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**INFLUENCE OF PATTERN DRAFTING AND FREE-HAND  
CUTTING TECHNIQUE ON APPAREL FIT AMONG FASHION  
DESIGNERS IN KOFORINDUA, GHANA**

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# INFLUENCE OF PATTERN DRAFTING AND FREE-HAND CUTTING TECHNIQUE ON APPAREL FIT AMONG FASHION DESIGNERS IN KOFORINDUA, GHANA

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## ABSTRACT

**Purpose:** To assess the influence of pattern drafting and free-hand cutting technique on apparel fit among fashion designers in Koforindua, Ghana.

**Methodology:** The study employed a cross-sectional descriptive survey was considered adequate for this study as it has the advantage of soliciting respondent's views on the nature of the situation as it existed at the time of a study (Creswell, 2012; Mugenda, 2008). The design is an efficient way of collecting information of a large group of people within a short time using questionnaires. The survey design was deemed appropriate for this study as it has the advantage of seeking the views of informal dressmakers and tailors on the use of pattern drafting and free-hand cutting in apparel construction. It allowed for the use of both quantitative and qualitative techniques in the study. This paved way for better understanding of a phenomenon under study. The use of these methods offered the opportunity to have in-depth information and also the weakness in one method is compensated for by the strength in another method (Creswell, 2012).

**Results:** Pattern drafting was scored higher than free-hand cutting. Concerning how measurements were being taken, it was realized that there was great disparity between the two groups in the way measurements were taken and recorded. The group using pattern drafting scored good (75%), the group using the free-hand cutting had a low score of 34%. In other words, they showed low skills in taking measurement in all the apparel they sewed. The implication is that measurement taking was a great problem that needed to be addressed as far the use of free-hand cutting method is concerned. Proper taking and recording of measurement for future references was not part of their style. Standing position of clients during measurement taking was not given the needed concern.

**Unique Contribution to theory, practice and policy:** The study recommended more vocational training on pattern drafting to increase the accuracy in dress crafting. Additionally, the study advocated for IDTA to enact policy to incorporate pattern drafting and other methods of apparel

construction into the training curriculum of apprentices to develop interest in the use of these methods right from the onset.

**Keywords:** *Pattern Drafting, free-hand cutting, apparel fit*

## **1.0 INTRODUCTION 1.1 Background to the study**

Apparel communicates louder than words hence more acceptable apparel helps to boost one's confidence. Apparel, style and fit directly determine whether a client is satisfied or not (Dove, 2016). This in effect relates to adequate knowledge about the selection of apparel which fits and makes one feel comfortable considering the type of method used to make the apparel. According to Obinnim and Pongo (2015), free-hand cutting and pattern drafting remain the bedrock of ways of designing apparel in fashion industry which come with variances of fit and modifications of style.

Apparel refers to all types of clothes worn by humans, both men and women. It is made through the use of various methods such as pattern drafting or free-hand cutting. A pattern is achieved through the use of actual measurements of the person concerned and this results in a piece of paper drafted and cut to shape and subsequently used for sewing apparel (Ekumankama & Igbo, 2009). Free-hand cutting does not employ patterns and it is achieved by cutting a style of the apparel directly on the fabric (Shailong & Igbo, 2009). The option of free-hand cutting or pattern drafting method to make apparel may affect the end product. Generally, clients are more particular about how well apparel fits (Dove, 2016; Shailong & Igbo, 2009).

Previous study by Efajemue and Lily (2011) which compared the fit of a shoulder, sleeve and bust of a gown sewn by pattern drafting and free-hand cutting revealed that, the former method fitted better. The same study also revealed that pattern drafting techniques applied to sew the skirt part of gown fitted the waist, hips and draped better on the body.

## **1.2 Statement of the Problem**

Clients now demand better products as they have difficulties with the fit of apparel made by their informal dressmakers and tailors (Wallace & Choi, 2011). The level of dissatisfaction with the fit and modification of apparel by clients of informal dress makers, tailors and apprentices has increased (Dove, 2016). Studies by Foster and Ampong (2012) revealed that pattern drafting still remains a challenge in the informal sector (small scale apparel industries) because it is believed that free-hand cutting instructions were fewer and easier to commit to memory.

Studies have shown that though pattern drafting is mostly taught at the higher level of the Ghanaian education (Foster & Ampong, 2012), most of the informal dressmakers and tailors may not have gone through secondary education and therefore lack the skills in pattern drafting. To solve this deficiency, the Dressmakers and Tailors Association of the Koforidua in the New Juaben Municipality of Ghana organizes a periodic workshop on pattern drafting for its members, but it seems most of them go back to use free-hand cutting. Research has shown that most clients are likely to resort to use ready-made new clothes when they are not satisfied with the services they receive from their informal dressmakers and tailors (Boakye, 2010; Efajemue & Lily, 2011; Foster & Ampong, 2012, Dove 2016).

### **1.3 Purpose of the study**

To investigate the influence of pattern drafting and free-hand cutting technique on apparel fit among fashion designers in Koforindua, Ghana.

## **2.0 LITERATURE REVIEW 2.1 Technique Learning**

Foster and Ampong (2012) and Foster and Adamtey (2009) intimated that with regard to free-hand cutting, masters normally allow learners to explore because there is not enough documented information on skills for the method. Researchers realized that in most cases beginners are given small piece of brown paper to manipulate the cutting of particular styles without using accurate measurement for number of months just to master on how to hold the scissors well and cut.

For the foregoing reasons, the researchers also agreed on the use of pattern drafting in apparel making as part of training for the informal fashion industry but lack the technical know-how (Foster & Ampong, 2012; Foster & Adamtey, 2009). There are few documented studies on the challenges for skills recognition in the informal sector in foreign countries worldwide. These challenges need to be studied to identify where skills exist, define those skills, communicating to learners, and administering the learning process.

Steenekamp and Singh (2012) indicated that five African countries beside Ghana, namely; Mauritius, Seychelles, Botswana, Namibia and South Africa were studied for recognition and validation of informal learning. The results of these studies facilitated the participation in formal education and training, employability and labor mobility in the informal sector (Steenekamp & Singh, 2012).

There are many constraints associated with sewing using adapted patterns for informal dressmakers and tailors. The processes of drafting and adaptation of patterns before laying, cutting and sewing is time consuming and may be difficult for an inexperienced person. It can be boring to a dressmaker or frustrating if the individual lacks the needed competence (Foster & Ampong, 2012). The dressmaker or tailor may not be able to satisfy his/her clients' needs without detailing the design at the first stage of construction before sewing (Boakye, 2010; Foster & Ampong, 2012; Obinnim & Pongo, 2015).

### **2.2 Free-hand Cutting Skill**

Free-hand cutting is a method of cutting a style of apparel directly on the fabric without the use of a pattern (Efajemue & Lily, 2011). Many types of apparel worn these days apart from ready-to-wear apparel are usually made from free-hand cutting. Forster and Adamtey (2009) as cited in Foster and Ampong (2012) noted that, little has been done on documentation on free-hand cutting. Shailong and Igbo (2009) described free-hand cutting as a method of cutting the fabric marked with chalk based on a measurement and cut directly without the use of a paper pattern. The measurement of the individual is utilized directly on the fabric in free-hand cutting. If a dressmaker or a tailor makes a mistake while using the free-hand cutting, the fabric is usually wasted.

According to Shailong and Igbo (2009), free-hand method of apparel construction may spoil the apparel entirely, thereby wasting the fabric. In addition, free-hand cutting is time consuming and slow, therefore cannot be conveniently used for mass construction. From the researcher's



experience, free-hand cutting has in some instances resulted to poorly fitted apparel and quarrels among dressmakers and their clients.

Boakye (2010) has stated that, people may prefer ready-to-wear clothes due to the unsatisfactory jobs from some dressmakers and tailors that use free-hand cutting for apparel making. This has made the budget for clothing in some cases increase for individuals as a result of fabric wastage or increase in cost when patterns are used (Foster & Ampong, 2012). Thus, affecting the output of the dressmaking and tailoring institutes negatively. For the purpose of this study, an analysis was carried out on some of clothes made with drafted patterns and free-hand cutting, as a way to confirm these research findings.

### **2.3 Pattern Drafting Skills**

Pattern drafting is the art of designing the outline of the plan or arrangement for sewing apparel (Aldrich, 2014). Thomas (2009) posits that the first step in pattern drafting is taking of body measurements. She recommends that when taking measurements for pattern drafting, the person should just wear normal underclothes. Aldrich (2014) noted that pattern drafting by adopting shapes from pattern can play a central role in apparel making.

Anikweze (2013) stated that flat-pattern drafting, involves using a sheet of paper, pencil and all the pattern drafting tools, and coming out with a pattern based on a set of measurements. Flat pattern drafting is based on commercialized basic patterns with standard measurements but when employed in designing, one makes use of fitting darts to increase apparel fitting (Aldrich, 2014).

Anikweze (2013) added that flat-pattern has several advantages which include the ability to design patterns to fit into economical fabric layouts, the possibility of restyling old patterns and out-of-date clothing into new ones. It also ensures ease in determining causes of mistakes during the making of the pattern and how to correct them. By pattern drafting, one can plan properly and organize himself or herself efficiently during construction of apparel (Rosen, 2004; Wandaka, 2009; Aldrich, 2014).

According to MacDonald (2010) and Joseph-Armstrong (2010), patterns used in apparel making bring out the good style of the apparel and makes it fit better. The main categories of fashion designs are haute couture, ready-to-wear and mass construction. Haute couture collection is mainly custom-made to size and fit. This called for the need to find out the type of style modifications commonly made by informal dressmakers and tailors in the New Juaben Municipality.

### **2.4 Fit of Apparel**

Apparel fit is one of the major factors considered by consumers in selecting apparel from shops and even in accepting apparel sewn by their dressmakers or tailors. Anikweze (2013) and Dove (2016) described clothing fit as the outward appearance of a piece of clothing to one's body. Fit is one of the first thing clients consider when apparel is made for them by their designers. This is also the first complaint by clients and areas on to reject apparel (Dove 2016; Wu & Ashdown, 2016). Anikweze (2013) that proper fit gives the wearer of a dress a feeling of physical comfort and self-confidence. Anikweze (2013) also posited out that well-fitting clothes should not only appear gorgeous on the wearer but, should offer comfort whether the wearer is standing, sitting, walking or bending and also fit in motion.

In addition, to recognize and identify standard quality apparel, one must be guided by some details which involve almost all the constructional techniques. In providing guidelines for assessing clothing fit, Dove (2016) emphasized three major considerations, namely; wrinkles, grain and ease. The authors considered wrinkles as the main indicator of improper fit in clothing (as cited in Anikweze, 2013). A dressmaker or a tailor may choose to use a standard size that has been pregraded on a purchased pattern or they may decide to design a pattern to better fit the wearer. This may be done by creating a sewer's apparel template from inexpensive muslin material or by customizing a computerized pattern to fit. The three-dimensional technology enables the home sewer to see the final apparel as a virtual simulation on the wearer (Obinnim Pongo, 2015; Dove 2016).

### 3.0 RESEARCH METHODOLOGY

The study employed a cross-sectional descriptive survey was considered adequate for this study as it has the advantage of soliciting respondent's views on the nature of the situation as it existed at the time of a study (Creswell, 2012; Mugenda, 2008). The design is an efficient way of collecting information of a large group of people within a short time using questionnaires. The survey design was deemed appropriate for this study as it has the advantage of seeking the views of informal dressmakers and tailors on the use of pattern drafting and free-hand cutting in apparel construction. It allowed for the use of both quantitative and qualitative techniques in the study. This paved way for better understanding of a phenomenon under study. The use of these methods offered the opportunity to have in-depth information and also the weakness in one method is compensated for by the strength in another method (Creswell, 2012).

### 4.0 RESULTS

Results of the findings of researcher's observation of steps in construction of the apparel are shown in Table 1.

**Table 1: Results of the Steps used in Construction of different Apparels**

Steps in Construction	Free-Hand Cutting		Pattern Drafting	
	Good %	Poor %	Good %	Poor %
How measurement is taken	34	66	75	25
Design / style analysis	65	35	81	19
Folding of fabric, layout and cutting out	47	53	66	34
Type stitches used	74	26	78	22
Required seams and seam allowances	18	82	54	46

Source: Analysis of Survey Data (2017)

A general observation from Table 1 shows that in all the steps in construction, pattern drafting was scored higher than free-hand cutting. Concerning how measurements were being taken, it was realized that there was great disparity between the two groups in the way measurements were taken and recorded.

While the group using pattern drafting scored good (75%), the group using the free-hand cutting had a low score of 34%. In other words, they showed very poor skills in taking measurement in all the apparel they sewed. The implication is that measurement taking was a great problem that needed to be addressed as far the use of free-hand cutting method is concerned. Proper taking and recording of measurement for future references was not part of their style. Standing position of clients during measurement taking was not given the proper concern.

The reason behind that practice was that though clients visit the shops for transactions, some never come back so there was no need of keeping records on such clients. It was observed that the group using pattern drafting was more careful with every bit of the measurement taken and recordings were being done in a small book they called first customers. The reason behind this was that in dealing with patterns, every information counted towards the fit of the apparel therefore, there was the need for accuracy.

On the design or style analysis, the researcher was concerned with the ability of the dressmakers and tailors to interpret the style they were given to sew in relation to the fabric. One can notice from Table 1 that on both methods, pattern drafting scored higher than free-hand cutting. However, both methods scored a good percentage on the use of right types of stitches.

The researcher also checked the types of seams used and the seam allowances of the apparel made by both methods. Apparel with free-hand cutting had problems with the width of seams and the required seam allowances. It was observed that large seam allowances were created in the apparel when the dressmakers and tailors were given fabrics which were more than what was needed to sew for the required apparel. In general, the researcher could conclude that pattern drafting method had some advantages over the free-hand cutting.

## 5.0 CONCLUSION AND RECOMMENDATION

The study concluded that although apparel fitting was less practiced technique among the informal dressmakers in Koforindua, it had the best results of apparel fit in comparison with free hand cutting. The study therefore recommended more vocational training on pattern drafting to increase the accuracy in dress crafting. Additionally, the study advocated for IDTA to enact policy to incorporate pattern drafting and other methods of apparel construction into the training curriculum of apprentices to develop interest in the use of these methods right from the onset. The study also identified the gaps and advocated for future studies to focus on the scope of apprenticeship training contents to fashion courses within the formal setting. This will ensure standardization of training to boost the fashion industry.

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