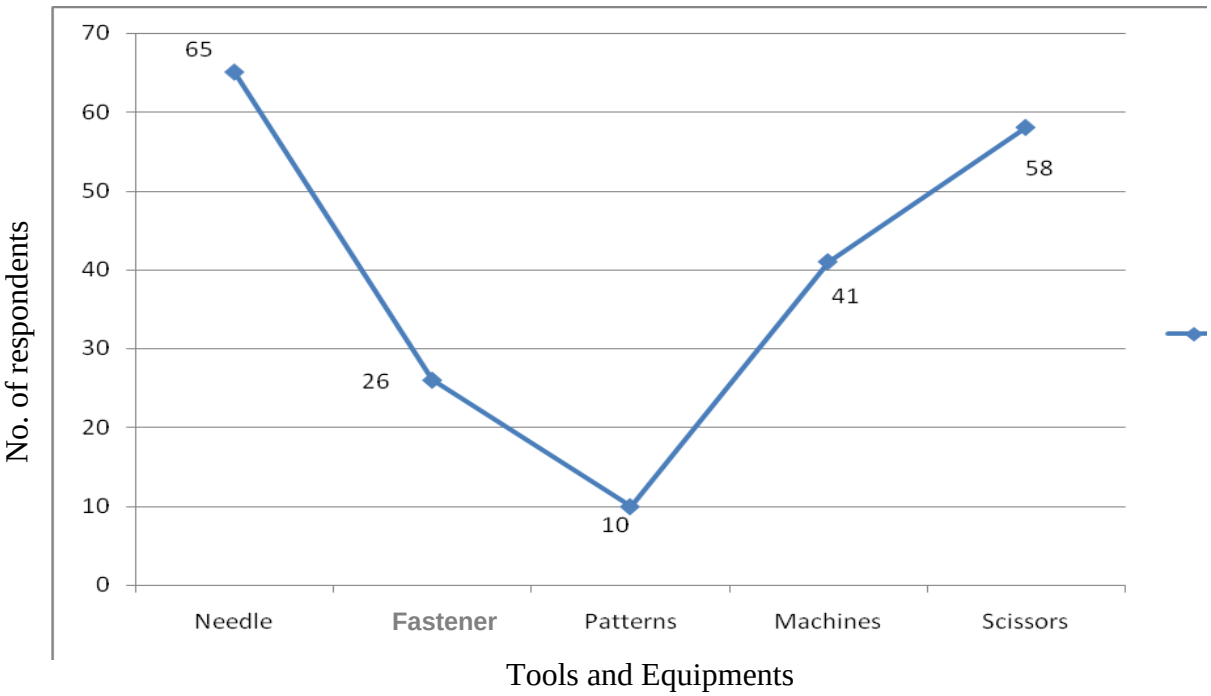


Figure 4.7: Tools and equipment necessary for the production of structural and decorative designs

Regarding the distribution of respondents on their opinion on the tools and equipment necessary for the production of structural and decorative designs, 65(32.5%) said it was needle, while 26 (13.0 %) chose fastener as tool, 10 (5.0 %) said it was patterns, 41 (20.5 %) assumed the best tool was machine. The rest 58 (29.0 %) said scissors were the best tools and equipment. This implies that needles, scissors and machines in that order were the most common important tools and equipment necessary for the production of structural and decorative designs in fashion (Design) profession.

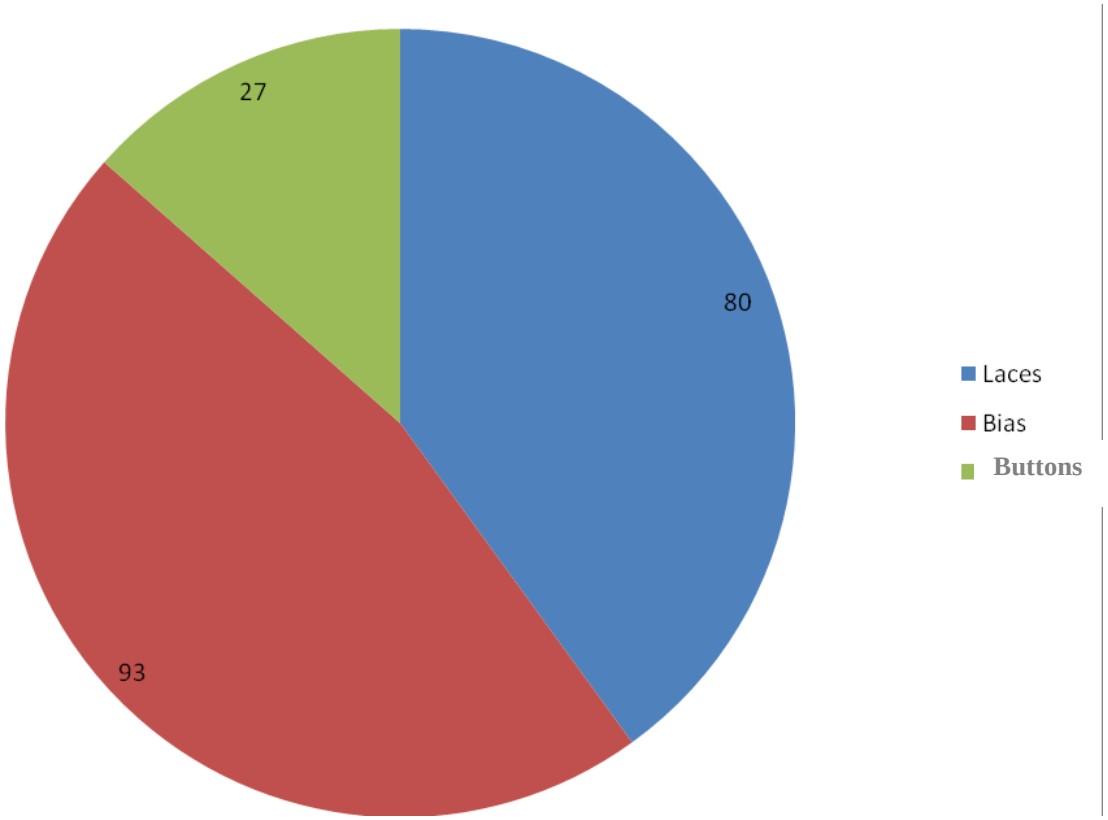


Figure 4.8: Pie-chart on list of decorative trims for enhancing garment parts

On the respondents' listing of decorative trims for enhancing garment parts, 80 (40.0 %) chose lace, 93 (46.5 %) selected bias, the rest 27 representing 13.5 % assumed buttons were the decorative trims for enhancing garment parts. This shows that majority of the respondents numbering 93 (46.5 %) chose bias as the most important decorative trims for enhancing garment parts, followed by 80 (40.0 %) that considered lace as the most important decorative trims for enhancing garment parts. Therefore, bias was the most common trim used by fashion designers and tailors.

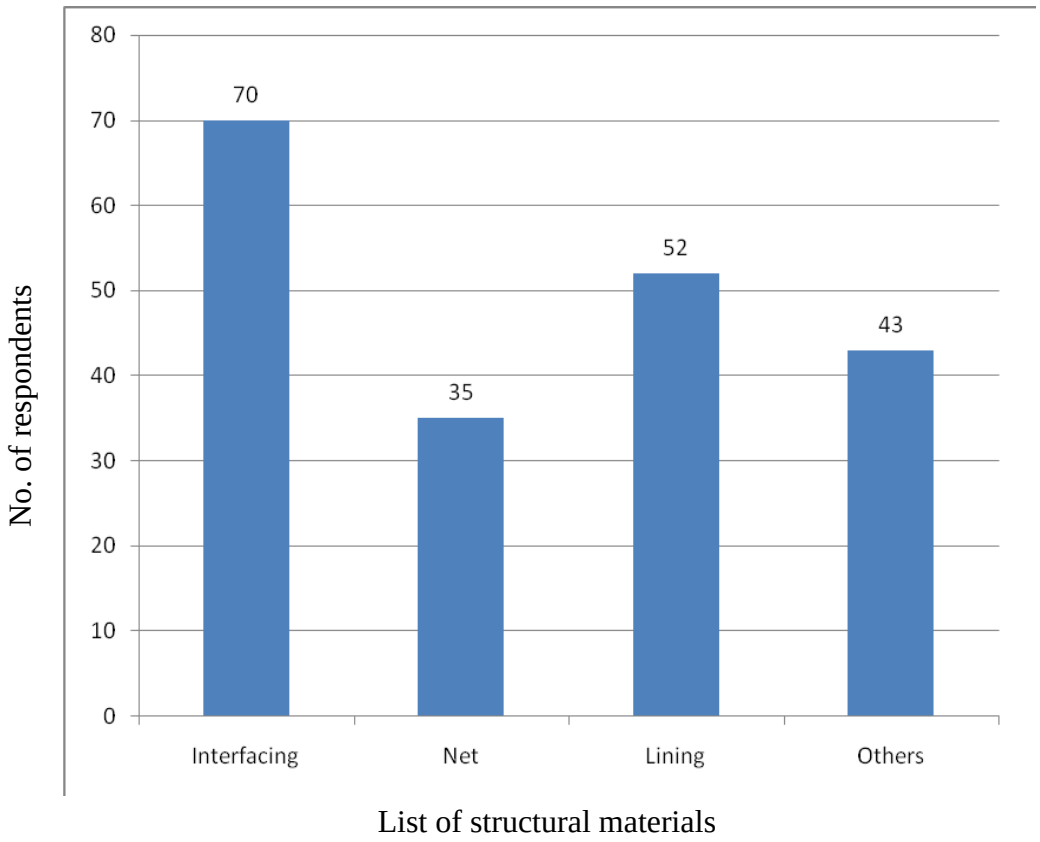


Figure 4.9: List of structural design materials for placement of structural designs on garment parts

On respondents' response in listing the structural design materials for placement of structural designs on garment parts, 70 (35.0 %) suggested interfacing, while 35 (17.5 %) listed net, 52 (26.0 %) listed lining. The rest 43 (21.5 %) listed other structural design materials for placement. This shows that interfacing, according to majority of the respondents numbering 70 (35.0 %) was the best structural design materials for placement of structural designs on garment parts.

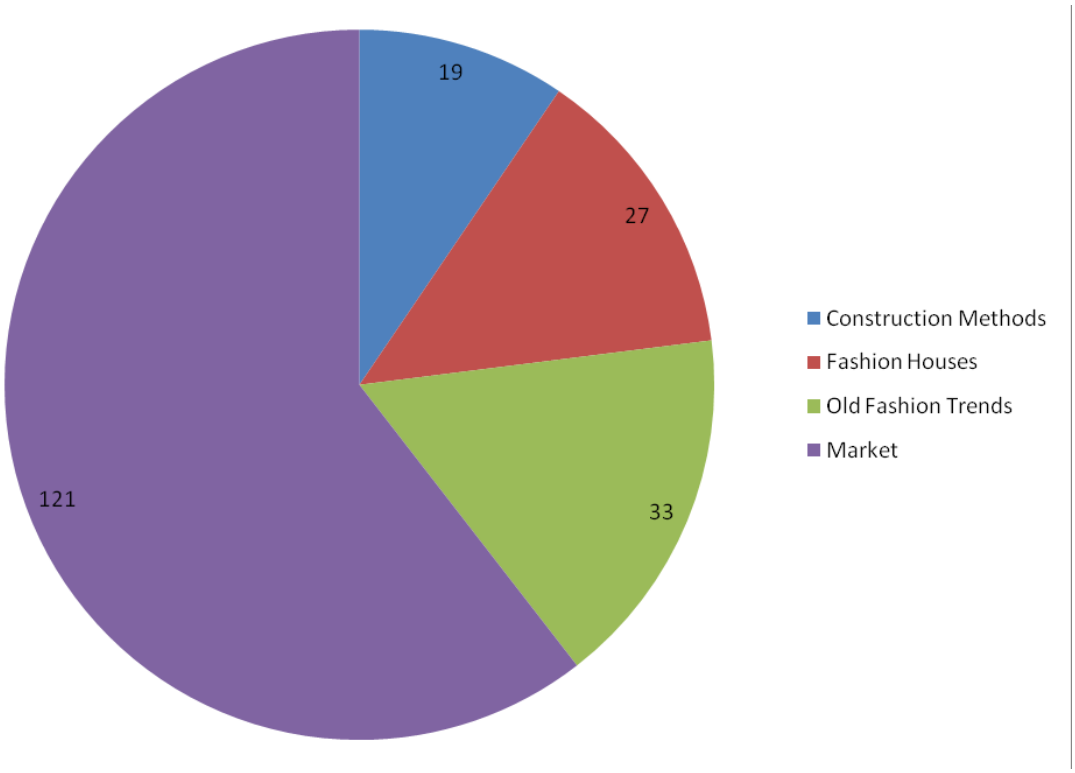


Figure 4.10: Pie-chart on source of materials

On where respondents can source structural and decorative design materials, 19 (9.5 %) said it was through construction methods, while 27 (13.5 %) said it was through fashion houses 33 (16.5 %) said it was through old fashion trends. The remaining 121 representing 60.5 % said it was in the market. Therefore an overwhelming majority of the respondents numbering 121 (60.5 %) said they sourced structural and decorative design materials from the market.

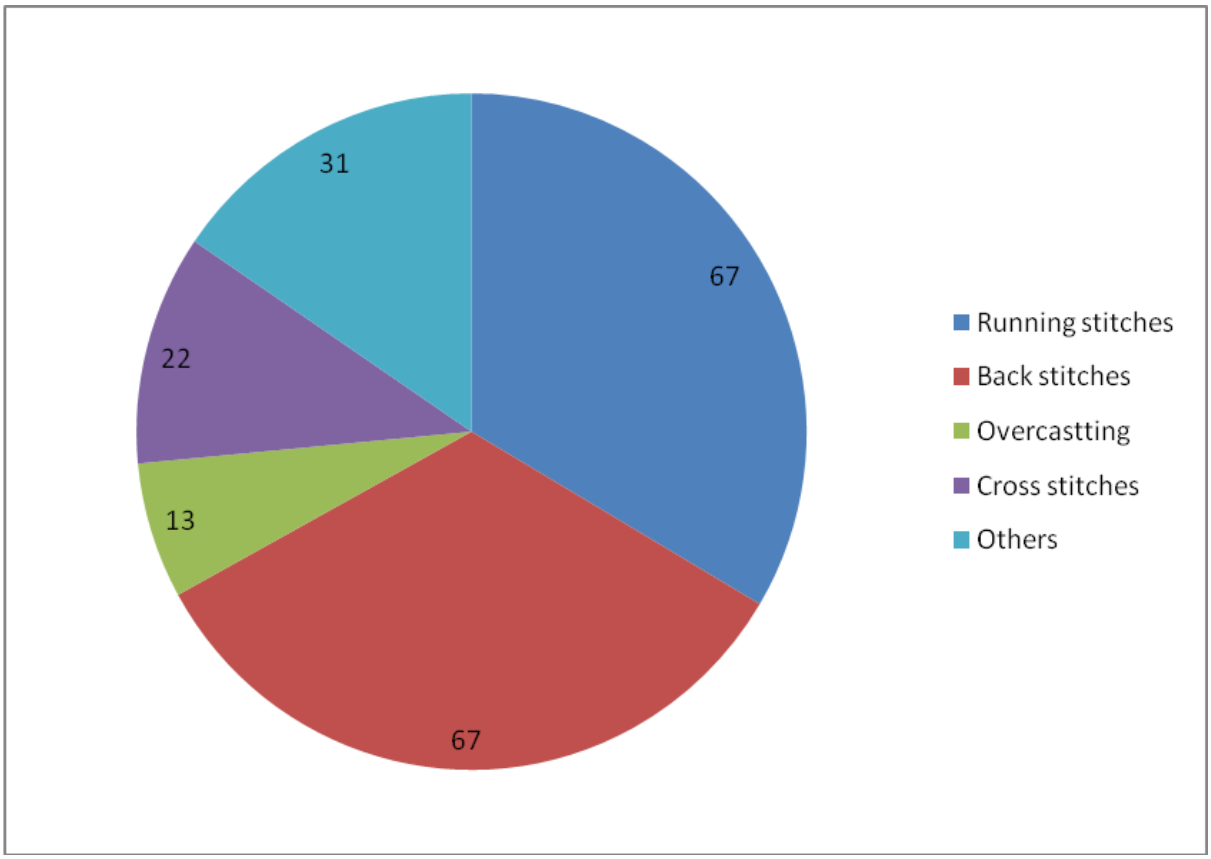


Figure 4.11: Pie-chart on structural and decorative design stitches

Regarding the respondents answer on type of stitches used for the production of structural and decorative designs, 67 (33.5 %) said they used running stitches, while another 67 (33.5 %) used back stitches, 13 (6.5 %) used overcastting. Twenty-two 22 (11.0 %) used cross stitches, the remaining 31(15.5 %) used other type of stitches. This implies that running and back stitches were the most used stitches for the production of structural and decorative design

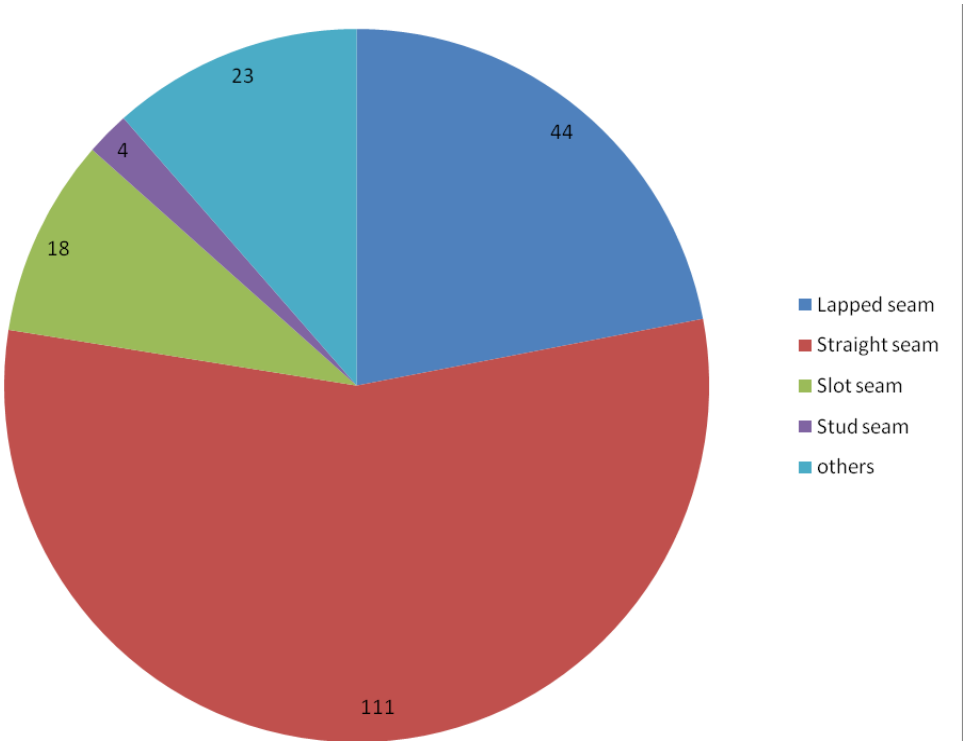


Figure 4.12: Pie-chart on seams used for production of structural and decorative designs

On the type of seams used for production of structural and decorative designs, 44 (22.0 %) used Lapped seam, while 111(55.5 %) used straight seam, 18 (9.0 %) used slot seam. Only 4 (2.0 %) used stud seam, the remaining 23 (11.5 %) of the respondents used other seams for production of structural and decorative designs. On the whole, majority numbering 111 (55.5 %) used straight seam for production of structural and decorative designs.

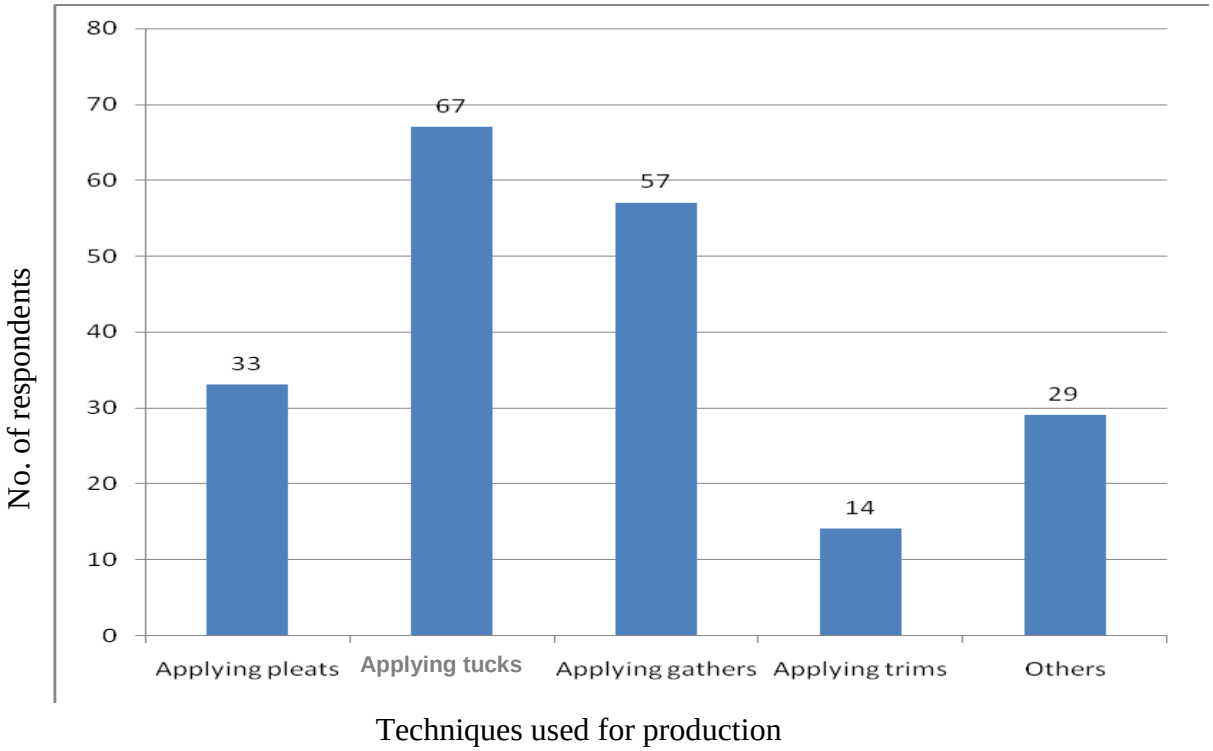


Figure 4.13: Techniques used for the production of structural and decorative designs

Regarding respondents distribution according to the techniques used for the production of structural and decorative designs, 33 (16.5 %) applied pleats, while 67 (33.5 %) applied tucks 57 (28.5 %) applied gathers, 14 (7.0 %) applied trims. The rest 29 (14.5 %) used other techniques. In summary, the two most used techniques for the production of structural and decorative designs applied tucks and gathers.

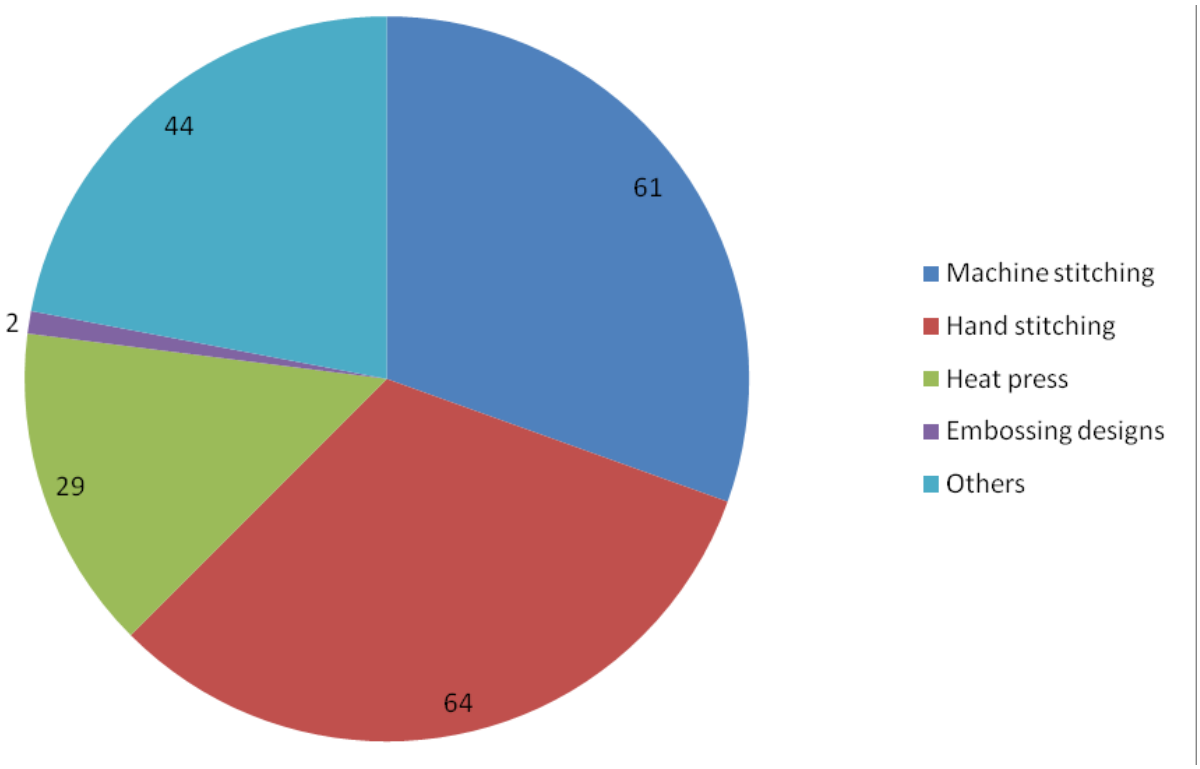


Figure 4.14: Pie-chart on method of placing structural and decorative designs

On how structural and decorative designs can be placed on garment parts, a total of 61 (30.5 %) of the respondents used machine stitching technique, while 64 (32.0 %) used hand stitching, 29 (14.5 %) used heat press, 1 (1 %) used embossing, the rest 44 (22.0 %) used other techniques. Therefore, majority of the respondents used the machine stitching, followed by hand stitching technique of placing structural and decorative designs on garment parts.

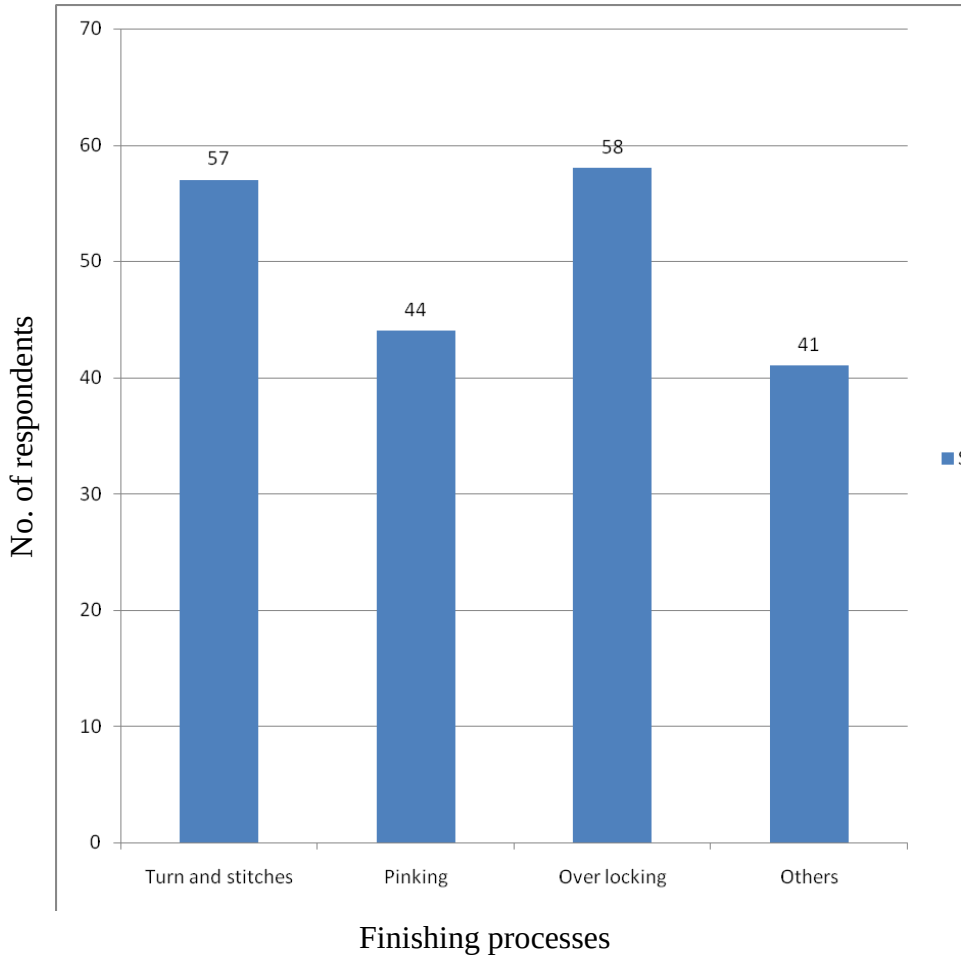


Figure 4.15: Finishing processes in garment making

On how respondents finish up garments, 57 (28.5 %) said they turned and stitched, while 44 (22.0 %) said they used Pinking method, fifty-eight 58 (29.0 %) did so using over locking, the remaining 41 (20.58 %) said they used other means finish their garments. This means that, turn and stitch and over locking methods were mostly used to finish garments.



Plate II: An Overlocker and serging machine for sewing and finishing garments
Source: Barnawa, Kaduna
Photograph by: Mary A. Afolabi, 2014

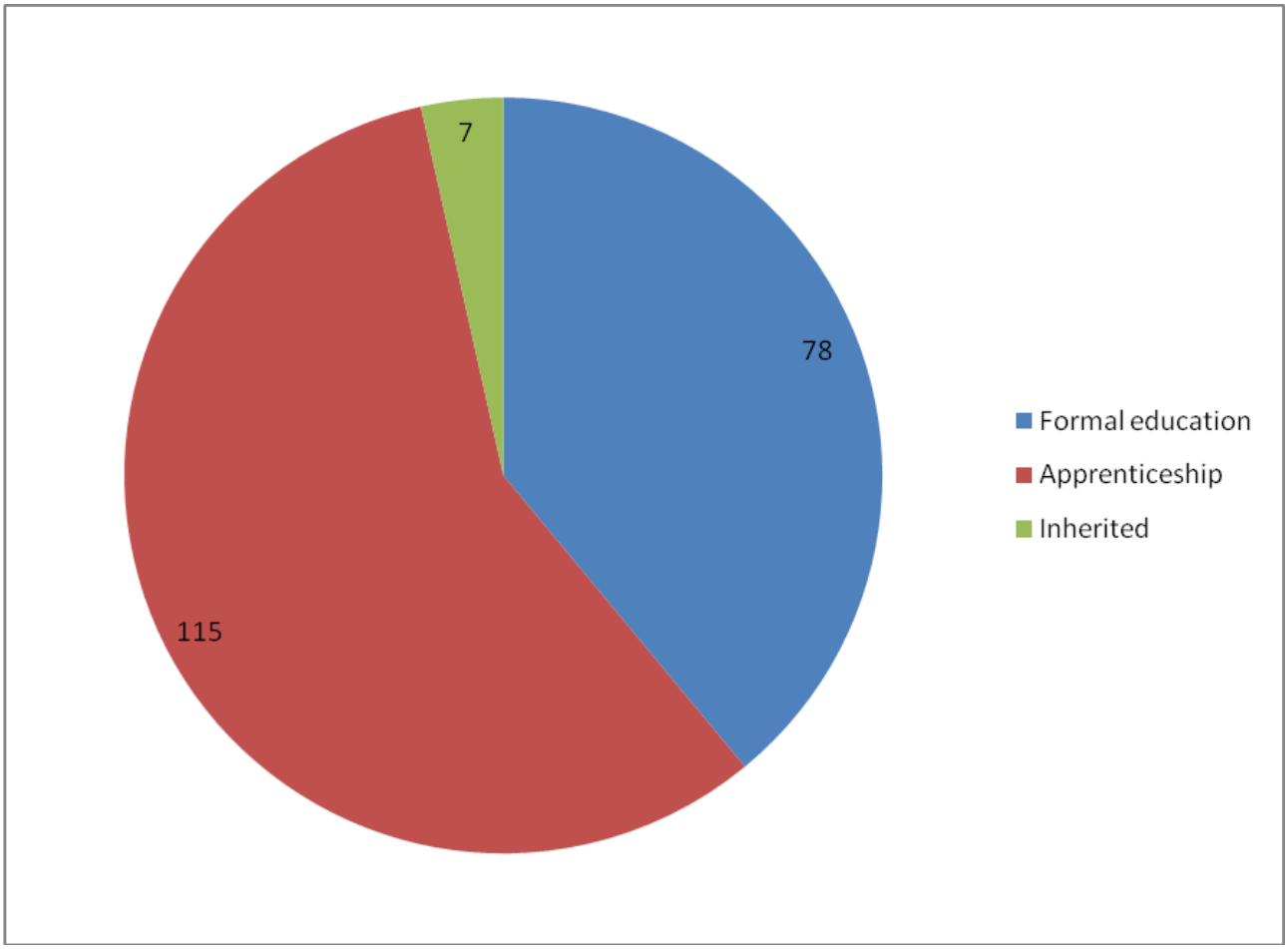


Figure 4.16: Pie-chart on mode of Training

On how respondents learned fashion designing/tailoring, a total of 78 (39.0 %) learnt the trade through formal education, 115 (57.5 %) learnt theirs through apprenticeship. The rest 7 (3.5 %) learnt fashion designing and tailoring by inheritance. This clearly shows that an overwhelming majority of 115 (57.5 %) of the respondents learnt fashion designing/tailoring through apprenticeship, followed by formal education numbering 78 (39.0 %).

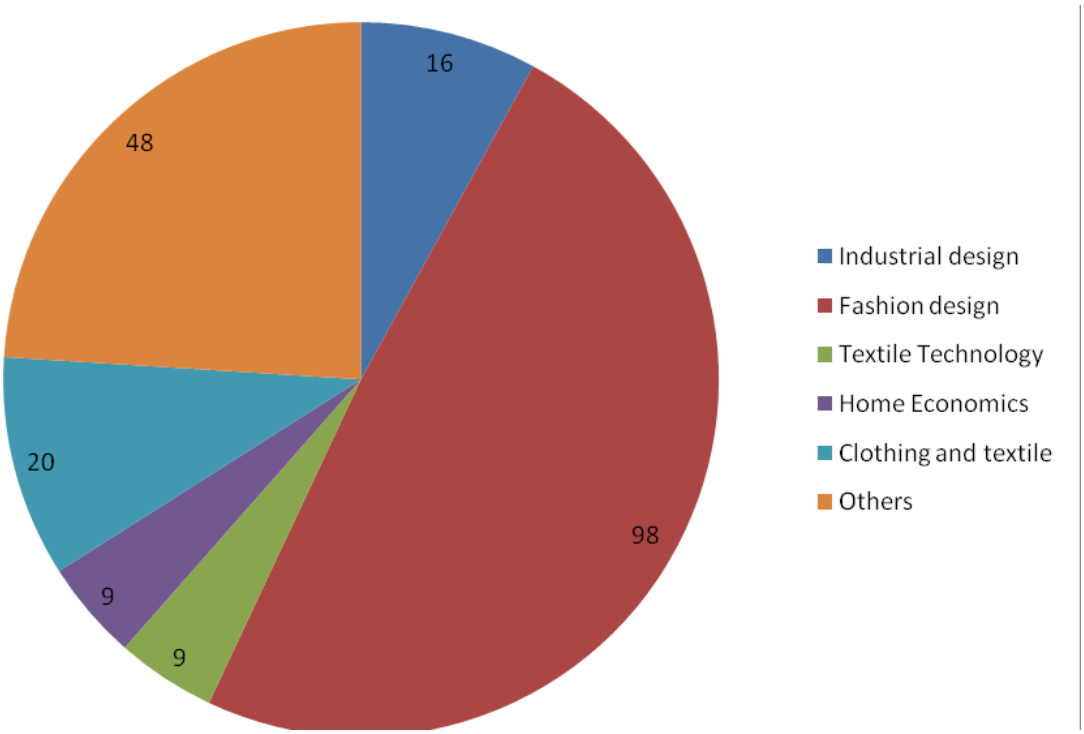


Figure 4.17: Pie-chart of respondents professional training

The chart revealed the distribution of the respondents according to their professional training. It showed that 16 (8.0 %) were industrial designers while 98 (49.0 %) were fashion designers, 9 (4.5 %) were textile technologists. Another 9 (4.5 %) were home economists, compared with 20 (10.0 %) who were in Clothing and Textiles. In other words, majority of the respondents' professional training numbering 98 (49.0 %) read fashion design.

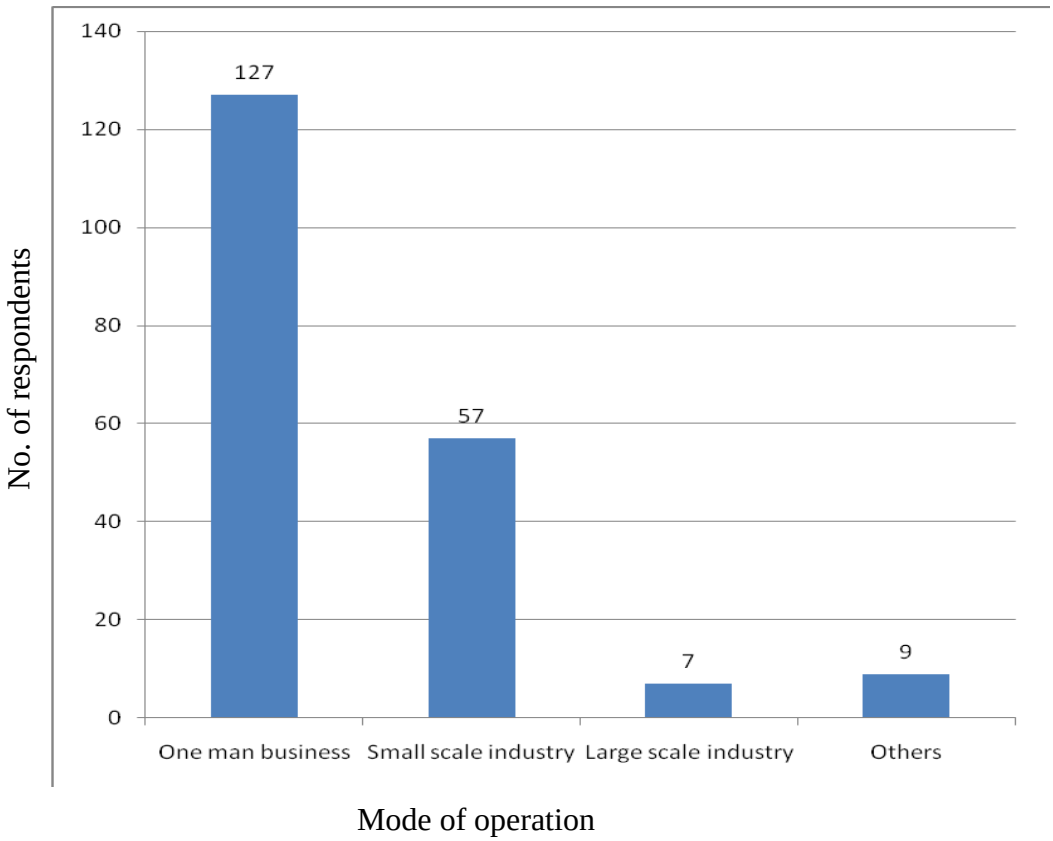


Figure 4.18: Mode of operation of fashion designers and tailors

On the mode of operation as fashion designers and tailors, a total of 127 or 63.5 % operated as a one man business, while 57 (28.5 %) operated as a small scale industry, seven 7 (3.5 %) operated as a large scale industry, the remaining 9 (4.5 %) operated in other forms. This implies that over whelming majority of the respondents operated as a one man business.

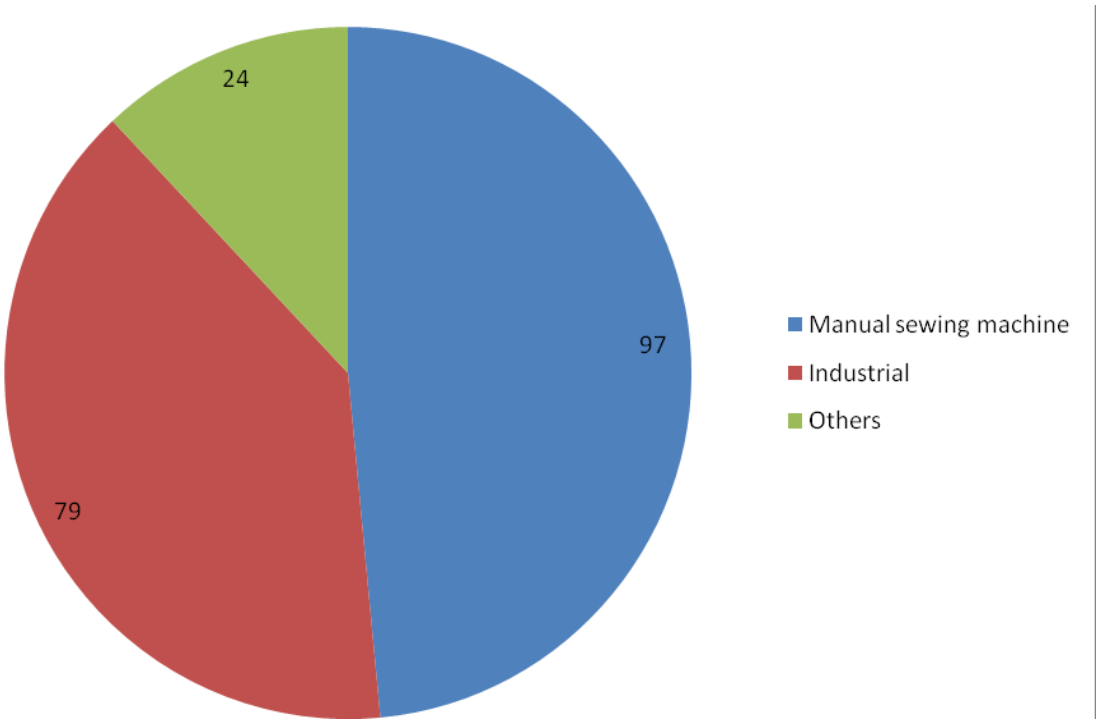


Figure 4.19: Pie-chart on type of sewing machine respondents use

Regarding the type of sewing machine the respondents use, 97 (48.5 %) used manual sewing machine, compared with 79 (39.5 %) that use the industrial machine, the remaining 24 representing (12.0 %) use other type of machines. Majority of the respondents either use manual sewing machines or industrial machines.



Plate III: Garment Laboratory where structural and decorative design garments are produced by students.
Source: Department of Textile Technology and Fashion Design Kaduna Polytechnic.
Photograph by: Mary A. Afolabi, 2014

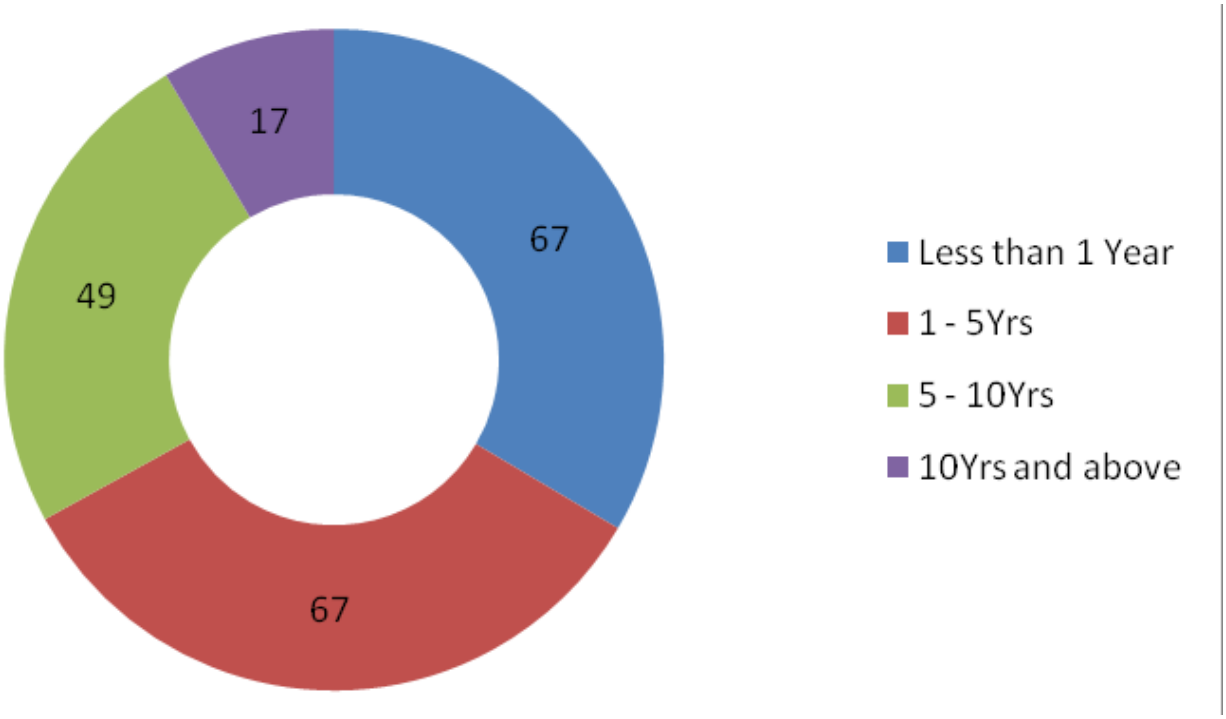


Figure 4.20: Donut chart of respondents' experience in garment production

According to the above chart, on how long respondents have been producing garments, a total of 67 (33.5 %) said less than 1 year, 67 (33.5 %) have been producing garments for between 1-5 years, while 49 (24.5 %) have been in garment production for between 5 – 10 years. The remaining 17 (8.5 %) have been producing garments for over 10 years. This implies that majority of the respondents numbering 134 representing 67.0 % have been producing garments for between 1 and 5 years ago.

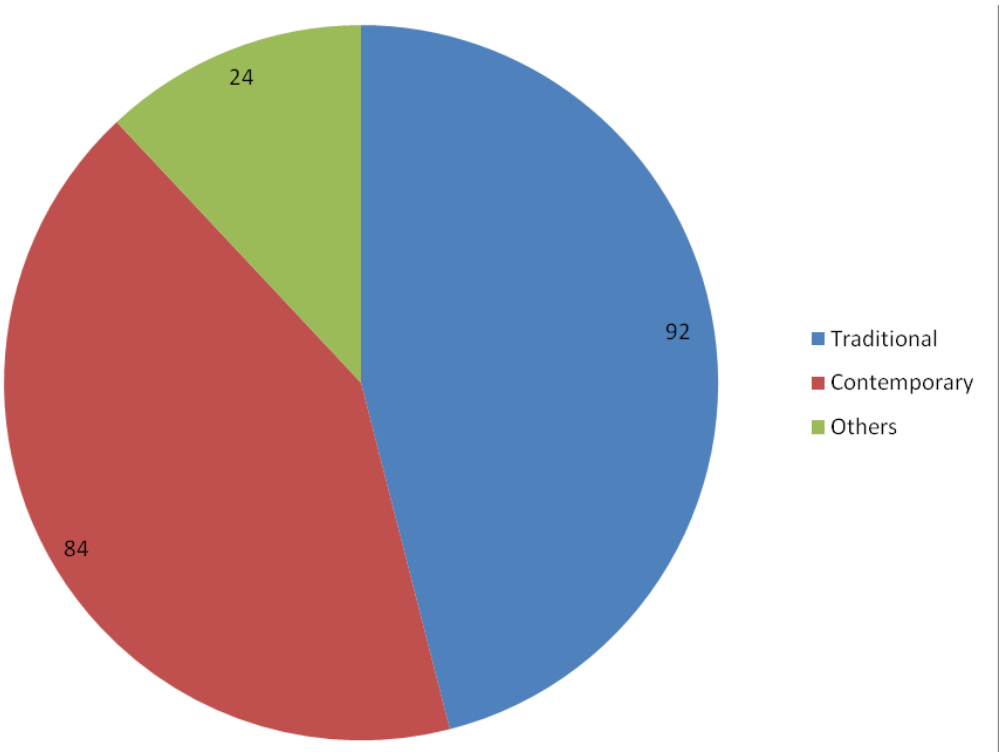


Figure 4.21: Pie-chart of categories of designs

Regarding the type of garment the respondents produce 92 (46.0 %) produce traditional garments, 84 (42.0 %) produce contemporary garments, while the rest 24 (12.0 %) produce other types of garments. This means that most of the garments produced were majorly traditional 92 (46 %), followed by contemporary 84 (42.0%).

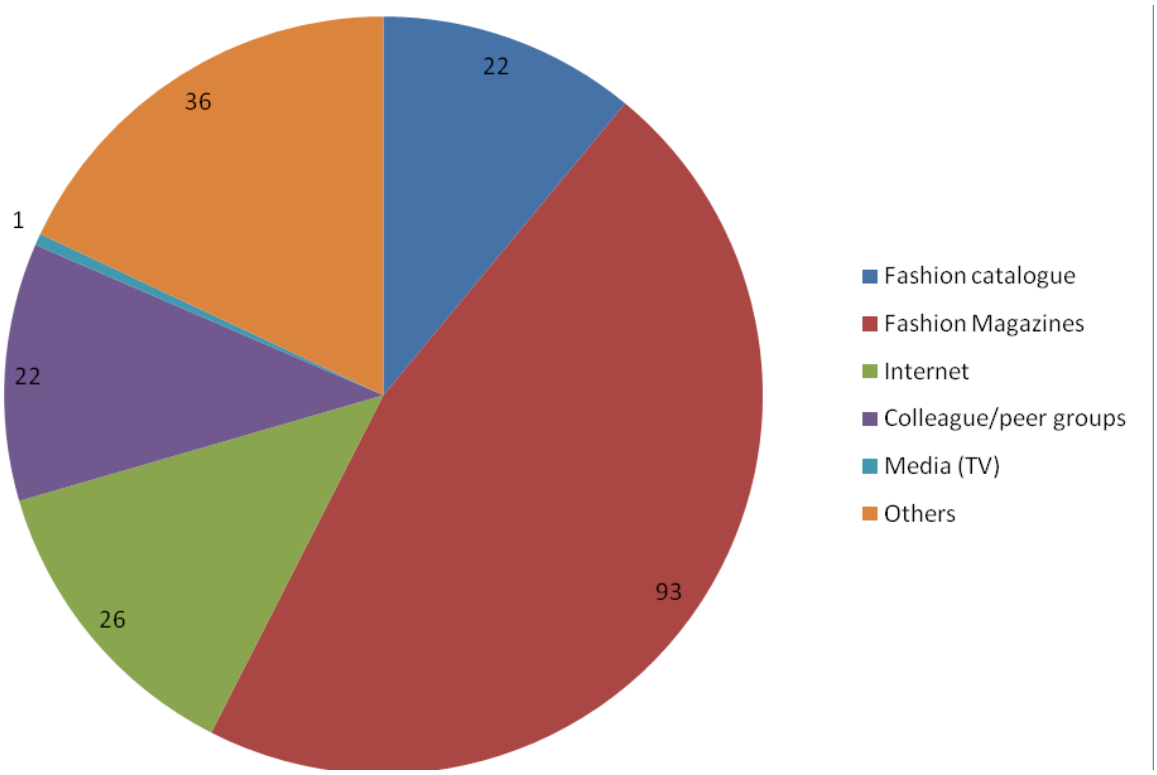


Figure 4.22: Pie-chart on methods of getting design ideas

On how the respondents acquired knowledge on design ideas, 22 (11.0 %) said it was through fashion catalogue, 93 (46.5 %) got their knowledge from fashion magazines, while 26 (13.0 %) got their design ideas from the internet 22 (11.0 %) derived their ideas from Colleagues and peer groups, one (1) 0.5 % got design ideas from the media (TV), the remaining 36 (18.0 %) got design ideas from other sources.

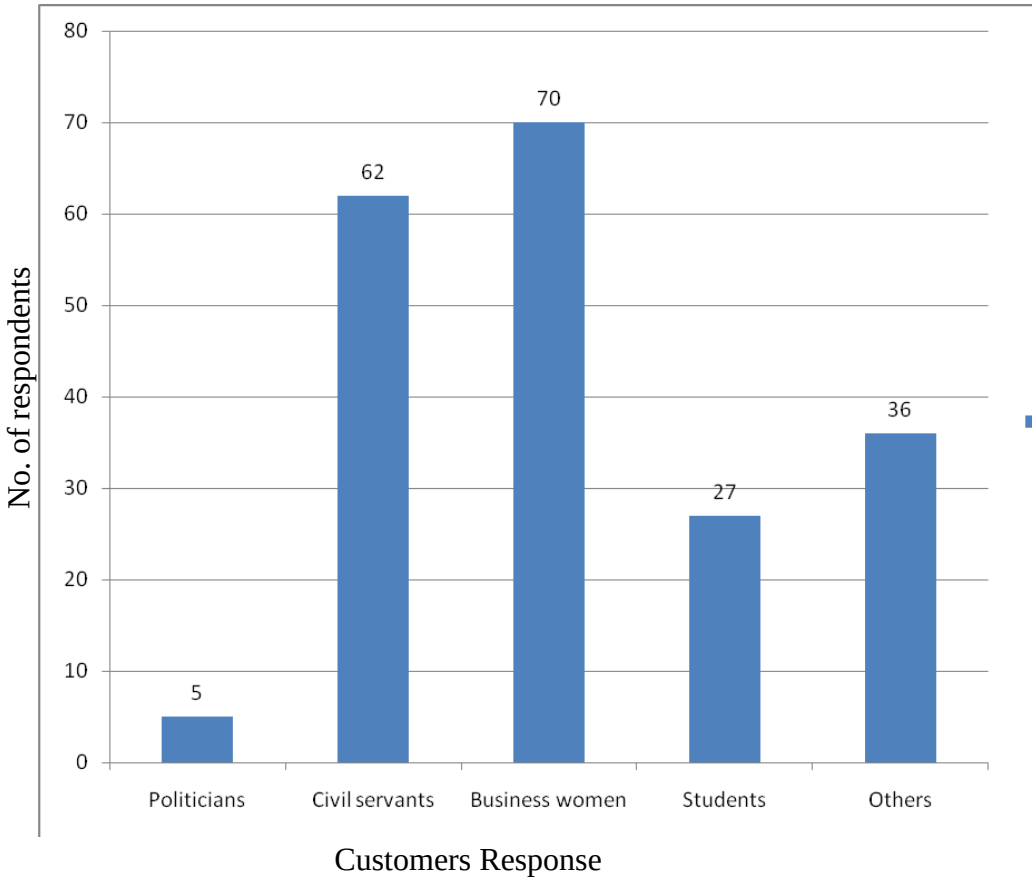


Figure 4.23: Customers' Response

The above chart revealed the respondents opinion according to who their customers were. It was discovered that 5 (2.5 %) had politicians as their customers, while 62 (31.0 %) said their customers were civil servants, 70 (35.0 %) customers were business women. Twenty-seven (27) 13.5 % said their customers were students, the rest 36 (18.0 %) said their customers were other people in the community. By implications, therefore civil servants and business women were the main customers of the respondents, based on the study.

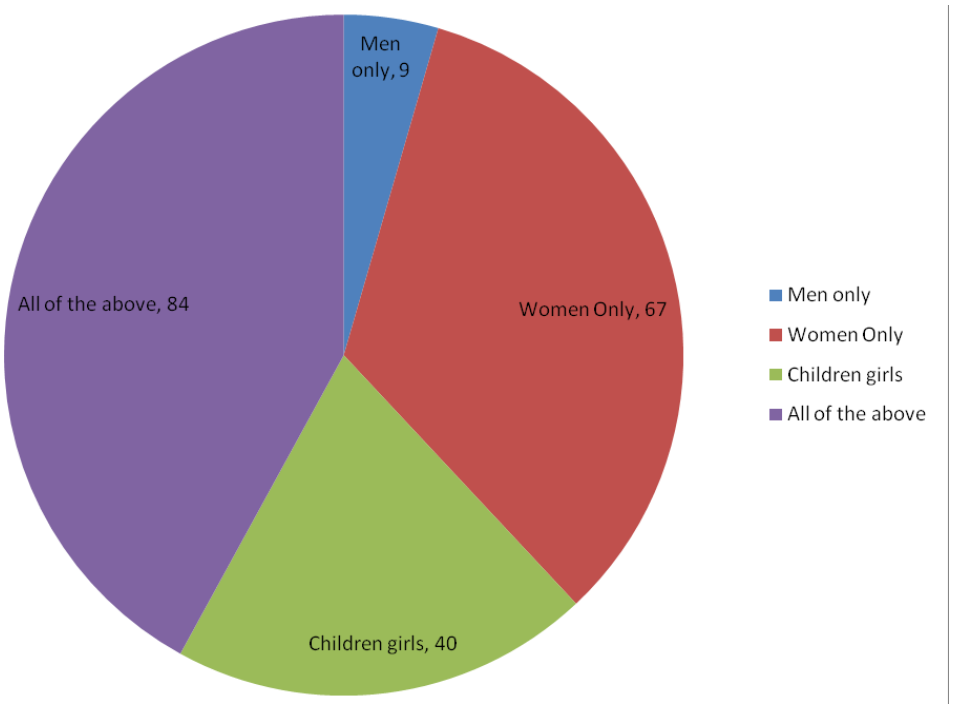


Figure 4.24: Pie-chart of categories of designs

Regarding the categories of people respondents design for, 9 (4.5 %) of the respondents said they design for men only, while 67 (33.5 %) said they design for women only, 40 (20.0 %) design for children. The remaining 84 representing (42.0 %) said their categories of design include all the above. This shows that majority can design for all categories of people.

CHAPTER FIVE

5.0 FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is composed of findings, conclusions, implications and recommendations of the study. It includes the objectives, methodology and procedure for the study. Based on the findings, conclusions and recommendations for future research are presented.

The problem that led to the study was as a result of inadequate and unprofessional application of structural and decorative designs on garments by fashion designers and tailors in Kaduna metropolis. The same observation was also made on consumers of fashionable garments as per quality of designs that are produced for them. The main objective of the study is to investigate the level of awareness of fashion designers and tailors on the use of elements and principles of design in garment production.

Photographs of garments produced by respondents are displayed alongside with photographs of garments remodeled by the researcher.

5.2 Findings

1) It was established that majority of the respondents are not aware of the elements and principles of design in garment production.



Plate IV: A blouse decorated with shirring.
The shirring that serves as emphasis (focal point) was not properly applied
Source: Barnawa, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate V: A blouse embellished with shirring (Structural design 1)
Researcher's Concept.
Photograph by: Mary A. Afolabi, 2014



Plate VI: A blouse embellished with shirring, sleeves are flare from the top arm. (Structural design 2)
Researcher's Concept.
Photograph by: Mary A. Afolabi, 2014.



Plate VII: Booboo decorated with machine embroidery. The embroidery that serves as emphasis is not proportionate to the size of the garment.
Source: Kakuri, Kaduna.
Photograph by: Mary A. Afolabi, 2014.



Plate VIII: Boubou decorated with machine embroidery (1). The embroidery which serves as emphasis is proportionate to the size of the garment.
Researcher's Concept.
Photograph by: Mary A. Afolabi, 2014



Plate IX: Booboo decorated with machine embroidery. The embroidery that serves as focal point which is the point of emphasis is not pronounced.
Source: Unguwar Rimi.
Photograph by Mary A. Afolabi, 2014.



Plate X: Boubou decorated with machine embroidery (2). On this booboo, the embroidery that serves as focal point which is the point of emphasis is pronounced.
Researcher's Concept.
Photograph by: Mary A. Afolabi, 2014

2) Majority of the respondents identified needles, scissors and machines in that order, as the most common tools and equipment.

3) The respondents considered lace as the most important decorative trims for enhancing garment parts, followed by bias bindings and buttons.



Plate XI: Placement of lace for decoration is not properly applied on the blouse. The decorative design suppose to serve as the focal point (emphasis)
Source: Gonigora, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XII: Entire bodice of a buba covered with lace fabric, the motifs on the fabric are totally concealed, except on the sleeve hem.
Source: Kakuri, Kaduna.
Photograph by: Mary A. Afolabi, 2014.



Plate XIII: Blouse decorated with lace fabric (An added dimension). Here, the lace is applied appropriately.
Researcher's Concept.
Photograph by: Mary A. Afolabi, 2014.



Plate XIV: A blouse decorated with corded trims below the neckline. The decoration which is suppose to be the centre of attraction is not pronounced.
Source: Barnawa, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XV: A blouse decorated with straight corded trims, for aesthetics. All the elements and principles of design are obeyed in the production (Decorative design 1). The trims that serves as centre of attraction are pronounced.
Researcher's Concept
Photograph by: Mary A. Afolabi, 2014



Plate XVI: A blouse decorated with zigzag corded trims for aesthetics (Decorative design 2). The trims that serves as centre of attraction are pronounced.
Researcher's Concept
Photograph by: Mary A. Afolabi, 2014



Plate XVII: Blouse decorated with buttons.
Source: Unguwar Rimi, Kaduna
Photograph by: Mary A. Afolabi, 2014

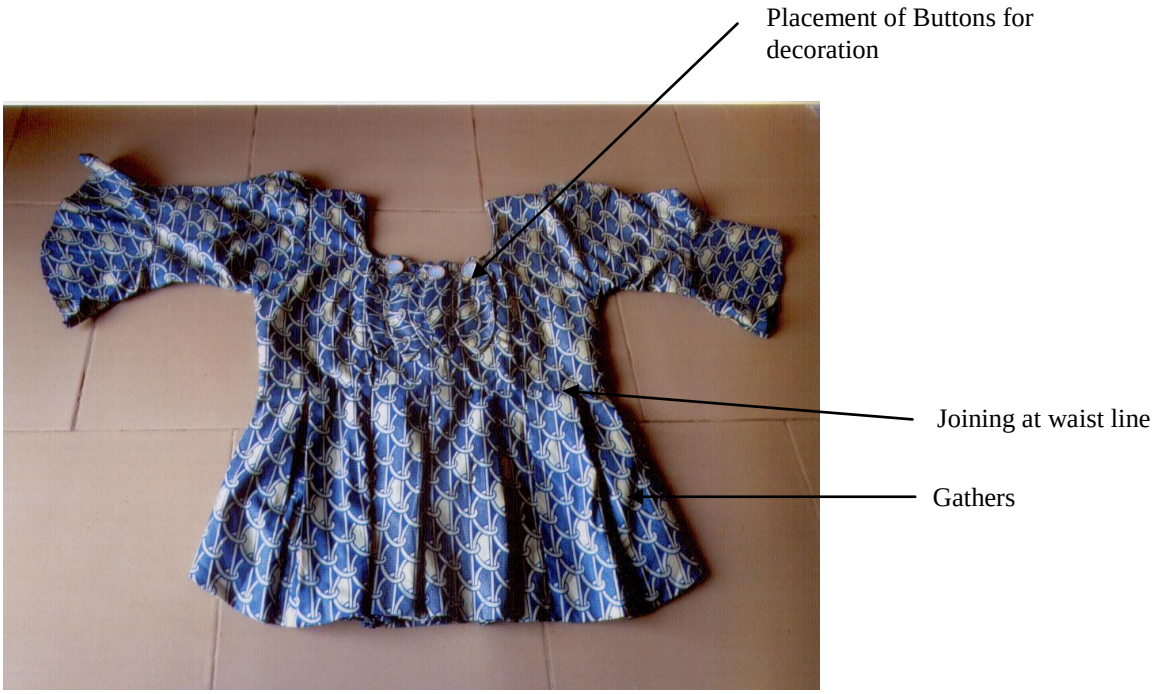


Plate XVIII: Blouse decorated with buttons and gathers.
Researcher's concept.
Photograph by Mary A. Afolabi, 2014.

4) It was revealed that interfacing was the structural design material used for placement of structural designs by respondents because it is the only one they know.
5) The findings also revealed that overwhelming majority of the respondents sourced structural and decorative design materials from the market.
6) It was established that back stitches were the most used stitches for the production of structural and decorative designs by respondents.

7) According to the respondents, the two most used techniques for the production of structural and decorative designs are tucks and gathers.

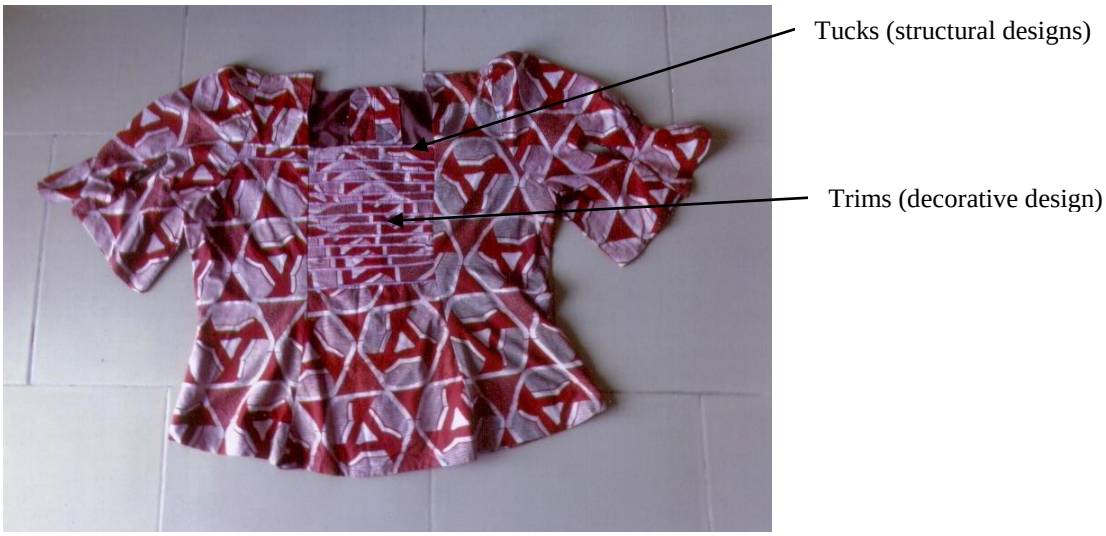


Plate XIX: A blouse decorated with tucks and trims. The tucks are not properly set in place, while the trims are not properly applied.
Source: Tudunwada, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XX: A blouse embellished with tucks. (Structural design 3). The tucks serve as a centre of attraction, the application of the elements and principles of design in garment production can be seen on this design
Researcher's Concept
Photograph by: Mary A. Afolabi, 2014

8) Majority of the respondents used machine stitching followed, by hand stitching technique for placing structural and decorative designs on garment parts.
9) It was established that turn and stitch and overlocking methods were mostly used to finish garments.

Generally, it was discovered that in most of the places visited, respondents were fully committed to their jobs, taking measurements, cutting, sewing, applying structural and decorative designs on garment parts and teaching apprentices. In some of the shops visited, the researcher noticed that the respondents were having their lunch in their shops with their sewing machines as tables where food was placed by food vendors. In other places, the only time the researcher observed movement in and out of the shops was when apprentices were sent on errand by their masters to buy sewing accessories, It was also observed that majority of the designers were dedicated to their work, creating designs according to their level of understanding, copying available structural and decorative designs in fashion magazines as demanded by customers. Some fashion designers and tailors were also found copying designs from samples of garments brought to them by customers, where respondents operated as small scale industry, it was observed that there was mutual understanding and good working relationship, as designers interacted freely with apprentices, working together in unity, despite the fact that some of them were masters in the trade. The researcher did not observe any dichotomy among the fashion designers and tailors.

During the fieldwork, respondents gave answers to research questions without much problem, though some of the respondents could not communicate in English language, with the help of the research assistant, the researcher was able to understand the respondents. Interestingly, the researcher was able to create awareness in identifying colours on fabric and how colour can be selected for the placement of structural and

decorative designs. Simple tips were given to some of the respondents on how to select harmonious colours. The fashion designers and tailors appreciated the researcher's efforts on colour selection, it was also noted that respondents with no formal education were aware that colour on fabric and garment attracts; therefore, selecting harmonious colours for placement of structural and decorative design is important. The researcher also educated some respondents without formal education in fashion designing on how to handle stripe fabrics when sewing for individuals because vertical and horizontal stripes on fabric create two different illusions on the wearer. Tall people may look shorter when stripes run horizontally on the wearer, while short people may look taller when stripes run vertically on the wearer. This was also noted by the respondents. In all the fashion designing shops visited, designers were willing to show their designs to the researcher. Perhaps, this was because the researcher and the research assistant had earlier visited the respondents during the pilot study. The only problem the researcher had was that majority of the respondents were not ready to have snap shots with the researcher, their reason was that they did not know where their pictures would get to. They however allowed the researcher take pictures of their designs, sewing equipment and tools; however, the researcher was able to take pictures of designed garments, equipment and tools as well as pictures of few individuals who were willing.

5.3 Correlation of Research Findings with Previous Studies

Using the review of relevant literature, the questionnaire, fieldwork experience, respondents' answers to structured questionnaire and oral interview, as well as practical work on structural and decorative designs, the results have shown clearly that there exist relationship between this study and previous works.

From the previous studies, Nkeoye (2009) observed that fabric provides for variety, beauty and aesthetics appeal; and that designs on fabric are grouped into two

classes; structural and applied design of fabric. This is quite true and obvious, during fieldwork to the selected areas of study; the researcher came across different categories of designs, such as woven, printed, painted and embroidered. The researcher was able to create awareness to respondents who were ignorant of the elements and principles of design on fabric to always study fabric for garment making first; this should include colours, motifs, stripes, shapes, plaids as well as motif direction, before cutting in order to get the best out of the fabric; so that the aesthetics of the fabric will not be distorted. These advice according to some of the respondents was an "eye opener".

From the previous studies, Adamtey (2008) stated that, decorative designs which are referred to as trimmings are all those items essential to enhancement of beauty and aesthetics on garments, the author suggested that some of these can however, enhance garments when properly and carefully selected and appropriately placed. Therefore, trims should be chosen carefully because decorative designs are relatively critical in the making of garments. These suggestions seemed to be quite true in this study in the sense that decorative designs are relatively critical in the make-up of garments, if trims are chosen carefully and appropriately placed on garments, the outcome of the garments will be beautiful, appealing and attractive to a consumer.

Frings (1987) also observed that the finishing touches that a designer adds to garments are decorative designs; these include every seam, topstitching, buttons, laces, and bindings. The author however suggested that decorative designs must not be overdone, she stated further that the best result are obtained by using the elements and principles of design to serve as a guideline for combining elements, she also stressed that whether design elements are used successfully depends on how harmonious they are on a garment. Designers may not consciously think of these as they sew; but when a design is wrongly placed, the problem can be analysed in terms of proportion, balance, repetition,

emphasis and harmony. This statement seem to be true in this studies in the sense that as soon as a garment is completed with structural and decorative designs, mistakes are always obvious when designs are poorly selected and wrongly placed on displayed garments, poor selection and inappropriate placement depends on the individual's level of knowledge and exposure to the application of the elements and principles of design in textiles as related to fashion design, some people may not see anything wrong on the selection and placement of designs. A fashion designer and tailor may be good artistically in creating structural and decorative designs without adequate knowledge of the elements and principles of design; in this case, designs may not be harmonious.

Nelms (1976) stated that decorative and structural designs used on garments include tucks, pleads gathers, shirring, appliqué, bias, embroidery, patch work and the use of printed fabrics. This is quite true because in some of the study areas, printed fabric was used as combination fabric for producing garments and accessories. This has become a common trend in the study areas in Kaduna metropolis. Knight (2008) also observed that decorative designs must harmonize with the materials on which they will be used, decorative designs must be harmonious with the fabric, she stated further that designs are meant to add balance and attractiveness to a garment. This is true in the sense that if decorative and structural designs are properly selected and applied, they can add to the value of a garment and this will lead to an attractive result from consumers.

Nelms (1996) suggested that, in placing structural and decorative designs on garments, fashion designers and tailors should ask the following questions: -

1) Are structural and decorative designs really necessary for the desired effect?
2) Will these designs help to accentuate the line, colour and the structure of fabrics?
3) Are these designs appropriately selected?
4) Will these effects add to the aesthetics and beauty of the garment?

The author concluded that carefully chosen and wisely applied structural and decorative designs can add to the value of a garment, attractive results can be obtained; this is true, based on the experience of the researcher during fieldwork.

Waddel (2004) stated that designs of today are greatly influenced by styles worn in the past. Cloths are part of the continuing part of life, through different periods of history; the researcher therefore through literature review noted that, fashion designers and tailors in their search for new ideas often turn to the past for ideas; this is true in the sense that during the fieldwork, respondents were also seen using fashion magazines and catalogues to get styles, few respondents were seen studying styles of some garment gotten from "the bend down market boutique" (second hand garments), while some were seen copying styles from garments collected from peer groups.

On garment finishing, Butterick (1971) stated that four methods of garment finishing include; turn and stitch, overlocking, pinking and overcastting. Barker (1991) also observed that the reasons for garment finishing is to prevent fraying, the author stated further that to control fraying, a designer could turn and stitch with a sewing machine, overlock or use pinking shears, she stated further that if this is done, the fabric will not fray. This is quite true because during fieldwork, majority of the fashion designers and tailors used overlocking method, popularly known as (weaving) and turn and stitch to finish up their garments.

Based on findings from respondents and photographs of samples displayed, it is obvious that the objective of the study has been achieved in the study area in Kaduna Metropolis.

5.4 Conclusion

From the findings and discussion on examination and remodeling of structural and decorative designs on ladies' garments in Kaduna metropolis, the following conclusions are deduced:

1) Though many of the respondents exhibited high skill in garment making, they had limited knowledge of the application of the elements and principles of design in garment production.
2) Despite the fact that there was total commitment on the part of fashion designers and tailors in producing fashionable garments, less attention was given to proper selection of structural and decorative designs as well as proper placement.
3) Majority of the respondents sourced structural and decorative design materials from the market, the few that constructed their designs artistically were respondents that passed through tertiary education and studied fashion designing. Some respondents, who constructed without formal education in fashion designing, were not precise in constructing. For example, when making different categories of pleats and tucks such as spaced tucks, pin tucks, cross tucks, spaced pleats, inverted pleats, knife pleats and box pleats, measurements were not even between space.
4) Turn and stitch and overlocking methods, according to respondents, were mostly used to finish garments. It was discovered during the fieldwork that some respondents failed to overlock completed garments, despite the fact that overlocking machines were available, perhaps some customers cared less about the finishing of their garments.

5.5 Implications of the findings to the Textile and Fashion Education

1) The findings and conclusions of this study revealed that different fabrics are produced with variety of structural and applied designs, these fabrics are made into garments by fashion designers and tailors using different techniques, creativity and methods to place designs on garments for enhancement. During fieldwork, the researcher observed that design ideas were gotten from fashion magazines, fashion catalogues and the television; in some cases, from respondents peer groups. Few designs were sourced from secondhand clothing (bend down boutique). With the awareness created among respondents in the study areas, it is believed that respondents will always study designs on fabrics before cutting and sewing in order not to distort motifs. It is also believed that the study has enhanced the knowledge of fashion designers and tailors in the study areas with regards to the elements and principles of design in garment production.
2) The findings also revealed that, some respondents lack adequate knowledge on harmonious colour selection when they need to place structural and decorative designs on ladies garments, due to the awareness created by the researcher during the fieldwork on simple tips on how harmonious colours could be selected, the researcher is confident that the knowledge respondents acquired during fieldwork on colour selection would be helpful.
3) The findings also revealed that structural and decorative designs are primarily placed for garment embellishment. Frings (1987) stated that good decorative designs applied on garments enhances' beauty and increases patronage. Appropriate selection and placement of structural and decorative designs on ladies' garments would definitely promote and increase saleability of ladies' garments in the study areas; therefore, the problem of looking for foreign

imported materials would be solved; made in Nigerian fabrics that are made into attractive ladies' garments will be sort for, and patronized; hence, fashion designers and tailors will be encouraged and challenged to create more attractive colourful, structural and decorative designs on ladies' garments for the populace. Textile designers will also be encouraged to produce beautiful and well designed fabrics for garment production.

4) The study also revealed that majority of the respondents chose interfacing as structural and decorative design material for supporting the garment fabric when placing structural and decorative designs on ladies' garments.

   Interfacing, popularly known as "gumstay" by respondents has been an important part of garment production; especially for structuring. They are also used to reinforce decorative design details. The choice of interfacing however, depend on the weight of the garment fabric as well as the effect desired. Interfacings are produced in light, middle and heavy weight. It is hoped that respondents would choose interfacing appropriately for placing structural and decorative designs on ladies' garments.

5) The findings also revealed that majority of the respondents operated on a one man business basis, fashion designers and tailors in the study area should team up to exchange ideas and set-up small scale sewing industries, by so doing, the researcher belief designers will learn from one another, develop good creative skills in producing quality structural and decorative designs for enhancement of beauty and aesthetics in the Nigerian society, the small scale industries established can also serves as a training ground where people can effectively learn the art of selecting and placing structural and decorative designs on garments, people will be empowered and be self reliant.

5.6 Recommendations

The following recommendations are made based on result of the findings from the study.

1) The Bank of Industry should give fashion designers and tailors soft loans so that respondents can teem up to establish small scale fashion businesses because overwhelming majority of them operate on a one man business basis.
2) The teaching of entrepreneurship education should be directed towards fashion design and clothing technology for self employment; this will help students to be knowledgeable in techniques of generating business ideas and various operational techniques of managing fashion designing businesses.
3) More modern fashion design schools should be set up to train fashion designers; majority of the designers presently depend only on magazines for ideas on structural and decorative designs.
4) Seminars and workshops on selection and placement of structural and decorative designs on ladies' garments should be organized by specialists; majority of the respondents learnt fashion designing through apprenticeship.
5) There should be close linkage between fashion designers, tailors and fashion schools, so that contemporary ideas can be imparted to designers in the society.
6) The National Board for Technical Education should create more departments in Polytechnics in the country where fashion design should be taught. The National Universities Commission should also look into Universities that are interested in teaching fashion designing and create this departments in relevant faculties so that fashion design graduates from polytechnics can go for degree programmes in fashion designing.

5.7 Suggestions for further Studies

Further studies should be made on the following:

1) Examination and remodeling structural and decorative designs on men's wear in any part of the country.
2) Embellishing techniques suitable for children's garments.
3) Innovation on tools, materials and equipment for the production of fashionable contemporary garments.
4) Adopting pattern drafting techniques in place of free hand cutting by fashion designers and tailors in the country.

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APPENDICES



Plate XXI: Combination fabric decorated with buttons, slippers and a bag produced using garment fabric
Source: Boutique, Department of Textile Technology and Fashion Design, Kaduna Polytechnic
Photograph by: Mary A. Afolabi, 2014



Plate XXII: Applique on garment with footwear.
Source: Boutique, Department of Textile Technology and Fashion Design, Kaduna Polytechnic
Photograph by: Mary A. Afolabi, 2014



Plate XXIII: Researcher admiring appliqué on garments
Source: Unguwar Rimi, Kaduna
Photograph by: Research Assistant, 2014



Plate XXIV: Researcher and a student of Kaduna Polytechnic inspecting a fabric in case of fault in production in his garment shop
Source: Tudunwada, Kaduna
Photograph by: Research Assistant, 2014



Plate XXV: Machine embroidered blouse.
Source: Tudunwada, Kaduna
Photograph by: Research Assistant, 2014



Plate XXVI: Researcher and a student of Kaduna Polytechnic Inspecting an appliqué decorated garment.
Source: Barnawa, Kaduna
Photograph by: Research Assistant, 2014



Plate XXVII: A Sequinned garment on display
Source: Barnawa, Kaduna
Photograph by: Research Assistant, 2014



Plate XXVIII: Researcher admiring a student's fashion shop.
Source: Barnawa, Kaduna
Photograph by: Research Assistant, 2014

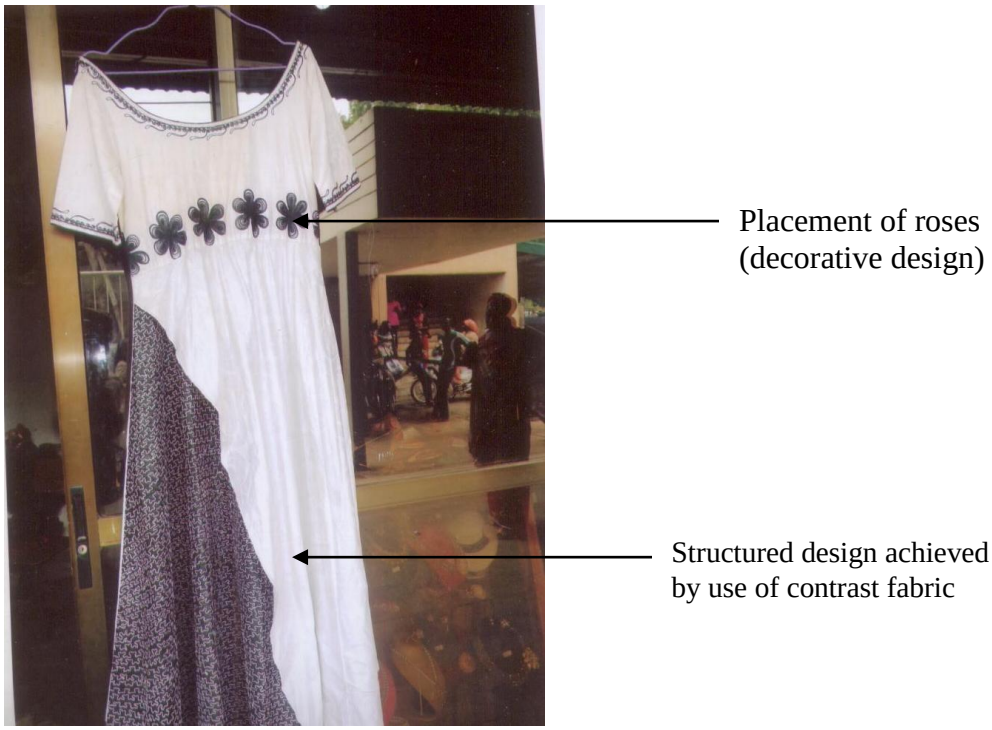


Plate XXIX: Garment embellished with structural and decorative design
Source: Boutique, Department of Textile Technology and Fashion Design, Kaduna Polytechnic
Photograph by: Mary A. Afolabi, 2014

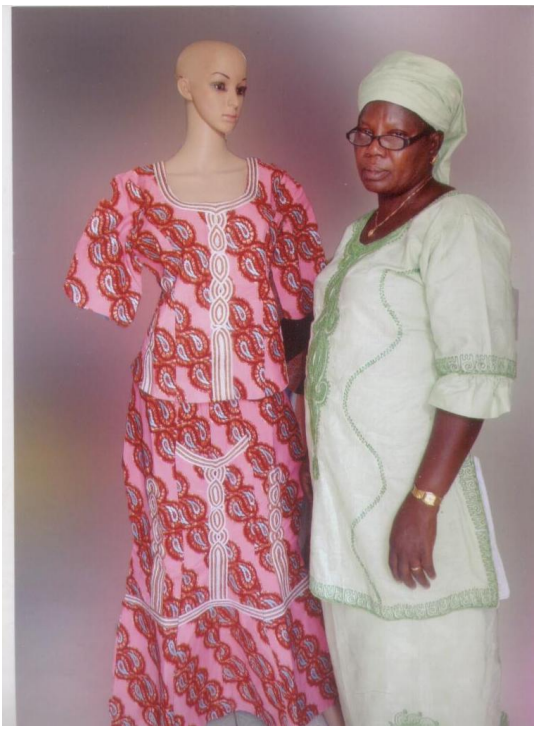


Plate XXX: A blouse and skirt garment decorated with trims
Source: Barnawa, Kaduna
Photograph by: Research Assistant, 2014



Plate XXXI: Researcher interviewing a respondent
Source: Kakuri, Kaduna
Photograph by: Research Assistant, 2014



Plate XXXII: Researcher admiring a garment well decorated with printed fabric
Source: Kakuri, Kaduna
Photograph by: Research Assistant, 2014

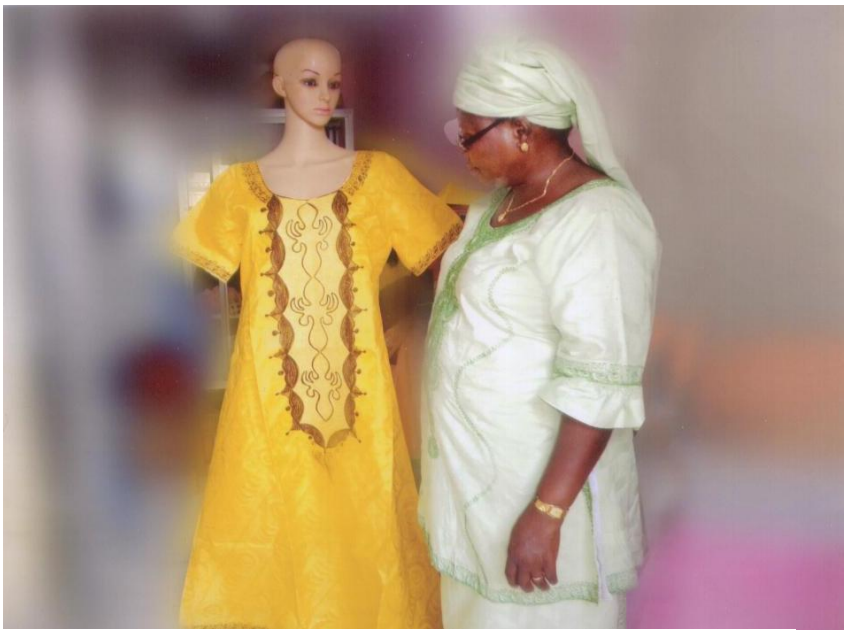


Plate XXXIII: Researcher Inspecting an embroidered garment
Source: Kakuri, Kaduna
Photograph by: Research Assistant, 2014

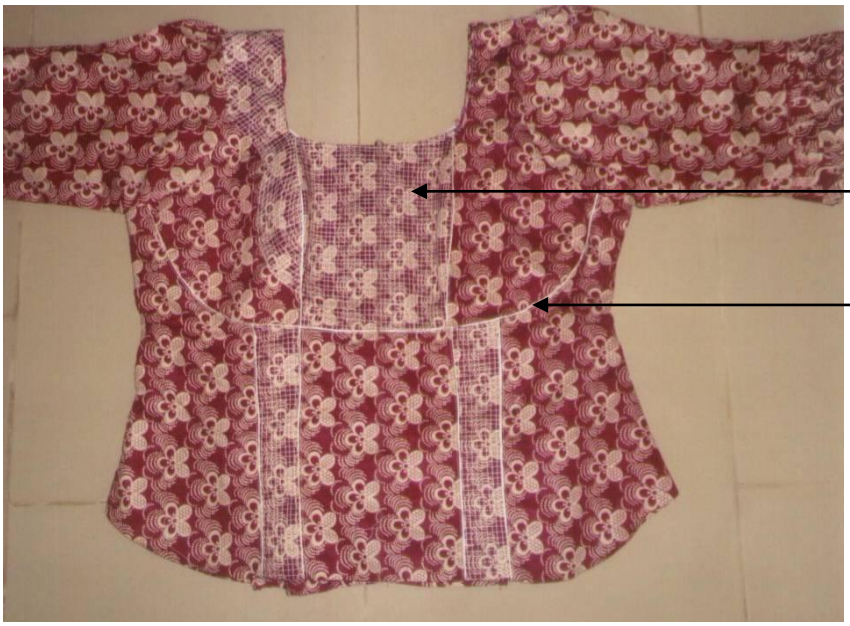


Plate XXXIV: A blouse embellished with machine stitches
Source: Gonigora, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XXXV: Researcher commenting on trims used on a garment
Source: Kakuri, Kaduna
Photograph by: Research Assistant, 2014



Plate XXXVI: Researcher admiring a multicoloured machine embroidered garment – currently in vogue in Kaduna
Source: Barnawa, Kaduna
Photograph by: Research Assistant, 2014



Plate XXXVII: Kaduna Polytechnic boutique where structural and decorative designed garments are displayed.
Source: Department of Textile Technology and Fashion Design Kaduna Polytechnic
Photograph by: Mary A. Afolabi, 2014



Plate XXXVIII: Decorated garments on display
Source: Kakuri, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XXXIX: Displayed decorated kaftans and a blouse
Source: Unguwar Rimi, Kaduna
Photograph by: Research Assistant, 2014



Plate XL: A typical fashion designing shop in Unguwar Rimi
Source: Unguwar Rimi, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XLI: A quilted garment
Source: Boutique, Department of Textile Technology and Fashion Design, Kaduna Polytechnic
Photograph by: Mary A. Afolabi, 2014



Plate XLII: A blouse decorated with Tucks and Trims
Source: Unguwar Rimi, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XLIII: Blouse embellished with printed fabric
Source: Kakuri, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XLIV: Beadwork on a garment
Source: Goningora, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate XLV: Researcher at Selah fashion Institute, Gonigora. The Director is seen overlocking a garment
Source: Gonigora, Kaduna
Photograph by: Research Assistant, 2014



Plate XLVI: Researcher inspecting a beaded wedding gown produced by a respondent
Source: Gonigora, Kaduna
Photograph by: Research Assistant, 2014



Plate XLVII Machine embroidered blouse
Source: Kakuri, Kaduna.
Interfacing was used to stabilize and stiffen the garment fabric on the embroidered area
Photograph by: Mary A. Afolabi, 2014



Plate XLVIII: Tie-dye blouse decorated with machine embroidery
Source: Gonigora, Kaduna.
Photograph by: Mary A. Afolabi, 2014



Plate XLIX: A blouse decorated with trims
Source: Kakuri, Kaduna.
Photograph by: Mary A. Afolabi, 2014



Plate L: A blouse heavily decorated with machine embroidery
Source: Unguwar Rimi, Kaduna.
Photograph by: Mary A. Afolabi, 2014



Plate LI: Garment decorated with gathers.
The fabrics cut for gathers was too long.
Therefore, the design intended was not achieved
Source: Gonigora, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LIII: A blouse decorated with lace on the front bodice.
The design covered some motifs; while shirring was not properly done.
Source: Unguwar Rimi, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LIV: A blouse decorated with pleats, tucks and bias binding at the yoke using garment fabric for placement.
Source: Barnawa, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LV: A blouse embellished with machine embroidery at the neckline
Source: Kakuri, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LVI: "Senegalese" style embellished with lace trimmings, bias binding and stones.
Source: Unguwar Rimi, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LVII: Blouse decorated with machine embroidery and roses
Source: Kakuri, Kaduna
Photograph by: Mary A. Afolabi, 2014



Plate LVIII: Researcher producing a decorated Boubou
Photograph by: Research Assistant, 2014

APPENDIX A

QUESTIONNAIRE FOR SELECTED FASHION DESIGNERS AND TAILORS IN KADUNA METROPOLIS

Department of Industrial Design,
Faculty of Environmental Design,
Ahmadu Bello University,
Zaria.

Dear Fashion Designers and Tailors,

I am conducting a research on examination and remodeling of structural and decorative designs on ladies garments in Kaduna Metropolis.

The aim of this study is to look into the problems involved in the placement of structural and decorative designs on ladies garments, to create awareness to fashion designers and tailors on how designs can be selected and placed appropriately on garments for beauty and aesthetics and for future reference and documentation.

Attached is questionnaire to be completed by you.

Thank you for your cooperation in advance.

Yours faithfully,

Afolabi Mary Adeboyin

SECTION ONE: PERSONAL DATA

Please answer the question that is most appropriate to you, thick (√) in the box as appropriate.

Age:

a. 15-20 [ ]

b. 21-25 [ ]

c. 26-30 [ ]

d. 31-35 [ ]

e. 36-40 [ ]

f. 41 and above [ ]

Marital Status:

a. Single [ ]

b. Married [ ]

c. Divorce [ ]

d. Widowed [ ]

e. Widower [ ]

Sex:

a. Male [ ]

b. Female [ ]

Qualification:

a. M.A/M.Sc/M.Ed [ ]

b. B.A., B.Sc [ ]

c. HND [ ]

d. ND [ ]

e. SSC [ ]

f. Primary Six [ ]

g. Non Formal Education [ ]

SECTION TWO: PLEASE ANSWER THE QUESTIONS AS APPROPRIATE

1. What are the elements of design in garment production?

   a. Colour [ ]

   b. Line [ ]

   c. Shape [ ]

d. Details [ ]

e. Others (Specify) _____

2. What are the principles of design in garment production?

   a. Proportion [ ]

   b. Balance [ ]

   c. Repetition [ ]

   d. Emphasis [ ]

   e. Others (Specify) _____

3. What are the tools and equipment necessary for the production of structural and decorative designs?

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

4. List decorative trims for enhancing garment parts

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

5. List structural design materials for placement of structural designs on garment parts

   a. Interfacing [ ]

   b. Net [ ]

   c. Booms [ ]

   d. Lining [ ]

   e. Others (Specify) _____

6. How do you source structural and decorative materials?

   a. _____

   b. _____

   c. _____

   d. _____

e. _____

7. What are the stitches used for the production of structural and decorative designs?
   a. Running stitches [ ]
   b. Back stitches [ ]
   c. Overcasting [ ]
   d. Cross stitches [ ]
   e. Others (Specify) _____
8. What are the seams used for the production of structural and decorative designs?
   a. Lapped seam [ ]
   b. Straight seam [ ]
   c. Slot seam [ ]
   d. Stud seam [ ]
   e. Others (Specify) _____
9. What are the techniques used for the production of structural and decorative designs?
   a. Applying pleats [ ]
   b. Applying tucks [ ]
   c. Applying gathers [ ]
   d. Applying trims [ ]
   e. Others (Specify) _____
10. How can you place structural and decorative designs on garment parts?
    a. Machine stitching [ ]
    b. Hand stitching [ ]
    c. Heat press [ ]
    d. Embossing designs [ ]
    e. Others (Specify) _____
11. How do you finish up your garments?
    a. Turn and stitch [ ]
    b. Pinking [ ]
    c. Overlocking [ ]
    d. Others (Specify) _____

SECTION THREE: PLEASE ANSWER THE QUESTIONS AS APPROPRIATE

12. How did you learn fashion designing and tailoring?
    a. Formal education [ ]
    b. Apprenticeship [ ]
    c. Inherited [ ]
13. What is your professional training?
    a. Industrial design [ ]
    b. Fashion design [ ]
    c. Textile Technology [ ]
    d. Home Economics [ ]
    e. Clothing and Textiles [ ]
    f. Others (Specify) _____
14. How do you operate as a fashion designer and tailor?
    a. One man business [ ]
    b. Small scale industry [ ]
    c. Large scale industry [ ]
    d. Others (Specify) _____
15. What type of sewing machine do you use?
    a. Manual sewing machine [ ]
    b. Industrial [ ]
    c. Others (Specify) _____
16. How long have you been producing garments?
    a. Less than 1 year [ ]
    b. 1 – 5 years [ ]
    c. 5 – 10 years [ ]
    d. 10 Years and above [ ]
17. What type of garments do you produce?
    a. Traditional [ ]
    b. Contemporary [ ]
    c. Others (Specify) _____
18. How do you get design ideas?
    a. Fashion Catalogue [ ]
    b. Fashion Magazines [ ]
    c. Internet [ ]

d. Colleagues and Peer groups [ ]

e. Media (TV) [ ]

f. Others (Specify) _____

19. Who are your customers?

a. Politicians [ ]

b. Civil servants [ ]

c. Business women and men [ ]

d. Students [ ]

e. Others (Specify) _____

20. What are the categories of your designs?

a. Men only [ ]

b. Women only [ ]

c. Children only [ ]

d. All of the above [ ]

APPENDIX B

DEPARTMENT OF INDUSTRIAL DESIGN
AHMADU BELLO UNIVERSITY, ZARIA - NIGERIA
Website: www.industrialdesign.org.ng E-mail: did@abu.edu.ng

Vice - Chancellor: Professor Abdullahi Mustapha, B. Sc (Hons) Pharm (ABU) Ph.D (London), FPSN
Head of Department: Dr. Salihu Maiwada, B.A., M.A., Ph.D(ABU) MSNA, MATTN

Tel: 08028185081
069879415

PhD/Env.Des/19801/2007-08

5th June, 2014.

The Head
Department of Chemistry
Ahmadu Bello University
Zaria

Dear Sir/Madam,

TO WHOM IT MAY CONCERN

The bearer of this letter is Mary Adeboyin a Ph.D. Student of the Department of Industrial Design, Ahmadu Bello University, Zaria. She is presently set to conduct some survey regards to her study, in Kaduna Metropolis, on structural and decorative design.

Please kindly assist to enable her use facilities to achieve results of survey necessary for her research work. Thanking you in anticipation.

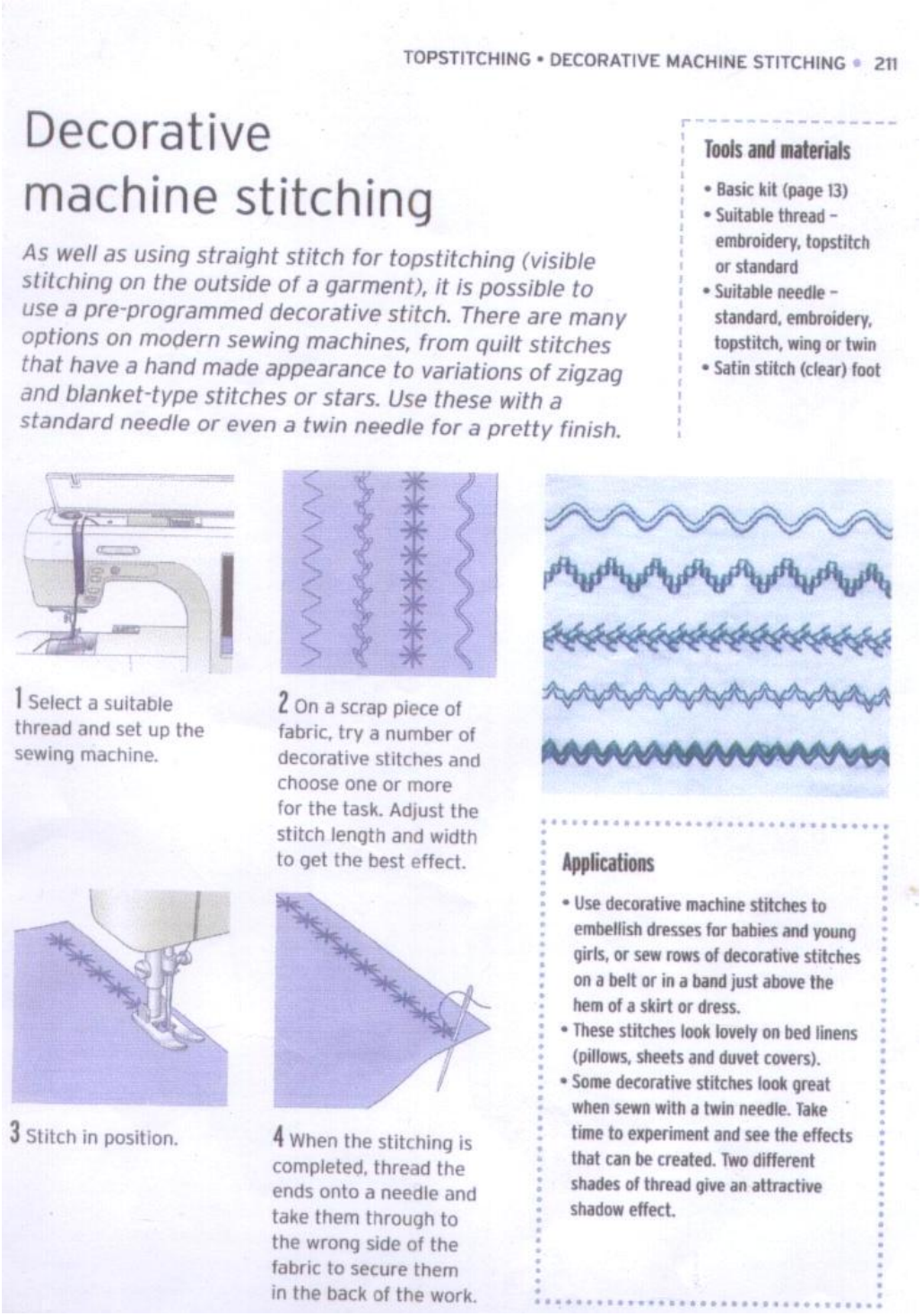
Yours faithfully,

Elisha S. Jamson

DEPT. OF INDUSTRIAL DESIGN
A.B.U. ZARIA.

Sections: Basic Design • Ceramic Design • Graphics Design • Textile Design • Glass Technology

APPENDIX C



TOPSTITCHING • DECORATIVE MACHINE STITCHING • 211

Decorative machine stitching

As well as using straight stitch for topstitching (visible stitching on the outside of a garment), it is possible to use a pre-programmed decorative stitch. There are many options on modern sewing machines, from quilt stitches that have a hand made appearance to variations of zigzag and blanket-type stitches or stars. Use these with a standard needle or even a twin needle for a pretty finish.

Tools and materials

- Basic kit (page 13)
- Suitable thread – embroidery, topstitch or standard
- Suitable needle – standard, embroidery, topstitch, wing or twin
- Satin stitch (clear) foot

1 Select a suitable thread and set up the sewing machine.

2 On a scrap piece of fabric, try a number of decorative stitches and choose one or more for the task. Adjust the stitch length and width to get the best effect.

3 Stitch in position.

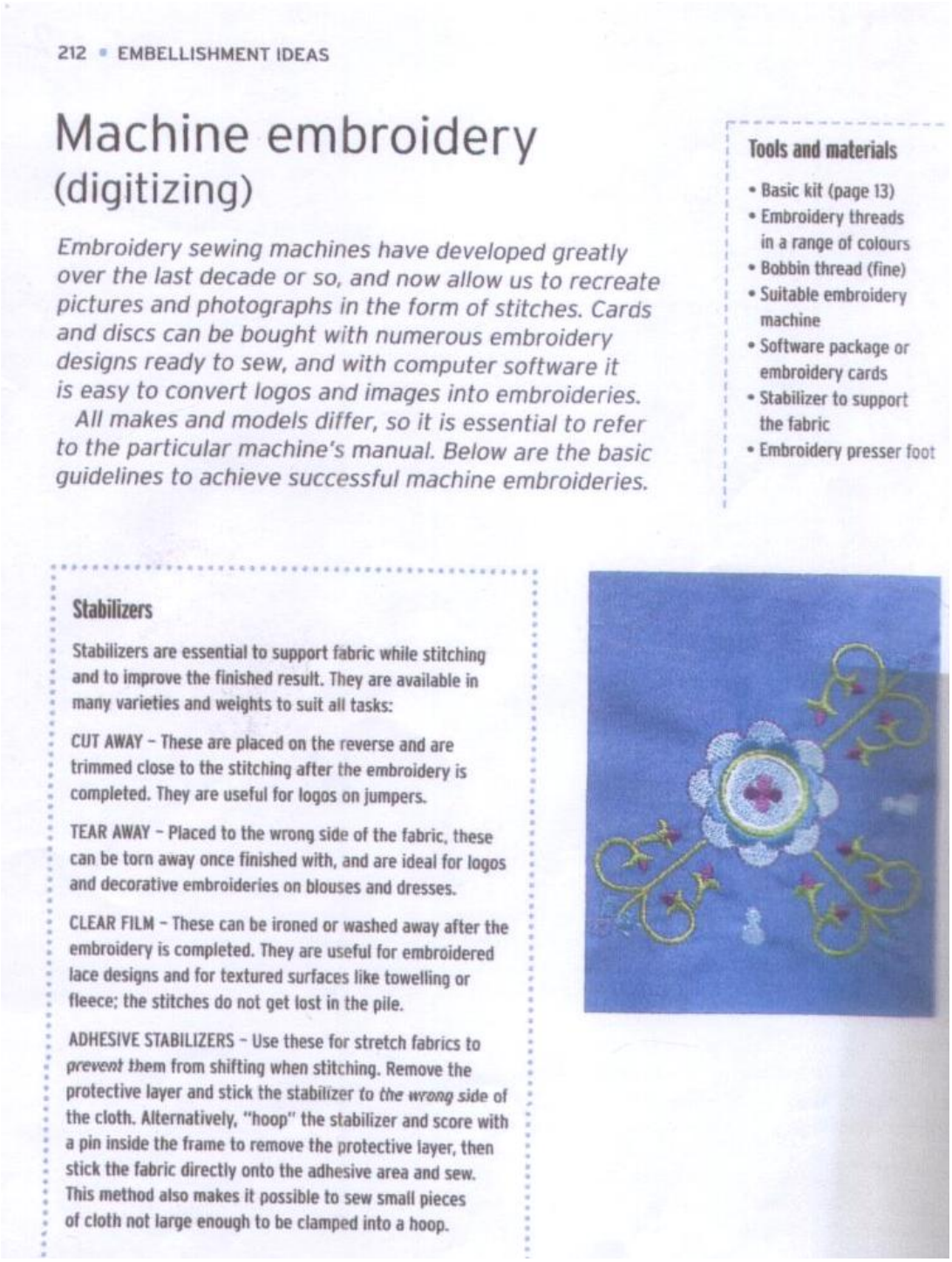
4 When the stitching is completed, thread the ends onto a needle and take them through to the wrong side of the fabric to secure them in the back of the work.

Applications

- Use decorative machine stitches to embellish dresses for babies and young girls, or sew rows of decorative stitches on a belt or in a band just above the hem of a skirt or dress.
- These stitches look lovely on bed linens (pillows, sheets and duvet covers).
- Some decorative stitches look great when sewn with a twin needle. Take time to experiment and see the effects that can be created. Two different shades of thread give an attractive shadow effect.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 211

APPENDIX D



212 • EMBELLISHMENT IDEAS

Machine embroidery (digitizing)

Embroidery sewing machines have developed greatly over the last decade or so, and now allow us to recreate pictures and photographs in the form of stitches. Cards and discs can be bought with numerous embroidery designs ready to sew, and with computer software it is easy to convert logos and images into embroideries.

All makes and models differ, so it is essential to refer to the particular machine's manual. Below are the basic guidelines to achieve successful machine embroideries.

Tools and materials

- Basic kit (page 13)
- Embroidery threads in a range of colours
- Bobbin thread (fine)
- Suitable embroidery machine
- Software package or embroidery cards
- Stabilizer to support the fabric
- Embroidery presser foot

Stabilizers

Stabilizers are essential to support fabric while stitching and to improve the finished result. They are available in many varieties and weights to suit all tasks:

CUT AWAY – These are placed on the reverse and are trimmed close to the stitching after the embroidery is completed. They are useful for logos on jumpers.

TEAR AWAY – Placed to the wrong side of the fabric, these can be torn away once finished with, and are ideal for logos and decorative embroideries on blouses and dresses.

CLEAR FILM – These can be ironed or washed away after the embroidery is completed. They are useful for embroidered lace designs and for textured surfaces like towelling or fleece; the stitches do not get lost in the pile.

ADHESIVE STABILIZERS – Use these for stretch fabrics to prevent them from shifting when stitching. Remove the protective layer and stick the stabilizer to the wrong side of the cloth. Alternatively, "hoop" the stabilizer and score with a pin inside the frame to remove the protective layer, then stick the fabric directly onto the adhesive area and sew. This method also makes it possible to sew small pieces of cloth not large enough to be clamped into a hoop.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 212

APPENDIX E

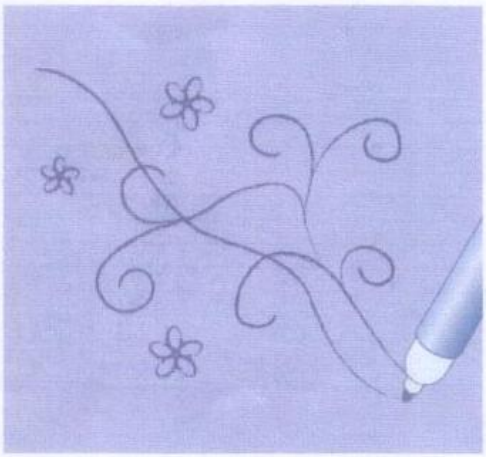
Hand embroidery

Hand embroidery may be slow compared to machine embroidery, but the effects can be stunning if you use simple stitches and a good choice of threads and colours. Added to that, no expensive equipment is needed.

Hand embroidery may be structured and formal or more abstract – the same stitches are used to achieve various results. It may be carried out using a hoop or frame or without either, depending on personal preference.

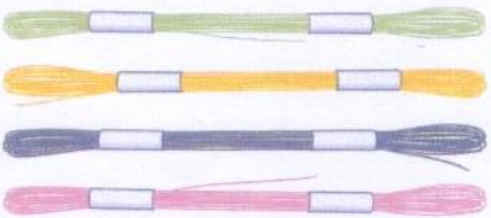
Tools and materials

- Basic kit (page 13)
- Embroidery needles with large eyes
- Embroidery threads (thread) in a range of colours
- Suitable fabric
- Small, sharp-pointed scissors

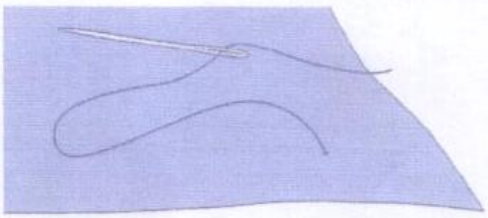




1 Plan out the design and mark with a temporary marker or use an iron-on transfer. Hoop the design, if required.



2 Arrange threads ready for stitching; colour code them to avoid mistakes.



3 Secure the thread end in the cloth and sew.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 216

APPENDIX F

Appliqué

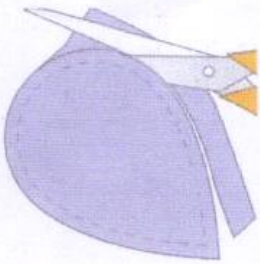
Appliqué is a decorative technique in which fabric pieces are placed and stitched onto fabric by hand or machine. Traditionally, the fabric pieces were tacked in place before being sewn, but now adhesive products make it easier to do the task and finish it more quickly.

Satin stitch gives a bold outline to an appliqué design and holds it to the backing cloth, but other decorative and blanket-type machine stitches can also be used.

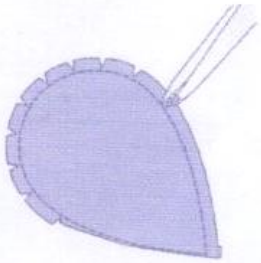
Tools and materials

- Basic kit (page 13)
- Design or template
- Paper-backed fusible adhesive film
- Small, sharp scissors

Hand-sewn appliqué

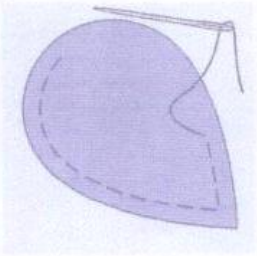


1 Cut out the appliqué shape with a 6 mm (1/4 in.) seam allowance.

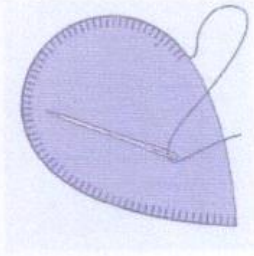


2 Stay stitch the outline and fold the seam allowance to the wrong side. Snip and clip the edges where necessary.





3 Tack the appliqué shape in position.



4 Hand sew the outer edge of the shape through the fabric below with a blanket stitch, or similar decorative stitch, to secure.

Applications

Use appliqué for bold designs on bags and children's clothing.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 218

APPENDIX G

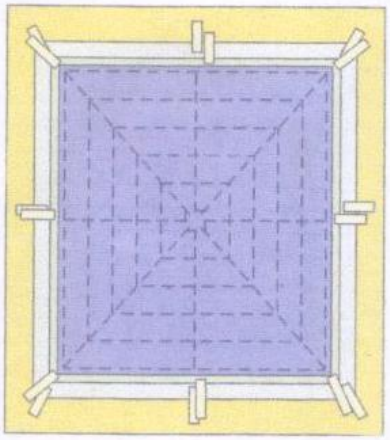
Quilting

Quilting is mostly regarded as a North American craft, introduced by European settlers. It is a decorative method of holding two or more layers of fabric together with hand or machine stitching. Quilted designs are attractive when stitched on plain fabrics, and are often used to construct a quilt. Many types of stitches may be used, but the simplest is a hand-sewn running stitch. Quilting with a sewing machine is also popular, using a free-motion technique or a walking foot attachment.

Tools and materials

- Basic kit (page 13)
- Quilting frames and hoops
- Long quilting pins
- Safety pins
- Masking tape
- Temporary markers
- Wadding
- Ruler

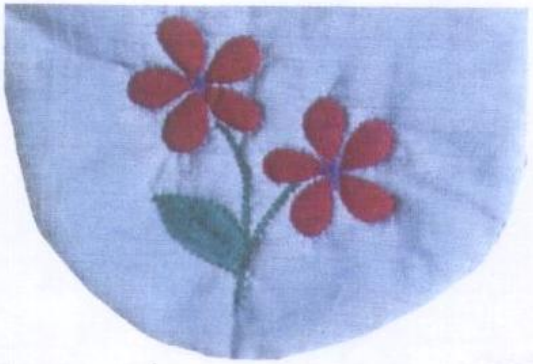
Preparation



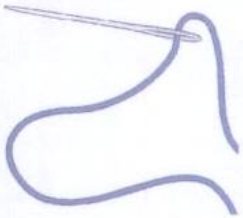
Lay the backing layer of the quilt face down on a large table or work surface, and tape it to the table to hold it flat. Place the wadding on top and tape this down, too.

Place the top of the quilt over the wadding and finish as above.

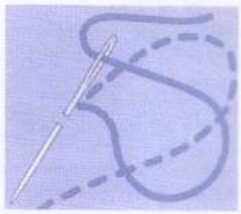
Working from the centre outwards, tack horizontally, vertically and diagonally, and then sew a grid of tacking stitches approximately 5–7.5 cm (2–3 in.) apart. Alternatively, hold the layers together with many safety pins.



Hand quilting



1 Thread up a short, sharp-pointed "betweens" needle.

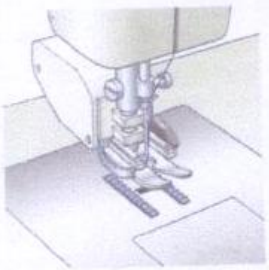


2 Secure the thread end with a knot or double stitch and sew a neat, regular running stitch along the sewing line. Secure the thread end to finish.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 226

APPENDIX H

Machine quilting – with a walking foot



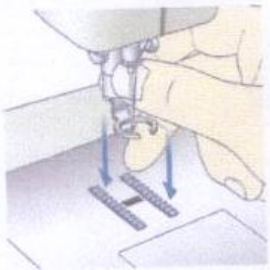
1 Attach a walking foot to the sewing machine. Follow the instructions provided to ensure it is in place.



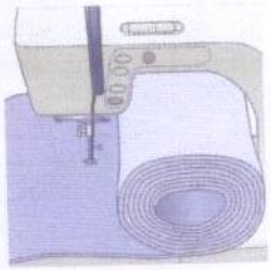
2 Machine quilt, as required. The walking foot copes well with the thickness and layers of fabrics and prevents the surface fabric from creeping over those layers below.



Free-motion machine quilting



1 Lower the feed dogs and attach a quilting or darning foot.



2 Place the quilt into a frame (although it is possible to hold the fabric without a frame). A whole quilt should be rolled – this makes it easier to sew.



3 Place the quilting under the needle and move it steadily while the needle makes stitches. The faster the movement, the larger the stitch.



Sewing tips

- If the sewing machine has a function to secure thread ends, use it, as sewing in thread ends afterward can be a very lengthy process!
- Take time to practise on spare fabric before starting to quilt and adjust the tension if necessary.
- Coats and jackets can be quilted to add warmth and have a decorative finish. Bags may have an area quilted with metallic threads to embellish them.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 227

APPENDIX I

Patchwork

The art of joining pieces of fabric together has changed enormously since it was first used to recycle old clothes and scraps of fabric into bed coverings for economic reasons. Although traditional styles are still popular, contemporary patchwork is stunning in its use of design and colour to create textile art.

Fabric pieces are joined by hand or machine and then often finished with quilting (see pages 226–227). Appliqué (see pages 218–219) and machine embroidery (see pages 212–215) are also often incorporated into patchwork designs.

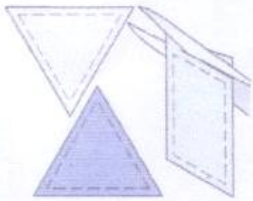
Tools and materials

- Basic kit (page 13)
- Cotton fabric
- Long pearl-headed pins
- Quilter's safety pins
- Scissors or rotary cutter and mat
- Ruler

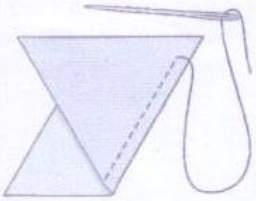
Basic patchwork



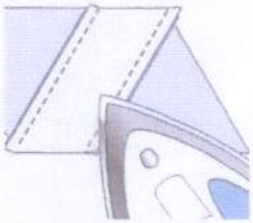
1 Plan the design and colours of the patchwork.



2 Cut out fabric pieces using simple shapes or with the help of a template. Include a seam allowance of 6 mm (¼ in.).



3 Join the fabric pieces together with a running stitch sewn by hand or alternatively, use a straight machine stitch.



4 Secure the thread ends and press the seam allowances to the darker or "busier print" side.

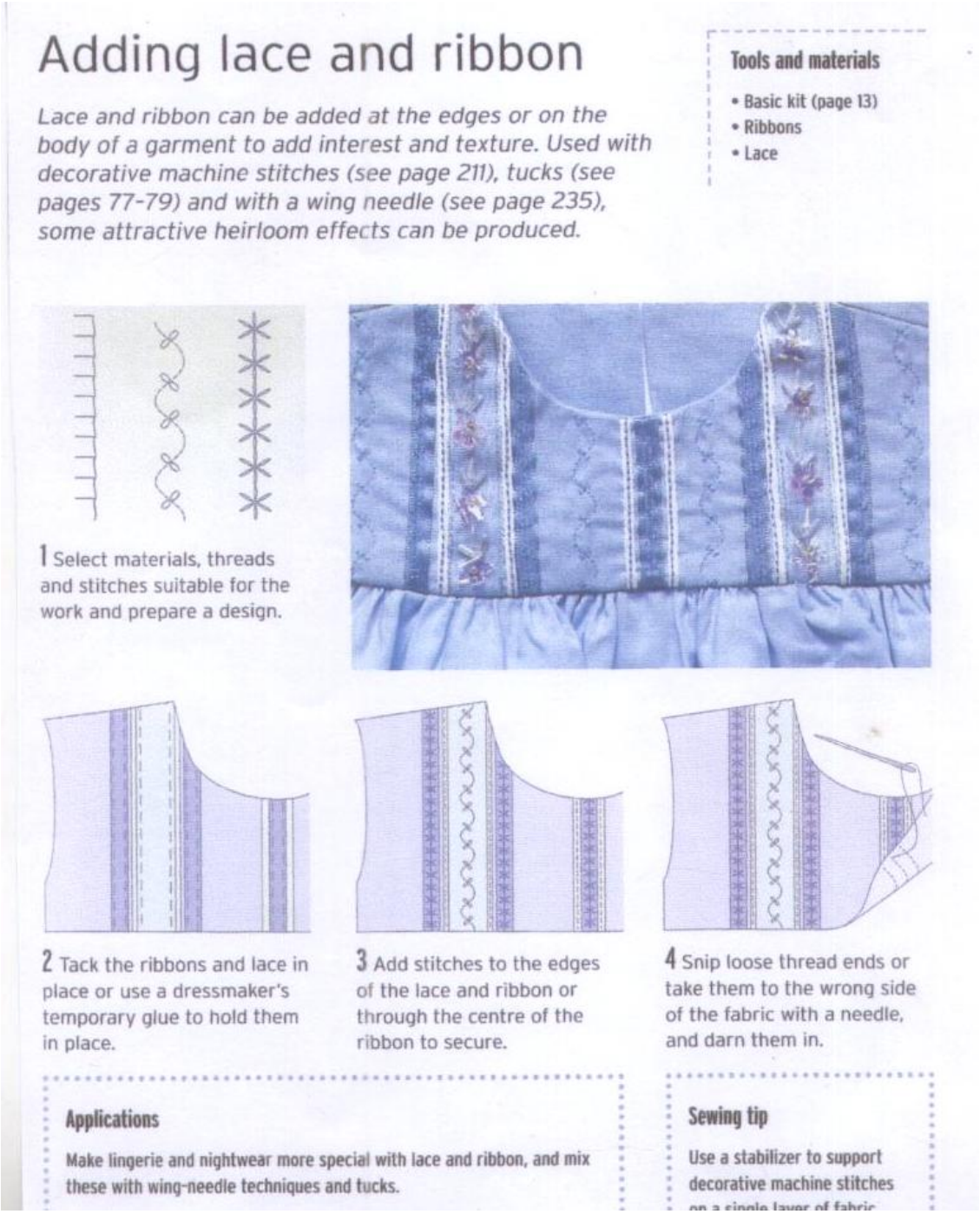


Applications

- Make up a piece of patchwork and cut the front flap of a shoulder bag from it. The remainder of the bag could be made from one of the fabrics in the patchwork.
- Make a waistcoat by sewing two rectangles of patchwork and cutting the front pieces from it. Make the back plain or in the same patchwork.
- Embellish a skirt with a border of patchwork just above the hem.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 224

APPENDIX J



Adding lace and ribbon

Lace and ribbon can be added at the edges or on the body of a garment to add interest and texture. Used with decorative machine stitches (see page 211), tucks (see pages 77-79) and with a wing needle (see page 235), some attractive heirloom effects can be produced.

Tools and materials

- Basic kit (page 13)
- Ribbons
- Lace

1 Select materials, threads and stitches suitable for the work and prepare a design.

2 Tack the ribbons and lace in place or use a dressmaker's temporary glue to hold them in place.

3 Add stitches to the edges of the lace and ribbon or through the centre of the ribbon to secure.

4 Snip loose thread ends or take them to the wrong side of the fabric with a needle, and darn them in.

Applications

Make lingerie and nightwear more special with lace and ribbon, and mix these with wing-needle techniques and tucks.

Sewing tip

Use a stabilizer to support decorative machine stitches

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 223

APPENDIX K

Beads and beading

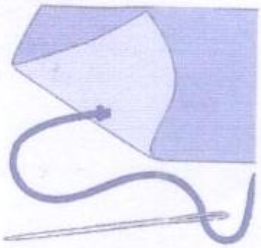
The addition of beads, pearls or sequins adds texture and glamour to clothing. These embellishments can give a plain, simple garment the perfect finish for a special occasion. Whether pearls are scattered over the skirt of a wedding dress or an elaborate cluster of glass beads is sewn on the bodice of an evening dress, both the pearls and beads are easy to sew in place.

Tools and materials

- Basic kit (page 13)
- Beads, pearls and sequins
- Beading needle (long and fine)
- Tambour hook
- Pearl, bead or braiding foot for machine application

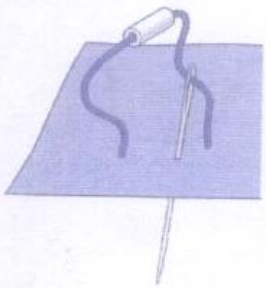
Individual pearls, beads and sequins

Preparation
If preferred, place the fabric to be beaded into a hoop or frame.

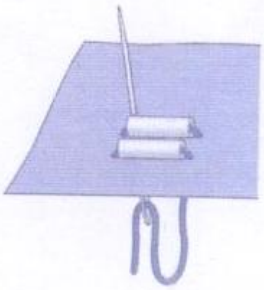


1 Secure the thread by sewing a double stitch on the wrong side of the fabric.





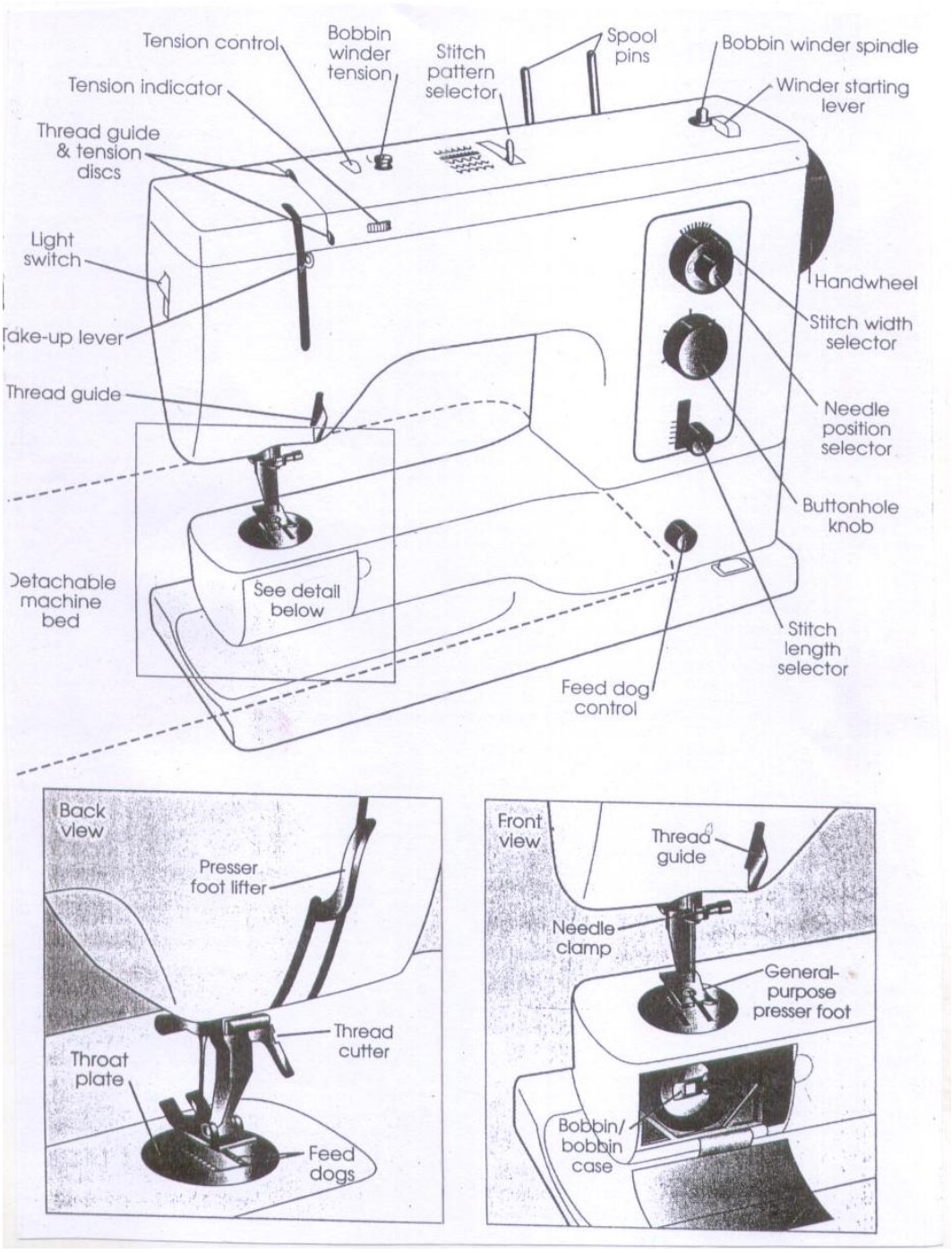
2 Bring the needle to the surface and pass it through the hole in the bead or sequin. Take the needle back down through the fabric under the bead.



3 If the beads are close together, repeat step 2, catching each in position. If they are more scattered, secure the thread each time before sewing the next bead.

Source: Knight, L. (2008). The Dressmakers Technique Bible. A Complete Fashion Sewing Techniques. David and Charles, UK pg 220

APPENDIX L



Source: Coats & Clark (2000). Nursery Décor for Beginners,
Creative Publishing International, Minnetonka, Minnesota, U.S.A pg. 9

APPENDIX M **MACHINE NEEDLES**

ways refer to the instruction manual whenever you have a specific question or problem with your machine.

CHOOSING SEWING MACHINE NEEDLE AND THREAD

Sewing machine needles are available in a variety of sizes and types. Choose the needle according to the type and weight of fabric that you are sewing. For convenience, always keep an assortment of needles with your supplies.

Needle Sizes

Needle sizes range from 9 (for delicate fabrics) to 18 (for heavyweight fabrics). The lower the number, the finer the needle.

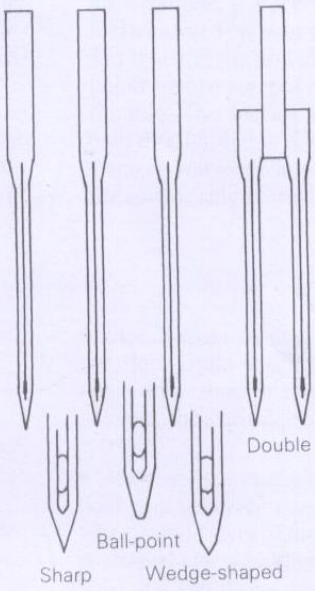
- Size 9 or 11 is used for fine, lightweight fabrics, such as chiffon and voile.
- Size 14 is used for mediumweight fabrics, such as flannel and corduroy.
- Size 16 or 18 is for heavier and thicker fabrics.

Some foreign sewing machine manufacturers use a different numbering system for needles. However, the same rule applies—the lighter and finer the fabric, the finer the needle.

Types of Needles

Four types of sewing machine needles are available: *sharp, ball-point, wedge-shaped,* and *twin.*

- A sharp, or general-purpose, point is used for woven fabrics.
- A ball-point is used for knits and stretch fabrics. The slightly rounded tip allows the needle to slip between the fabric yarns.
- A wedge-shaped point is used for sewing leathers and vinyls.
- Twin, or double, needles are available for decorative stitching.



Always replace a sewing machine needle when it becomes dull, bent, or burred (rough). A damaged needle can cause stitching problems and harm fabric. Some people insert a new needle when they begin a project.

Thread

The type of thread is also determined by the type and weight of your fabric. Refer to the chart on page 358 for the recommended thread, needle size, and stitch length for different fabrics.

In general, for fine fabrics use a fine needle, fine thread, and short stitches. For heavier fabrics, use a coarser needle, heavier thread, and longer stitches.

Except for special decorative stitching, always use the same type of thread in the needle and in the bobbin.

Changing Needles

These are the steps for changing a sewing machine needle:

1. *Raise* the needle to the highest position by turning the hand wheel.
2. *Loosen* the thumb screw on the needle clamp.
3. *Remove* the old needle, being sure to notice the way it was turned. The position of the needle depends on the model of your sewing machine. (The shank of a sewing machine needle has a round side and a flat side. A long groove runs down the round side. This groove protects the thread as the needle is lowered into the bobbin case. On all models, the long groove on the needle should face the side from which you thread the needle. Refer to your manual for specific directions.)
4. *Insert* the top of the needle firmly up in the needle clamp.
5. *Tighten* the screw securely.

Source: Weber, (1990). Clothing. Fahion. Fabrics. Construction Celncoe McGraw-Hill, Peoria, Illinois, page 357.

APPENDIX N

Sewing Supplies

The sewing process for making nursery deco involves five basic steps: measuring, marking, cutting, stitching, and pressing. For each of those steps there are special tools and suppl to make your sewing easier and enhance yo chances of completing a project successfull

You may already own some of these tools and supplies, but don't feel th you must get all of them before you start sewing. You will probably neec more than one cutting tool, for instance, but you don't need them all, o you will undoubtedly acquire tools as your skills and interest grow.

Hand-sewing Supplies

Needles and pins are available in a variety of sizes and styles. Look for rustproof needles and pins made of brass, nickel-plated steel, or stainless steel. Pictured from top to bottom:

Sharps are all-purpose, medium-length needles designed for general sewing.

Crewels are sharp, large-eyed medium-length needles, designed for embroidery.

Betweens are very short and round-eyed. They are useful for hand quilting and making fine stitches.

Milliner's needles are long with round eyes and are used for making long basting or gathering stitches.

Straight pins are used for general sewing. They should be slim and are usually 11/16" (2.7 cm) long. Pins with colored ball heads are easier to see and are less likely to get lost than those with flat heads.

Quilting pins are 1¾" (4.5 cm) long. Their extra length makes them ideal for use on bulky fabrics or fabrics with extra loft.



Source: Coats & Clark (2000). Nursery Décor for Beginners Creative Publishing International, Minnetonka, Minnesota, U.S.A pg. 20

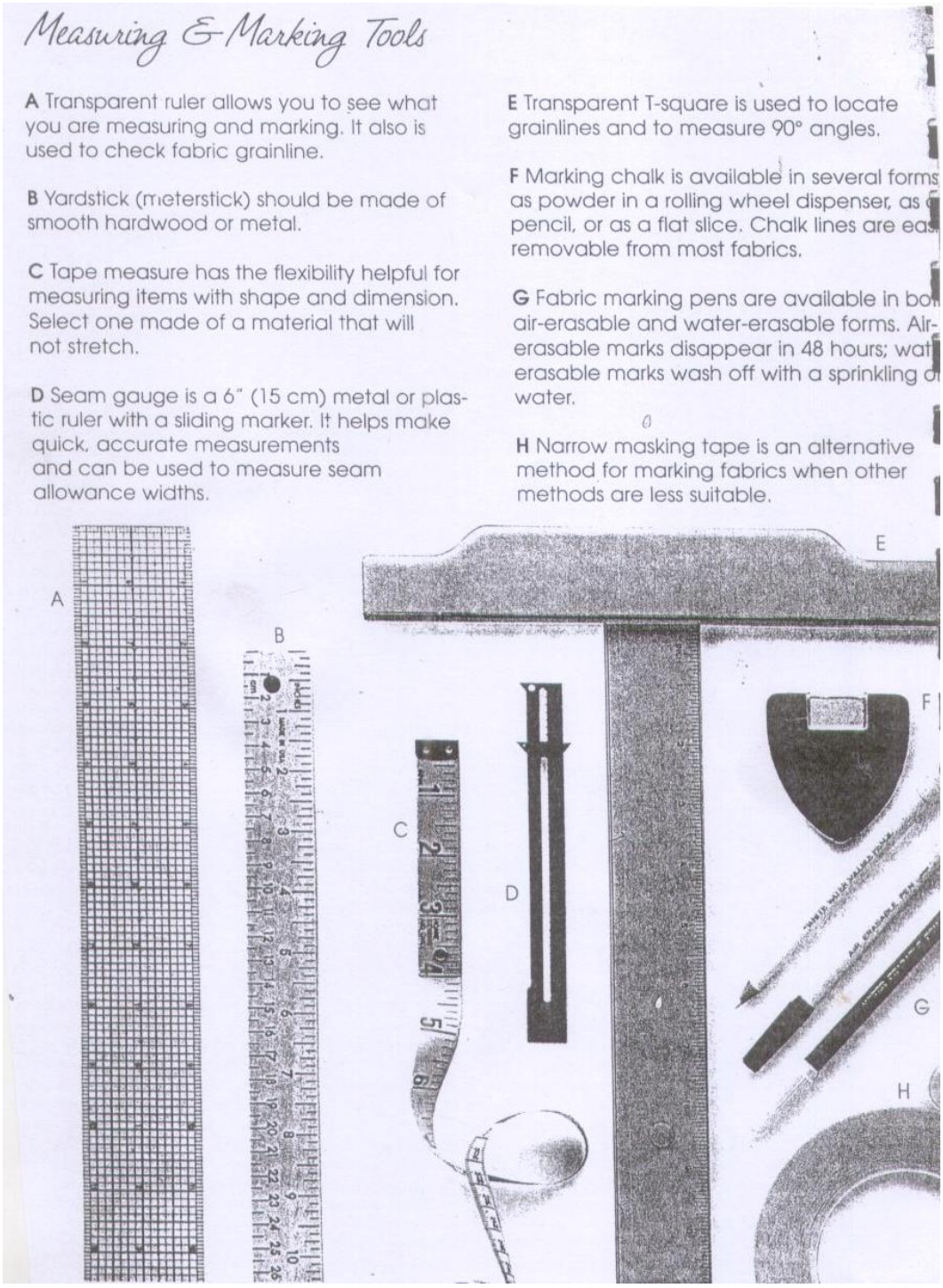
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**APPENDIX O** **SEWING AIDS**



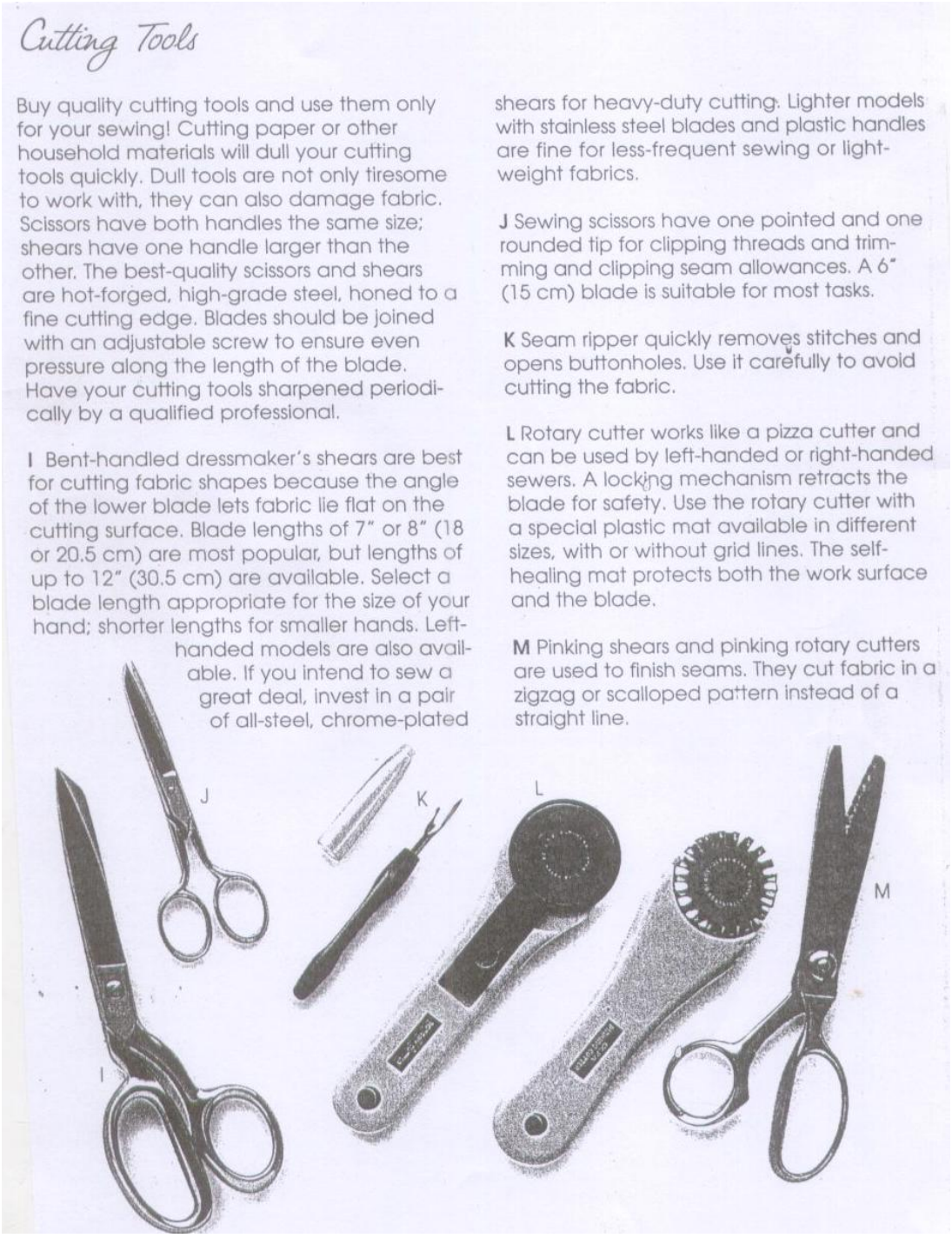

Source: Coats & Clark (2000). Nursery Décor for Beginners Creative Publishing International, Minnetonka, Minnesota, U.S.A pg. 21
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APPENDIX P



Source: Coats & Clark (2000). Nursery Décor for Beginners Creative Publishing International, Minnetonka, Minnesota, U.S.A pg. 22

APPENDIX Q



Cutting Tools

Buy quality cutting tools and use them only for your sewing! Cutting paper or other household materials will dull your cutting tools quickly. Dull tools are not only tiresome to work with, they can also damage fabric. Scissors have both handles the same size; shears have one handle larger than the other. The best-quality scissors and shears are hot-forged, high-grade steel, honed to a fine cutting edge. Blades should be joined with an adjustable screw to ensure even pressure along the length of the blade. Have your cutting tools sharpened periodically by a qualified professional.

I Bent-handled dressmaker's shears are best for cutting fabric shapes because the angle of the lower blade lets fabric lie flat on the cutting surface. Blade lengths of 7" or 8" (18 or 20.5 cm) are most popular, but lengths of up to 12" (30.5 cm) are available. Select a blade length appropriate for the size of your hand; shorter lengths for smaller hands. Left-handed models are also available. If you intend to sew a great deal, invest in a pair of all-steel, chrome-plated shears for heavy-duty cutting. Lighter models with stainless steel blades and plastic handles are fine for less-frequent sewing or lightweight fabrics.

J Sewing scissors have one pointed and one rounded tip for clipping threads and trimming and clipping seam allowances. A 6" (15 cm) blade is suitable for most tasks.

K Seam ripper quickly removes stitches and opens buttonholes. Use it carefully to avoid cutting the fabric.

L Rotary cutter works like a pizza cutter and can be used by left-handed or right-handed sewers. A locking mechanism retracts the blade for safety. Use the rotary cutter with a special plastic mat available in different sizes, with or without grid lines. The self-healing mat protects both the work surface and the blade.

M Pinking shears and pinking rotary cutters are used to finish seams. They cut fabric in a zigzag or scalloped pattern instead of a straight line.

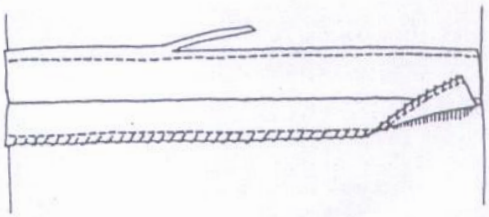
Source: Coats & Clark (2000). Nursery Décor for Beginners Creative Publishing International, Minnetonka, Minnesota, U.S.A pg. 23

APPENDIX R

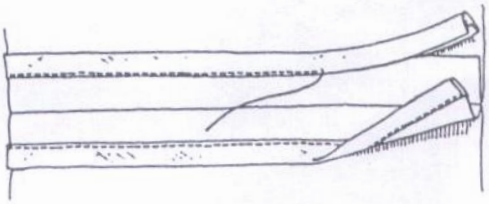
Seam Finishes

Since the inside story is as important to fine couture as the outside, all seams should be finished by the most suitable method if they are not covered by a lining. A seam finish helps the seam allowances to support the garment shape, insures durability, prevents raveling, and contributes to the over-all neatness of the garment.

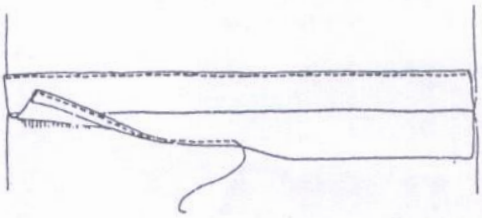
HAND OVERCAST: This finish is suitable for most fabrics. For a seam pressed open, stitch 6mm (¼") from each raw edge, then trim to 3mm (⅛"). (For firm fabrics, stitching and trimming may be omitted.) Overcast the edge by hand, using machine stitching as a guide.



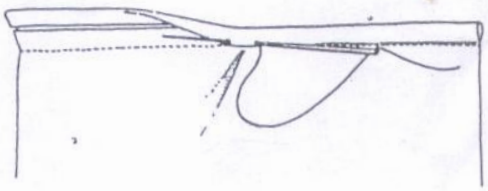
BOUND EDGE: For heavy, bulky, easily frayed fabrics, especially in unlined jackets or coats, encase each raw edge in purchased double-fold bias tape. Place the slightly narrower edge of the tape on top and edgestitch.



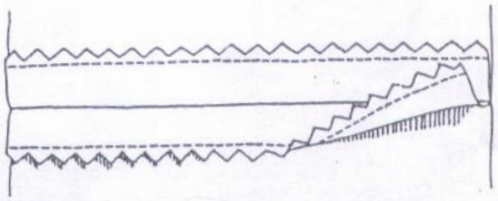
TURNED UNDER: Use this method for lightweight fabrics and plain weave synthetics. It is not suitable for fabrics with bulk. Turn under the raw edges of the seam allowances, press if necessary, and stitch close to the edge.



SELF-BOUND SEAM: Trim one seam allowance of a plain seam to 3mm (⅛") or 6mm (¼"), depending on your fabric. Turn the edge of the other seam allowance under and slipstitch or machine stitch over the seam, encasing the trimmed seam allowance.



PINKED: If you are working with a firmly woven fabric which does not ravel, pink the edges with pinking or scalloping shears. For an even more secure finish, you may wish to stitch 6mm (¼") from each edge before you begin to pink.



Source: Butterick (1971) Ready set sew. Published by Butterick Fashion Marketing Company, New York.