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## Traditional Hand Embroidery and Simple Hand-Woven Structures as Decorative Crafts for Garment Manufacturing

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### **Abstract:**

*This study explores a field of textile craft, which incorporates the techniques of traditional hand embroidery design and a simple hand woven structure into construction processes of garment production to enhance the fortunes of the local fashion industry in Ghana. It was mainly a studio based project which involved the use of experimental and descriptive methods to explore the possibilities of designing and construction of the weave and embroidery structures. The project was designed to have traditional and cultural significance, so as to provide a new dimension to local garment decorating processes. The results of the study revealed a wide possibility of creating and fashioning various simple hand woven structures of traditional significance into the production of garments. This provides innovative ways of actualizing new creative ideas for the progress of the local industry. The experiment revealed that with careful blending of yarns of various types, colours and sizes, very attractive and significant results can be achieved making it appropriate for use in garment decoration. The basic challenges encountered involved the variations in yarn sizes used, the long floats associated with some weave and embroidery styles and the limitations associated with the weave frame used for the project. These shortcomings can be considered for further studies in the field to improve on the performance of the techniques. In general terms, however, this study has proven that various designing techniques can be incorporated into garment product through mix-media techniques exploited in the project.*

**Key words:** Traditional hand embroidery, hand woven structure, creativity, textile craft, Decoration and Garment manufacturing

### **1. Introduction**

The garment industry is very dynamic and always growing with new concepts and ideas to keep the “craze” for fashion alive. Innovations and creativity are the hallmarks to survive in the industry. The crave for new ideas generation or processes associated with looking for a solution to problems are the traits necessary for ingenuity in the fashion world. Personal creativity must look beyond that which already exist and find new combinations of ideas and materials that can satisfy people’s needs and desires (Jones, 2005:171).

An innovative design must have a unique combination of silhouette and distinguishes a single fashion object from all other objects of the same categories, thereby creating a look that is unique to the designer. It must be a highly individualistic expression of ideas that depicts physical attractiveness through the culture and norm of social appropriateness. Good designs must reflect works that are special and original, thereby awakening the interest of the viewer to have the edge of going for such attires (Sproles and Burns, 1994; Weber, 1990; Yates, 1996).

In today’s world, fashion conscious consumers are looking for apparels of top quality, well tailored with best versatility and long-lasting fashion life (Wolfe, 1989). The dynamic nature of humans makes them want to be seen in the ‘state of the art’ fashionable designs. This called for adequate knowledge, creativity and skills to be developed to enable produce high quality garments which are based on the multi-disciplined areas of art with special reference to designing and clothing technology. These largely covered areas within fashion designing and illustration, pattern preparation and sewing which are never out of date (Adamtey, 2008).

Sustainability in the industry, especially for small garment producers therefore requires creativity, skills and techniques in well tailored clothes with innovations to match that of the couture industry. This will enable designers to capture and sustain segment of customers within a niche market. To this effect, the research considered the production of decorative textile crafts by ways of inculcating them into the designing and production of garments of African significances. This is done by ways of introducing some simple hand woven structures of various designs and decorations and traditional hand embroidery structure (*nwomu*) into garment construction of African identity. These, take into consideration, the fashionability, durability, comfortability, wearability and easy to care for properties which are significant in ensuring good garment performance.

Wolfe (1989) opines that decorative adornments provide a psychological feeling of well being through beauty. These decorative adornments are found in most cultures throughout history, which are expressed through clothes and other forms of accessories. Decorative effects are important in garment constructions, but must be applied only on well tailored garments, the designs should not weaken the decorated portions of the garment and the decoration must be suitable for the material. In reality a decorative design does not affect fit or performance; it is mainly used for the purpose of appearance thereby contributing to the overall purpose of the garment by visually flattering the wearer's good points and concealing figure problems. Decorative designs have exclusively aesthetic or visual effect on the consumer. In general the garment must withstand up to laundering to extend the life-span of the garment for the wearer (Neal, 2000; Davis, 1996).

Creativity triggers innovativeness which enable one to come out with new concepts and ideas which are relevant in the designing and implementation of fashion. Assessing two different concepts of fashion innovation, (Sproles and Burns, 1994:70) gave a contrasting view of definition in regard to innovation, while one relates it to an idea, practice or object perceived as new by any individual; the other felt it relates it to any thought and behaviour. Meanwhile decorative and functionality of garments must enhance the utilitarian purposes of the garment. For a garment to be successful and well pleasing it must be well-designed in three aspects (function; structure and decorations in that order of importance) which must complement well with each other, in achieving great designs (Davis, 1996).

Yarns known as threads in some applications comes with several sizes and structures as ply, cords, cable, braided, textured-filament, smooth-filament, monofilament and core-spun. Cotton, polyester and acrylic yarns are the main types of yarns used for the study due to their availability and strength. Acrylic yarns find heavy application as craft yarns as in weaving, embroidery, sweaters, vest, Afghans and the likes due to their heavier denier (5 to 6 denier). Acrylic yarns shrink when expose to high temperature and steam, making their application in garment with other fabrics like cotton and polyester quite technical (Kadolph, 2007:148). Weber (1990) opined that yarn forms the basic material for most fabrics used in garment production. In the sewing industry, they come in various forms with combination of different fibres, grouped into spun and filament and are classified as being simple or complex ply which must last the life-span of products they are fashioned with (Shaeffer, 2001; Humphries, 2004).

The tradition of weaving as a fabric constructing process has a wider fabric construction method with tremendous range of fabric character with amazing varieties of structures. It has a long history with many fabric names accompanying the variety of weave structures from time-to-time, which may be discontinued and reintroduced according to current fashion trends. This is being challenged with other fabric construction techniques; especially those from the non-wovens although it comes with its own setbacks as in stiffness, lack of durability and virtually have no stretch (Humphries, 2004; Taylor, 1993; Carr and Pomeroy 2006). This triggered down to garment production techniques and innovations; hence to be successful more innovative ideas must be incubated to provide more varieties to consumers.

The construction aspect of cloth is a major part of preparing garments for the market, all forms of new ideas and styles come to life by means of construction. A good design concept must reflect in the manufacturing of the garment, otherwise the style will not see the light of day or will not be accepted by the populist (Carr and Pomeroy, 2006: 95). The mode of construction works is carried out in two ways; where the garment is produced by an individual or through chain of workers as in mass production (Shaeffer, 2001). The former is design to target a niche market and reserved for fashion leaders who create their personal identity through clothes as being the interest of this study, as the trend among middle class in Ghana is preference for individual identity. The latter serves the masses which are in the category of ready-to-wear apparels.

Handicraft textiles are part of textile arts which are considered as arts and crafts that use plants, animal or synthetic fibres to construct practical or decorative objects. This textile art also known as fibre art is now used to describe textile-based decorative objects. Although machines are available for sewing, embroidery, weave print and dye fabric, there is a special satisfaction in doing these arts with the hand, which results in special effects and beauty that cannot be duplicated by a machine (Wikipedia, 2012; Weber, 1990). The uniqueness associated with these handicrafts, if treated carefully will add that unique touch that consumers want to be associated with. Thereby, creating a unique couture identity for themselves which are not associated with mass production goods.

Embroidery is considered as a needle and yarn craft (Brittain 1989) that incorporates many different types of decorative stitches used on fabric which is classified into four different kinds as crewel embroidery, counted cross-stitch embroidery, chicken scratch and candle-wicking embroidery (Weber 1990). The description reflects the effects desired and the type of yarns used in the art of embroidery. The art of embroidery is a way of garment decorating that employs various yarns for different end results which can be done with machines or by hand. The resultant effects of embroidery stitches which are mostly decorative in nature find their application on both under and outer garments. Colour selection processes for embroidered designs are important as the art itself since colour is a fascinating element in enhancing the aesthetics of any work of art (Diamond and Diamond, 2002; Neal, 2000).

According to Awuyah (2011), Indigenous hand embroidery designs in Ghana like '*nwomu*' was developed alongside the *adinkra* cloth production in the 17<sup>th</sup> century with the prior aim of decorating and enhancing the beauty of the *adinkra* cloth. The colours and designs used were symbolic and have certain cultural values and significance.

Historically, the *nwomu* which is a traditional hand-embroidery textile-craft of the Asantes were produced as an intermittent design within *adinkra* cloth. Yarns were traditionally spun from cotton fibres and dyed locally from traditionally prepared dyes before being used for the embroidery. This embroidery designs come in various colours, especially yellow, red, blue, black, green, brown and indigo which are done with high level of aesthetic before the stamping or printing are carried out on the fabric. In recent times, yarns in rayon and other synthetic nature with wide varieties of colours are being used. This design is being employed further in this study by incorporating symbols and motifs of traditional significance into the working process of the craft, which are being factored into the production processes of garments.

## 2. Materials and Methods

Yarns of various sizes, colours and types form the main material used in the experimental processes of both the traditional hand embroidery and hand woven structure production techniques. Among the various types of yarns, rayon, cotton and acrylic are considered the most appropriate for the execution of the project because they are relatively strong with good thickness in size, wide varieties of colours and found to be compatible with many fabric types when fashioned into garment. These therefore emphasized the point that items used for decoration must be suitable for the material and withstand all core properties of the fibre (Neal, 2001). Other materials used were plain and printed African prints. Interlinings in the form of stiffeners were used as base fabric for the traditional hand embroidery designs and also used in the cause of garment production itself.

Some tools and equipment that were employed in the project included, adjustable wooden frame, sewing machine, pressing iron, hand needles, measuring tape, tensioning cords and poles, pair of scissors and cutting knife. The study was designed to assess the suitability of *nwomu* and simple, hand woven structure application or introduction into the garment production as decorative material. This employs the experimental and descriptive survey design to find out the practicality of re-designing and fusing selected textile crafts into the production processes of garment styles. The study was designed to find out the possibilities of;

- Incorporating motifs into the original traditional hand embroidery designs used in *Adinkra* clothes among the Asantes.
- Produces various samples of woven structures on a hand prepared frame which can be suitable for use as decorative purposes on garments
- Exploring the effectiveness of how they can be fashioned out into garment production techniques as ways of creating new designing concepts and decorative ways in apparel production.

## 3. Results and Discussion

The results and discussions focus on the available techniques being used readily among designers within the local fashion industry through preliminary survey; results regarding the possibility of materials used in the experimental process and the designing and production processes adopted for the two samples.

### 3.1. Assessing the existing local techniques

The garment industry in Ghana today as revealed through a survey of fashion houses, boutiques, cultural centres, the marketplaces and costumes for social gathering indicates a wide varieties of clothing styles and techniques fashioned out in the local fabrics and African prints. Although it is an encouraging practice to see Ghanaians in more African prints, the designing and decorating processes of these garments are more focused on machine embroidery and combination of plain and printed fabrics mostly. These, to some extent reflects African aesthetic and personality, but the researchers believed more areas within the field of art and textile crafts can be explored to generate more designing concepts often in mix-media techniques into the fashioning of garments to widen the scope and creates designs that are more tailored toward African philosophy and ideas about life, which forms the pivot of this study.

### 3.2. Survey of Existing Local Techniques

The techniques employed for this study are not entirely new, but are seen in other arts, other than in garment production. Those that are indigenous textile crafts have seen their modification and application in garment production to give a wider concept to their uses.

A survey in the market revealed textile arts of indigenous significance as in *kente* weave stripes, traditional hand embroidery (*adinkra* with *nwomu* designs) and appliqué blend with hand or machine sewing designed clothes (*akunitan*) among the Akans of Ghana (Ross 1998; Adireafabric.com, 2013). These techniques are mainly restricted in designing and used as part of designing element of the rectangular traditional men's cloths among Ghanaians. It is only the *kente* that has penetrated into the construction of garments of all types in the Ghanaian market place. This study is designed to improve on the production processes of the *nwomu* techniques and derived hand-woven fabrics for other traditional weaving structures to be used as forms of decorations in garment manufacturing processes.

### 3.3. Designing Processes

The primary intention for the study is to produce works to be used for decorative purposes on garments. These inspire the designing of the two textile crafts from the perspective of African aesthetics. Sketches were made based on inspiration from African symbols of philosophical significance especially from the *adinkra* symbols. The designs were made more abstract in forms and revealed Ghanaian philosophical ideas used in both techniques.

The woven structure had its design and construction techniques based on 'doormat' and 'loomette' forms of craft works. The frame was constructed with spikes that carry the warp and weft yarns during the weaving processes. Its grooves and stoppers makes it

possible to be adjusted width-wise to support varied width sizes (figure 1). These techniques incorporated colour effects and motifs into the weave structures created on the frame.

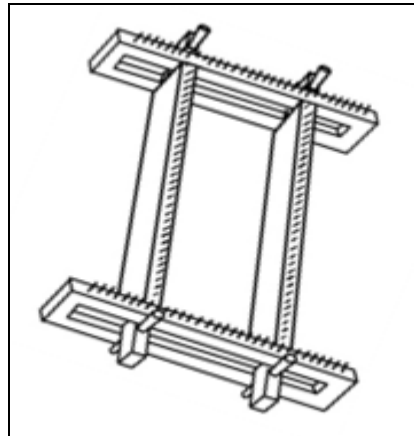


Figure 1: An illustrated version of the Weave Frame  
Source: Researchers personal illustration using Photoshop programme

The *nwomu* technique designed, also incorporate motifs as addition to the line stripes of colourful designs used originally by traditional embroiders. The addition also includes varied types of fabrics and interlinings which were not associated with the traditional techniques, thereby creating room for diverse ways of improving on the traditional embroidery ideas. The techniques of production involve the use of two fabric stripe holders called locally as *etiri* to stretch the ‘designing fabric’ within two poles taut so as to provide good tension for the commencement of the embroidery processes (figure 2a, b and c).

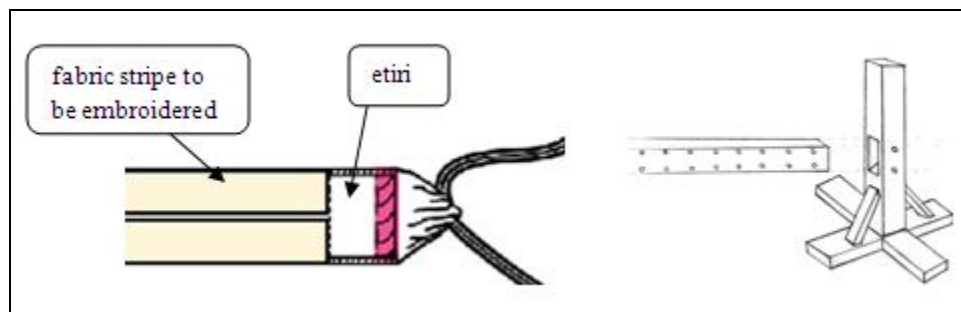


Figure 2a: Fabric stripe attached to the *etiri* Figure 2b: Supporting pole and a cross-bar  
Source: Field Work (2013); Researchers personal illustration with Photoshop



Figure 2b: A stretched fabric between two poles ready to be embroidered  
Source: Field Work (2013); Researchers personal illustration with Photoshop

The following sections described in details the procedures and processes associated with the production of a design each from the *nwomu* and hand-woven structure techniques as well as how each one can be fashioned into garment construction.

### 3.4. Motif Inspired ‘Nwomu’ Design

#### 3.4.1. Theme: Striking with Confidence

This design with it’s theme ‘striking with confidence’ is generated from two main symbols in *kente* designs known as *afuakwa* and *mpuakron* respectively. They are distinct *kente* symbols of geometric shapes. These are used to depict the wisdom and creativity of the weavers. Its incorporation into the *nwomu* design is to depict a blend between the masculinity and femininity as in the stripes of



coloured linear designs interplaying with the geometric figures. Its use in the designing of a female garment in this project is to emphasize the need for women to see themselves as leaders and talented people who are beaming with confidence in all their endeavours. The colours used in this design are mainly yellow, black, blues and mauve, emphasizing on versatility. The multi-coloured nature of the design is to announce a trend in Ghanaian fashion today termed as 'block fashion' where colourful attires are used to complete a single outfit. However, this study is to identify the Ghanaian in modern context with colours and symbols that make them unique with a true Ghanaian identity.

3.5. The following identified the steps followed in executing the work

**Step One:** Preliminary sketches were done with the theme in mind; the chosen sketch was improved upon and designed finally using Adobe Photoshop application software (figure 3).



Figure 3: Sketch of design for the nwomu design  
Source: Field Work (20130): Researchers personal illustrations

**Step Two:** Preferred colours of hank yarns in rayon and cotton were cut through at a point and had both ends secured, with one side knotted close to the edge. It is to prevent entanglement making it easy to remove and use for the embroidery processes.

**Step Three:** The fabric to be used in the garment production was cut to a length slightly longer (4 inches) than the desired length of the areas that the finished embroidery fixed in. The width of the fabric was determined by the width of the embroidered designs created on it. For instance, a width of 3 inches demands a fabric width of 12 inches, cut and split through the middle – 6 inches each; ½ of the 6 inches (3 inches each on both sides of the fabrics) was supported with interlining to make the area for stitching steady for the working process. Both ends of the interlining areas were given a double-turn hem folding with the other 3 inches being the reverse used as an attachment to the main fabric (figure 4). The fabrics were put together at the mid-fold and secured with short stitches of 2 inches at both ends.

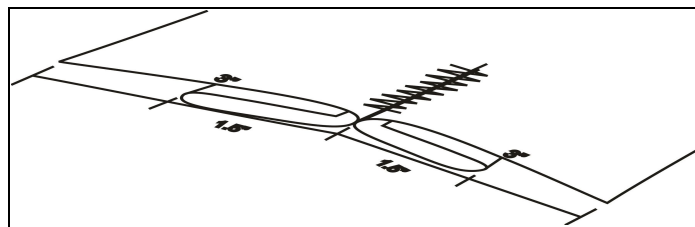


Figure 4: Mode of folding fabrics ready for the design  
Source: Field Work (20130): Researchers personal illustrations

**Step Four:** Both ends of the fabrics were hand-stitched onto the *etiri* and stretched between two strong poles thereby providing a highly tensioned surface to the fabric. The design is then transferred onto the tensioned fabric with carbon paper or drawn onto it with fabric pencil or chalk.

**Step Five:** The indigenous hand embroidery is mainly carried out with long cross-stitches which is used for the starting process. In the stitching process, a number of needles were threaded with required coloured yarns for easy access. The process was started close to the edge. The required coloured yarn was stitched through the fabric at the point of first fold. The needle was then pulled out through the end of the folded edges at midpoint, and then the yarns passed under the second folded part of the fabric and pulled out through the opposite side where the folding of the other strip ends. The needle with the yarn was taken back to the starting point, pierced and carried under the first folded strip and pulled through the midpoint. The yarn used for the stitching was alternated at this point before passing it under second fold and pulled at the edge to produce the cross-stitching effect (figure 5). The process continued until the thread on the needle got exhausted or when the colour needed to be changed. This produces the desired cross-stitching associated with this hand embroidery; instances where motifs were being in-cooperated into the *nwomu* design, the motifs were stitched first on the fabric with colours as designed. The background colour was stitched later to help project the design on the surface thereby producing positive and negative areas of the work. This continued until the final work was produced and ready for subsequent usage (figure 6 and 7).

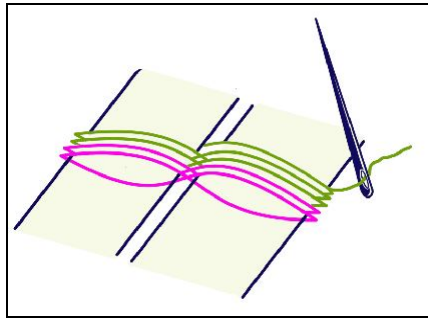


Figure 5a



Figure 5b

Figure 5a and b: The cross-stitching processes of nwomu design  
Source: Field Work (20130): Researchers personal work



Figure 6: Motif Designing Process with nwomu Stitching Techniques  
Source: Field Work (20130): Researchers personal work



Figure 7: A Finished Nwomu Embroidery  
Source: Field Work (20130): Researchers personal work

### 3.6. Motif inspired Simple Hand Woven-Structure

#### 3:6.1. Theme: Life's Journey

The design is based on the philosophy of life in that 'life's journey is full of twists and turns'; as the challenges will definitely come along with good times. Confronting these challenges is what makes you a survival and opens doors when the need be. Therefore, when one becomes successful in life, he must remember that we will all die one day so there is no need becoming portentous in good times. These designs are derivatives of three *adinkra* symbols of significance among Ghanaians (*mframada*, *nkyinkyim* and *owuo atwede*) which translate fortitude, twists and turns and ladder of death. Colours used were mainly black and white which express the difficulties as in black as well as good and happy moments as in white; representing the generality of life on earth.

#### 3.7. This woven structure resulted from the following steps:

**Step One:** The frame was adjusted to accommodate the plied yarns to make the resultant woven structure more compact.

**Step Two:** The warp yarn was laid by tiring the plied yarn to one of the stoppers on the frame which served as the starting point. The yarn was stretched between the first-two spikes on the first pole labeled A and move to the opposite pole B, the yarn was encircled around the first-two spikes and stretched back to pole A. It went round the third spike thereby leaving out the second spike free without yarn on it. The yarn was stretched back to pole B, encircling round the fourth and fifth spikes leaving out on the third spike, then back to pole A. The process continued in that manner, opting out one spike each on every back and forth movement of the yarn.

**Step Three:** Moving to pole B the third spike was left free while the yarn wrapped round spike four and five before extending back to pole A. The process continued until the entire desired width of yarns was laid around the spikes to determine the width of the structure (figure 8).

**Step Four:** At the completion of the first sets of laid yarns, it was encircled around the spike on pole A and the first spike on the adjacent pole identify as C. The process started as before, but this time from pole C to D which was opposite C (figure 9).

**Step Five:** At the completion of the second sets of laid yarns, the plied yarn was encircled on the last spike of D and first spike on B. The yarn, therefore passed between the first two spikes on pole B, extend to pole A and passed round spikes two and three, then back

to pole B and around spikes three and four before reversing to pole A. The process continued in this manner until all the spikes were covered (figure 10 and 11). Once carried out well, pole A and B had all the spikes covered with yarns in an alternating manner.

**Step Six:** The last part involved the actual weaving process; a stretch of the yarn was released and threaded with a needle. The size of the needle depends on the thickness of yarn(s) being used.

**Step Seven:** Few plainly woven structures were used to start the process by passing the needle through the stretches of yarns, alternating them from pole C to pole D (in the process one up, one down). At the end of the laid yarn, the yarns was pulled, stretched; one spike was skipped again on pole D (this equally skipped a laid yarn). The woven process reversed to pole C and the yarn pulled through, thereby producing a plain woven structure.

**Step Eight:** Different colour effects can be produced using different coloured threads in the weaving process. Other forms of woven structures were produced with the introduction of floats in regular and irregular manners.

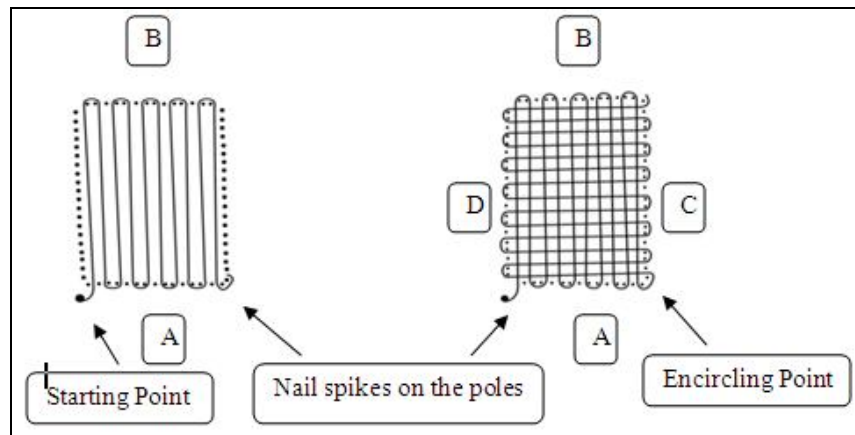


Figure 8: 1<sup>st</sup> Laying Process

Figure 9: 2<sup>nd</sup> Laying Process

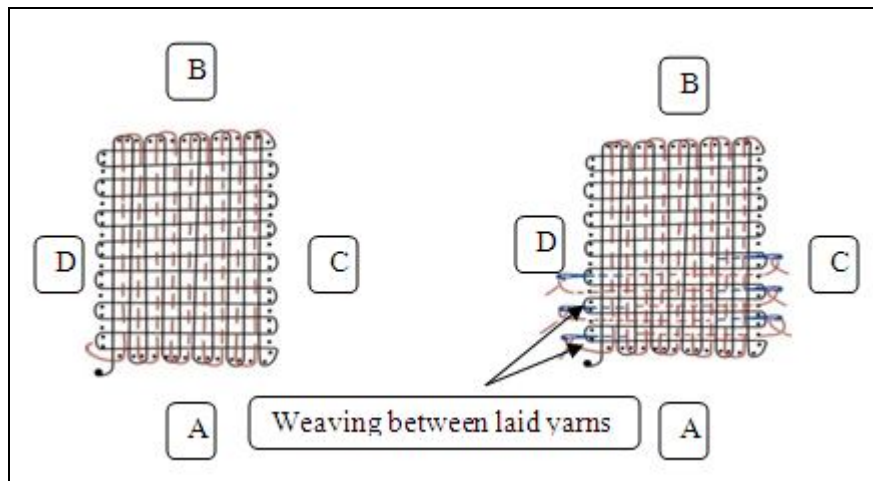


Figure 10: 3<sup>rd</sup> Laying Process in Red Colour Figure 11: 4<sup>th</sup> Indicating the Weaving Process

Source: Field Work (20130): Researchers personal illustrations

### 3.8. The weaving Process

The following were used in the working process to identify the various steps followed in achieving the design woven structure. In the sample given; “U” represents ‘Under a warp yarn’; “O” means ‘Over a warp yarn’; either U or O with a number, means the number of times the threaded yarn goes over or under the yarns laid on the frame. A number within a bracket means the number of times that the movement must be repeated and is written as that number with “X”. In the course of weaving, it is important to always skip the yarn laid in the weaving frame after weaving the first roll. The following order was used in producing the woven structure titled “Success in Perseverance”

**Step A:** The first-six steps were produced in a plainly woven structure using black acrylic yarns.

(O1, U1 across the width (6 times upwards) to produce a plain woven structure).

**Step B:** Each space for filling yarn works with both the black and white needles of threads.

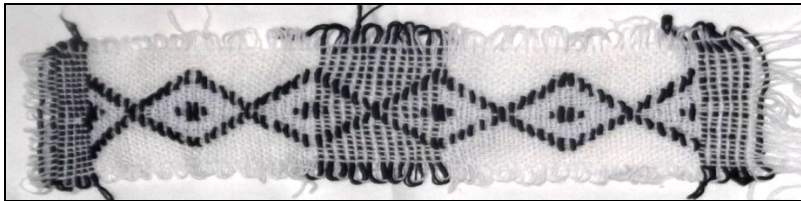
Pattern designs on surfaces are woven in black and the background in white.

**Step C:** Starting the weaving process from the right side of the structure;

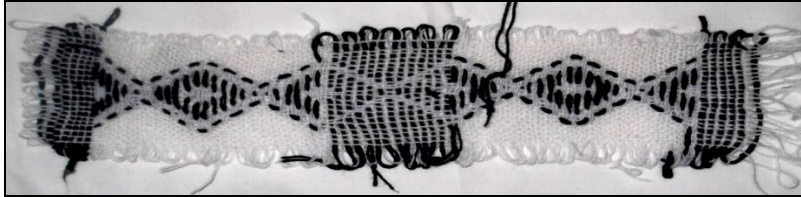
1. U6, O5, U7, O9, U7, O5, U6 (Black)
2. O1-O1(3X), U5, O1-U1(3X), U9, O1, U1(3X), U5, O1-U1(3X), O1, U1 (White)
3. U8, O5, U6, O7, U6, O5, U8 (Black)
4. O1, U1(4X), U5, O1, U1(3X), U7, O1, U1(3X), U5, O1, U1(4X)
5. U10, O5, U6, O3, U6, O5, U10
6. O1,U1(5X), U5,O1, U1(3X), U3, O1, U1(3X), U5, O1, U1(5X)
7. U12, O5, U11, O5, U12
8. O1, U1(6X), U5, O1, U1(5X), O1, U5, O1, U1(6X)
9. U14, O5, U7, O5, U14
10. O1, U1,(7X), U5, O1-U1(4X), U5, O1-U1(7X)
11. U16, O5, U3, O5, U16
12. O1-U1(8X), U5, O1-U1(2X), U5, O1-U1(8X)
13. U18, O9, U18
14. O1-U1(9X), U9, O1-U1(9X)

The various steps, from 1-14 represent a unit of the design.

**Step D:** The subsequent ones were produced by alternating the 14 steps to produce 10 alternated units. The woven structure was completed by repeating steps A to weave plain. The reverse of the design produces another unique effect of design which can equally be used in garment decoration (figures 12a and b).



*Figure 12a: Front/Surfaces of Weave Sample One*  
Source: Field Work (20130): Researchers personal work



*Figure 12b: Back/Reverse of Weave Sample One*  
Source: Field Work (20130): Researchers personal work

### 3.9. Introduction of Nwomu and Hand-Woven Structures into Garment Construction

The inclusion of these craft-works (simple hand-woven structure and traditional embroidery) into the production of garments begins with; the designing of the garments to be produced; the drafting of the patterns of the garments and adapting them to accommodate the designs; transferring the patterns onto the fabrics; sewing by putting parts together and finishing of the garments.

### 3.10. Garment Designing

The first step involved preliminary sketches of the garment designs. Five (5) different sketches were produced to enable the researcher select the two most suitable for the project. The selected designs were enhanced further using Adobe Photoshop Application Software to give a fair idea of the finished outlook as indicated in figures 13 and 14.



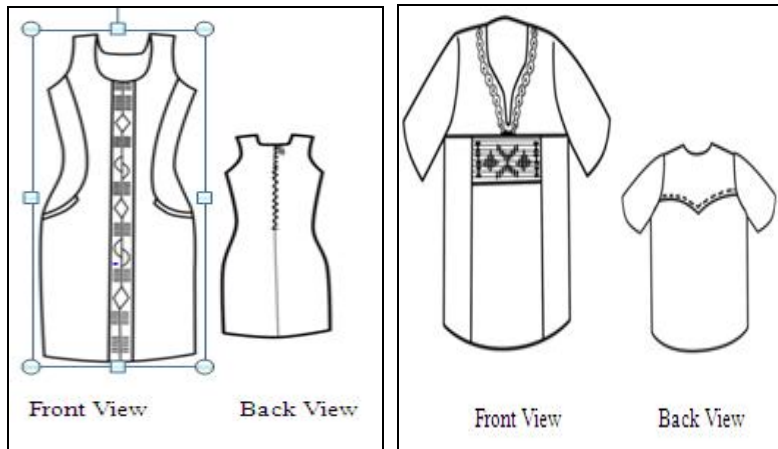


Figure 13: Sleeveless Long Dress

Figure 14: Shirt without Collar/Jumper

Source: Field Work (20130): Researchers personal work

### 3.11. Drafting Patterns for the Garment

The patterns were drafted out of the designs illustrated, by first taking the measurement of the person the garment was being designed for. The patterns illustrated in figures 15 and 16 are not drawn to scale but served as a miniature patterns for the two garments.

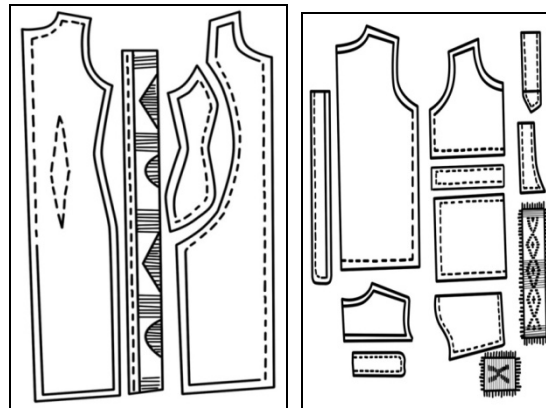


Figure 15: Patterns for the Long Dress

Figure 16: Patterns for the Jumper

Source: Field Work (20130): Researchers personal illustrations

### 3.12. Transferring Patterns onto the Fabric

The patterns were cut out, arranged on the fabric economically with the shape transferred onto the fabric with a tracing wheel and then cut out.

### 3.13. Putting the Garments Parts Together (Sewing)

During the course of stitching, interfacings were used to back the design weaves and the *nwomu* embroidery designs produced and stitched together around the edged before joining them to the desired portions on the garments.

The following processes were considered in relation to the two samples produced for the study:

#### a. Sample One (Simple Fitting Long Dress)

A. The front pattern was spitted that the centre portion and the *nwomu* design stitched to it as in figure 17.



Figure 17: The Nwomu Design Joint to the Middle Part of Front Pattern

Source: Field Work (20130): Researchers personal work

- B. The princess lines were stitched to the left and right patterns of the front portion of the dress-pattern. The curves toward the hip-base were left unstitched for inside pockets insertion.
- C. The inner pockets with rolled mouths were fixed to princess lines at the hip-base area.
- D. The princess lines for the back were attached to the back pattern.
- E. The underlinings were cut and fixed into the front and back patterns of the garment.
- F. The zipper was fixed which created the back-opening for the garment.
- G. The garment was joined at the shoulder line.
- H. The two sides of the dress were stitched together from the base of the armhole to the base on the hemline, using the correct bust, waist, hip and hemline measurements.
- I. Good finishing work was done to the armhole by rolling it in and stitching.
- J. The garment was finished by neatening and hemming at the edges.
- K. Figure 18a and b indicate the front and back views of the simple female dress on a model.



Figure 18a: Front View of a Model

Figure 18b: Back View of a Model

Posed in Simple Dress

Posed in Simple Dress

Source: Field Work (20130); Researchers personal works

- L. Figure 19a and b is another sample of tailored garment produced using the *nwomu* technique.



Front View (a)

Back View (b)

Figure 19a and b: Another front and back Views of Tailored Shirt with *nwomu* design

Source: Field Work (20130); Researchers personal work

### 3.14. Sample Two (Collarless Shirt/Jumper)

- A. The simple hand woven structure was joined to the lower-middle portion of the front pattern.
- B. The left and right pieces of the lower front pattern were stitched to that of A.
- C. The upper portion of the front pattern was joined to the lower one to complete the full front pattern of the garment's bodies (figure 20).



Figure 20: Front Pattern with Woven Design Fixed to it  
Source: Field Work (20130): Researchers personal work

- D. The back yoke was cut and fixed to the back pattern.
- E. After completion, the front and the back bodies were joined together first, at the shoulder lines.
- F. The neckline was fixed by stitching in the interfacing and smoothing it out with pressing iron.
- G. The sleeves were cut and shaped and then joined them to the armholes of the garment in the construction process.
- H. Both sides of the garment were joined together by stitching from the sleeve edge through the armhole to the edge of the hemlines.
- I. The hemline was completed by turning the edge in and stitching it across with a split created on both sides on the edge of the garment.
- J. The garment finished with neatening and hemming at the edges as and when necessary.
- K. Plates 20a and b indicate the front and back views of the garment as posed by the model below.



Figure 21a: Front View of a Model Posed in Jumper Shirt

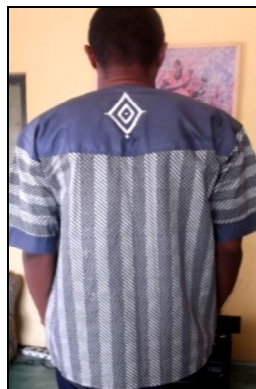


Figure 21b: Back View of a Model Posed in Jumper

Source: Field Work (20130): Researchers personal work

- L. Figure 22a and b shows the front and back views of another sample of classical shirt produced with the simple hand woven structure.



Front View (a)

Back View (b)

Figure 22: Front and Back Views of Classical Shirt from simple-weave on a model  
Source: Field Work (20130): Researchers personal work

#### 4. Recommendation

Fashion designers in Ghana should consider researching into other textile craft works which can find their ways into the fashion industry. For instance, natural leather, macramé and other needle works that do not just find their ways into fashionable items as in garments and upholstery can be considered. This will create more opportunities for the youth and improve on the creative ability of designers.

#### 5. Conclusion

The study shows that the incorporating of various techniques of the textile craft into garment construction is possible and innovative in widening the scope of fashion designing. The research therefore realized that, there is the possibility of introducing all sources of pliable media, within and outside textile into the construction of garment to improve on the aesthetic apparel of garments produced in recent times.

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