

# **The Significance of Flat Pattern Making In Fashion Designing: A Case Study of Dressmakers in the Ho Municipality Of Ghana**

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**ABSTRACT:**The development of a garment comprises of different processes and its appearance and fit is highly dependent on each of these process. Patternmaking is the foundation in garment manufacturing and plays an important role in deciding how the final appearance of a garment will look like. This study investigated reasons why dressmakers in the Ho Municipality do not use pattern for cutting out garment designs. It assessed the importance and challenges associated with the use of flat pattern making and developed strategies to assist dressmakers to overcome the challenges of using flat pattern in constructing garments. The research design adopted was descriptive survey. Questionnaires and semi-structured interviews as well as observation were employed to gather data. In all, 140 dressmakers out of the 180 in the Ho Municipality were sampled. In analysing the results, it was noted that dressmakers in the Municipality mostly used 'free-hand' cutting in arriving at garment sections, limiting their ability to cut out intricate designs. The findings of this study provides insight and implications for the leadership of the Ghana National Association of Tailors and dressmakers and management of higher institutions to take a second look at what goes into agreements and training of dressmaking apprentices. Basic pattern drafting should be made part of apprenticeship programs.

**KEYWORDS:**Pattern making, dressmaker, customised garment, flat pattern, freehand cutting.

## **I. INTRODUCTION**

The garment industry contributes a high percentage in any country's total revenue yet it is faced with many challenges [1]. Today, consumers have become more demanding and always looking for new styles and designs from their designers. Patternmaking is one of the earliest steps in the development of a garment. This craft has grown into a skilled technical process over the centuries. With the extensive research and standardized sizing; patternmaking took revolutionary step from customization to standardization. Pattern Making can be a 2D or 3D process [2]. Patternmaking is an art. It is the art of manipulating and shaping a flat piece of fabric to conform to one or more curves of the human figure. It is a bridge function between design and production. Cooklin [3] explains that a sketch can be turned into a garment via a pattern which interprets the design in the form of the garment components. Fischer [4] noted that patterns enable the designer to render something flat into something three-dimensional. Drafting patterns may seem very intimidating, but it is an amazing skill that can take the dressmaker to a completely new level of possibilities. The basic pattern according to Shoben and Ward [5] is the very foundation on which pattern making, fit and design are based. It is a simple pattern that fits the body with just enough ease for movement and comfort. Knowledge in pattern making and the ability to draft patterns for styles chosen are skills that can improve the quality of garments produced for clients.

As fashion changes, the ideal body size and shape also changes, as a result, pattern making has become a major aspect of the fashion world. MacDonald [6] describes flat-pattern as 'a design process where a basic pattern is developed to fit a standard dress form' (p.5). 'The designer uses a foundation pattern (block) as a basis for making the pattern for a

## International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

design. They may introduce style lines, tucks, gathers, pleats or drapes but still the basic fit of the pattern will conform to the block used' [7]. The rapid output of flat pattern designs, facilitated by slopers, is a useful skill for any fashion designer as it can be used as a means of developing original ideas effectively and efficiently. A five-piece pattern set, consisting of front and back bodice and skirt and a long sleeve, which represents the dimensions of a specific figure or form constitute the basic pattern set[8]. As a rule, a dressmaker is professionally trained to sew to fit an individual figure. Many of them learn their trade as apprentices, usually under the tutelage of an established dressmaker. These apprentices are most often not taught how to make patterns let alone use them. Some also learn the trade in formal school settings. Flat pattern methods involve measurements; a trial garment called "toile" is done to check the proportions and shape. Several fittings are then done to perfect the garment. In the developed countries, most garments are made using commercial patterns by using made to fit all body size patterns except in few cases where individuals order customised garments. The foundation blocks can be drafted to fit individual figures by using personal measurements instead of standard ones found in size charts[9].

Knowles [10], indicated pattern making, pattern drafting or pattern cutting is the art of designing patterns, and these are custom-fitted basic pattern from which patterns for many different styles are created. Flat pattern is often referred to as sloper, block, foundation or master pattern. All designers or dressmakers need a block or a sloper to create styles. Commercial patterns are generally printed on tissue or soft paper and sold in packets containing sewing instructions and suggestions for fabric and trim. Modern patterns are available in a wide range of prices, sizes, styles and sewing skill levels to meet the needs of consumers. Sewing patterns are again graded, to fit either larger or smaller sizes than the original design. Most original designs are made to fit average, standard or ideal figures. This figure according to Armstrong [11] is a form, a figure, a set of measurements, whose silhouette changes at the slightest whim of fashion. Patterns that are made from an individual's measurements are checked for accuracy by cutting out in sample fabrics and the resulting garments are fit tested for accuracy. Using this type of patterns increases productivity and makes work easier for the dressmaker. Pattern sizes are also arranged into marker, which is laid on top of layers of fabric and cut. Once the style fits the customer well and it has been approved by the designer, the pattern of that style becomes a block which helps the dressmaker to develop subsequent generations of patterns from it. Effective and efficient use of flat patterns in dressmaking workshops can help save time, energy and wasting of fabric that comes with freehand cutting and thereby increase productivity.

According to Barwick et al.[12] the Second World War created many radical changes in the fashion industry, where after, youthful new styles emerged and changed the focus of fashion forever. Hodges and Karpova[13], maintains that global forces have shaped the fashion industry into a complex and far-reaching phenomenon. Fashion is dynamic, hence, changes, but its meaning remains unaltered. Fashion is also a deep cultural expression and aims directly at who we are and how we connect to other people [14]. Fashion could also be a process that is expressed and worn by people and as a material object with a direct link to environment [15]. Layout and cutting of clothes is a multifaceted art in the fashion industry. This art can be viewed as the process of placing all pattern pieces of a garment style correctly on fabric to ensure economical and sound usage of fabric. The main categories of fashion design are Haute couture, Ready-to-wear and Mass production. The haute couture collection is dedicated to individual customers and is custom sized to fit these customers exactly. In Ghana a lot of couture sewing is done. Nudelman[16] describes couture as magic, art and detailed.

Most fashion designers or dressmakers in Ghana do customised sewing. They make their 'patterns' by marking directly on the cloth using white chalk which is termed in Ghana as 'free hand' cutting. This problem of pattern making applies to almost all dressmakers in the country. For the purpose of this study, the geographical scope is limited to the Ho Municipality. Based on these facts, the study was projected to explore reasons why dressmakers do not use patterns for cutting out garments, explore the challenges that come with this and develop strategies to help these dressmakers overcome the challenges. According to Aldrich [17], pattern cutting by adapting shapes from block patterns can be traced back to the middle of the nineteenth century after the "body" was discovered. Aldrich [18] noted that pattern plays a central role in the fashion designers activities. MacDonald [6] noted that the main tools needed for flat pattern include; paper made of varying grades, straight pins, paper scissors, straight and curved rules, pencils, tape measure and design from the stylist or the illustrator and so on.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

Clothing patterns according to MacDonald [19] are used to sew stylish garments that fit well. Individual pattern pieces are used to cut fabric pieces, which are then assembled and sewn to create wearable garments. Today, clothing patterns are now mass-produced numbered or lettered for easy understanding. Aldrich[18] indicates that beginners all over the world, be it students who are starting practical pattern drafting and cutting as part of Fashion Degree or Diploma courses, or City and Guilds Examinations start with the use of the basic pattern draft and cutting for individual figures. She indicated that some garment patterns, particularly in couture design, are constructed by draping on the dress stand. This study aims at creating awareness of the importance of the use of flat pattern making in dressmaking. It specifically explores reasons why dressmakers do not use flat pattern for cutting out and also identify challenges dressmakers face when using flat pattern for cutting out. The study also sought to develop strategies to overcome the challenges they face when making patterns.

## II. MATERIALS AND METHODS

This study used descriptive survey. The object of descriptive research is 'to portray an accurate profile of persons, events or situations' [20]. The survey strategy is usually associated with the deductive approach. It is most frequently used to answer who, what, where, how much and how many questions [21]. The population of this study comprised of all the 180 registered dressmaking shop owners in the Municipality. The most common type of non-probability sampling which is purposive sampling technique was used to select 140 dressmaking shops representing 78% of the population. The rationale for choosing this strategy is to enable the researchers use their judgment to select cases that will best facilitate the answering of questions for the study. This form of sampling is often used when one wish to select cases that are particularly informative [21]. Leedy [22] asserted that for quality research, at least, thirty percent (30%) of the total population for study, is a fair representation for an acceptable accuracy of results. Samples were clearly defined, identified, chosen objectively and systematically. Sound criteria were used to select samples to avoid errors. The sample included both male and female dressmakers in the municipality.

Semi- structured interviews, observation and questionnaire were used in the data collection. The data collection took place between September 2014 and December 2014. A set of questionnaires were designed and administered by the authors. The questionnaire consisted mainly of close-ended questions which required the respondents to tick their best option. An Interview schedule was designed based on the research questions to collect data on the knowledge level of pattern making methods if any at all used by dressmakers. Interviews lead to a high response rate because researchers schedule the interviews in advance and sample participants typically feel obligated to complete the interview. All the interviews were conducted in English and Ewe (local language). Observation becomes a scientific tool and a method of data collection for researchers, when it serves a formulated research purpose, is systematically planned, recorded and subjected to checks and controls on validity and reliability [23]-[24]. Observations were made in the dressmaking shops where ongoing cutting and sewing were undertaken to take note on methods dressmakers used in cutting out fabric for sewing. To analyse the data collected, descriptive statistics were used and content analysis done.

## III. RESULTS AND DISCUSSIONS

### 3.1.1 General background of dressmakers

Based on data collected, and with regards to age distribution, 38 of the respondents were within the age group of 26-35 years, summing up to 27.14%, while 57 respondents fell within the age group of 36-45 years representing 40.72%. The total number of respondents aged 46 years and above summed up to 32.14%. This clearly indicates that majority of the dressmakers were within the age group of 36-45 years. Figure 1 shows the age distributions.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

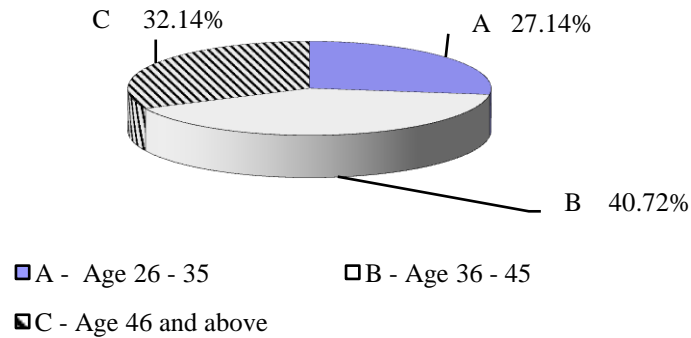


Figure 1: Age of dressmakers

### 3.1.2 Gender distribution

Of the 140 respondents, 116 were females (88%) and 24 were males (12%). They ranged in age from 26 years to 69 years with the mean age of 42. This depicts how the trade is dominated by females. UNDP [25] report on Sub-Saharan Africa found women to be at the end of economic development, while 35% of their male counterparts were found to be illiterate; more than 62% of women were not even functionally literate. Nonetheless, women contribute more to national growth than their male counterparts. To make women equal partners in development, these disparities should be corrected. This can be realized through a radical shift in the advocacy for women’s empowerment, which in reality covers every sphere of life [26].

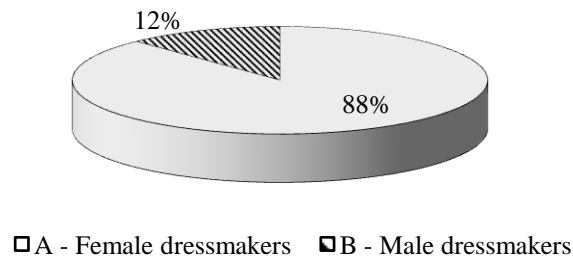


Figure 2: Gender of dressmakers

### 3.1.3 Educational level of dressmakers

At basic school level, respondents numbered 44, thus 31.43% while 8.57% gave a total of 12 respondents who do not have any formal education, but learnt the trade through apprenticeship. Data collected gave ten (10) respondents as those who are educated up to the tertiary level making 7.14%. This gives an indication that the lowest number of respondents had tertiary education while majority of the dressmakers were educated up to second cycle level and went through apprenticeship without any formal skills acquisition or training in an institution for an in-depth knowledge about the trade. Those respondents, who had just basic education, also went through apprenticeship, and the rest who had no education at all, learnt the trade through apprenticeship.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

Table 1: Education level of dressmakers

Education Level	Frequency (%)
Tertiary	10 (7.14)
Second Cycle	74 (52.86)
Basic	44 (31.43)
None	12 (8.57)

### 3.2.1 Why some dressmakers do not use patterns in cutting out garment pieces

There were varying responses to reasons why dressmakers do not use flat pattern for cutting out garment pieces. It was obvious that, most of the respondents have heard about flat pattern in the fashion trade, however, only 26% use flat patterns for cutting out garment pieces, while the greatest number of 74% do not use flat pattern at all when cutting out. This is because those who use patterns learnt it while they were in school. Also, a good number of dressmakers forming 73% do not have any idea of how patterns are drafted. However, 27% of the respondents could draft and use flat patterns when cutting out pattern pieces, this is as a result of the formal training they had at various levels of their education. On the difficulty level of pattern making, 88% of the respondents said pattern making is difficult, while 12% said it is not difficult. Majority of respondents forming 93% see pattern making as time wasting whereas 7% who had had some form of training in pattern making saw it as not time wasting.

### 3.2.2 Challenges dressmakers face when using patterns for cutting out

Regarding procedures for taking measurement before drafting, 90% of respondents agreed to the fact that the procedure was long and time wasting, only 10% of respondents disagreed to this fact. This brings to light how deficient it was on the part of respondents who learnt the trade from their masters with inadequate or in-depth knowledge of the trade. It was deduced from the analysis that, majority of respondents (95%) lack the skills needed for pattern making, thus agreeing to the fact that pattern making is time wasting. Minority, of the respondents (5%) disagreed that pattern making was time wasting. The survey again revealed that, because dressmakers do not have interest in pattern making, a whopping majority of 92.85% lack the requisite drafting tools, while only 7.15% of those who draft patterns had the requisite tools used for pattern making. On the perception that bought patterns are difficult to read and trace out, 91.43% of respondents agreed to this fact, whereas 8.57% disagreed to it. Some garment patterns, particularly in couture design, are constructed by draping on the dress form. However, pattern cutting from blocks or adaptation of existing patterns is now widely used in the fashion trade because of its accuracy of sizing and the speed with which ranges can be developed [7].

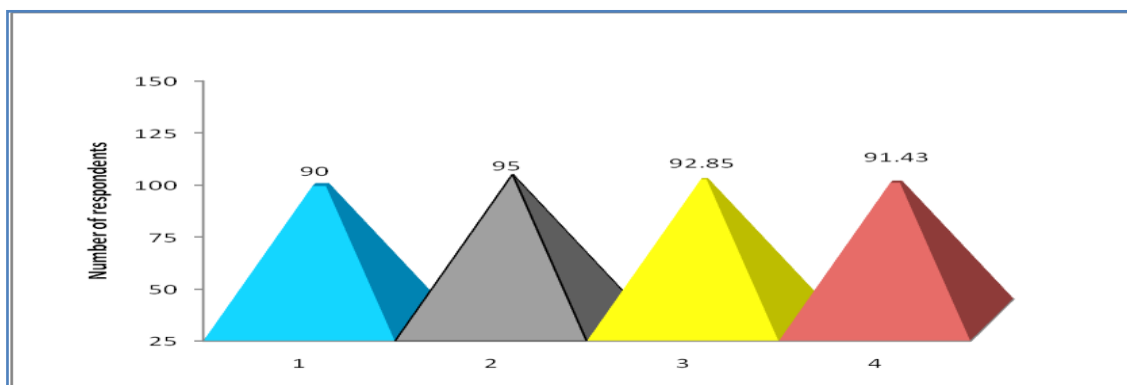






Figure 4: Challenges concerning flat pattern making

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

-  Procedure for measurement taking is too long
-  Flat pattern drafting is paper and time wasting
-  Tools are not common
-  Bought patterns are difficult to read and trace out

On the part of using patterns for cutting out, 68% of respondents would like to use it whereas 32% of respondents prefer using freehand or direct cutting method combined with pattern making. However, 76.43% are willing to learn how to make pattern themselves, 23.57% are not interested in the pattern making processes. Analysis made on drafting tools dressmakers use, gave a clear indication of how dressmakers are ready and willing to adopt strategies to learn how to make patterns, even though they perceive pattern making as challenging and would not waste time on it. Respondents who were willing to purchase tools needed for pattern making formed 76.43% of the total number of respondents, while 23.57% of the respondents were not in favour.

### 3.3 Strategies Adopted

On strategies put in place to overcome the challenges, respondents showed interest and willingness to learn how to make patterns. As this will keep them abreast with the changing trends in fashion and also enable them keep their ready-to-pay/dressed-to-kill clients for continuous flow of business. Hence there will be the need for them to work with celebrated instructors in flat pattern making in fully-equipped studios, as this will inspire them to learn all they need to know about flat pattern making. Again, dressmakers agreed that, learning how to make patterns would help solve the problem of fabric wasting thereby boosting productivity while raising their income levels. So they would have to work through the process of measuring the body accurately, creating a flat paper pattern, mocking the draft out of calico and fitting on a three dimensional figure. Through both  $\frac{1}{4}$  and full-scale exercises, this will help them understand the transition from two-dimensional patterns to three-dimensional designs. Analysis made from the data gathered clearly indicates that, 67.86% of the respondents would like to use patterns for cutting out whereas 32.14% of respondents prefer using freehand cutting method. Another 76.43% are willing to learn how to make pattern themselves, 23.57% are not interested at all.

On the part of acquisition of skills, it was obvious from the result that 72.86% were willing to make time to attend a workshop on patternmaking even though they acknowledged it was a waste of time. Only 27.14% thought it was not necessary, hence they were not willing to attend any workshop on patternmaking. Analysis made on drafting tools dressmakers use gave a clear indication of how dressmakers are ready and willing to adopt strategies to learn how to make patterns, even though they perceived patternmaking as challenging and would not waste time on it. Respondents who were willing to purchase tools needed for pattern making formed 75% of the total number, while 25% of the respondents were not in favour.

According to Knowles [10], prominent fashion designers have accepted the fact that there are challenges associated with pattern making. Also, understanding instructions for pattern making is another factor that will give the pattern maker the knowledge of proportioning pattern styles to the size they are working with. Measurements taken from live models, that are used to draft flat patterns for slopers must be calculated and plotted so well that they can be used to create unlimited and sophisticated styles.

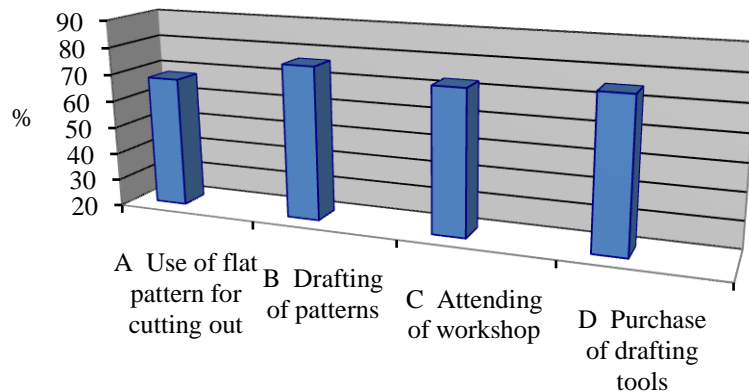


Figure 5: Strategies put in place to overcome challenges

### 3.4 Significance of pattern making in fashion designing

With regards to testing dressmakers' knowledge on the subject, it was noted that, only 26% of the respondents know how significant or useful flat patterns are in fashion designing. Majority of respondents, who formed 74%, did not know the significance or usefulness of using patterns. This confirms the fact that, even though dressmakers had a fair knowledge of flat patterns in the fashion trade, they have limited knowledge in terms of its significance. Burke [27] asserts that as a fashion designer, one of key challenges is to translate a 2D fashion sketch and conceptual designs into 3D garments. According to her, it is vital to understand the dynamics of patternmaking as it is the most important factor leading to the final acceptance or rejection of any garment. Fashion trends are the styling ideas that major collections have in common. They indicate the directions of colour, textiles and styling, in which fashion is moving [28].

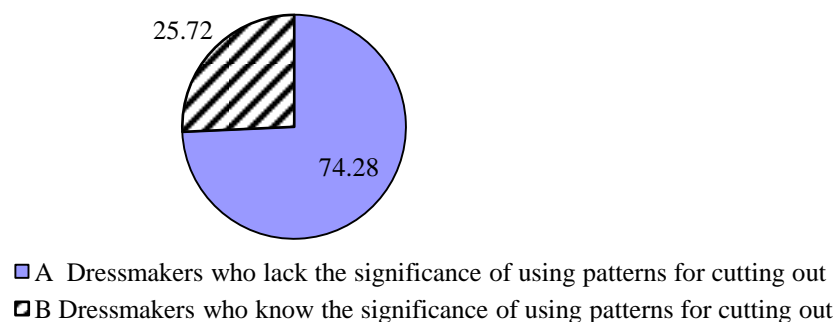


Figure 6: Significance of using patterns

### 3.5 Interview and Observation

Information gathered from the researchers' interaction with respondents, on methods used for cutting out revealed that, majority of respondents use freehand or direct cutting method. This is because; most dressmakers perceive flat pattern making as time consuming, energy and paper wasting. Again, the Interview revealed that challenges dressmakers face when making patterns, was due to inadequate skills acquired during apprenticeship and lack of technical know-how when it comes to the making of patterns. They were indeed handicapped in terms of pattern making skills. Results of the observations done in various shops visited revealed that most of the dressmakers chalk mark direct on to fabric before cutting out. It was again noted that, only those who had in-depth knowledge in fashion designing made use of flat

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 4, Issue 4, April 2015

patterns for cutting out, and also use it as a marker for laying and cutting out during bulk sewing. Again observations gave a clear indication that, challenges encountered during apprenticeship compelled dressmakers to chalk mark unto fabric instead of using patterns for cutting out.

## IV. CONCLUSION

The research examined the reasons why dressmakers do not use pattern when cutting out garment pieces. It also assessed the challenges associated with the use of pattern and suggested strategies to help dressmakers to overcome the challenges of using flat pattern. Findings from the results indicated that, most dressmakers in the Ho Municipality had little or no knowledge about flat pattern use in the fashion trade. Hence its use for cutting out was not common. The few who had an idea about it perceived it as difficult and time consuming. There was a clear indication from the findings that, dressmakers lack the skill of taking standard and accurate measurements for drafting. This consequently led to the use of free hand or the direct method of cutting out.

As portrayed by the results of the findings, dressmakers saw the usefulness of patterns used in cutting out so were ready to learn. Among these strategies were purchasing of pattern making tools and taking some time off their busy schedules to attend workshop to learn or finesse the difficult areas of pattern making to enhance their skills. Majority of the dressmakers did not appreciate the significance of using flat patterns for cutting out. It was also obvious from the findings that, only dressmakers who had formal education and uses flat patterns for cutting out were conversant with flat patterns hence knew the significance of using them. It was also apparent that most dressmakers chalk mark on fabric before cutting out because that was the skill they acquired during their apprenticeship.

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