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IKKente: Fusion of Ikat Technique into Asante Traditional Kente weaving

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Article

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ABSTRACT

The Asante Kente is unquestionably the most popular and best-known of all African textiles. It has attracted the attention of many for centuries due to its uniqueness. The aesthetic appeal of Kente has been significantly improved over the years as a result of variations in design and production techniques. However, its design and production could be further improved and enhanced for the Asante Traditional Kente weaving industry to meet contemporary standards and market demands. Hence, this study sought to innovatively incorporate the Ikat technique – a patchy yarn dyeing decorative technique into the Asante traditional Kente weaving. The researchers utilized the studio-based research design under the qualitative research approach. The procedural steps in the Double Helix of Praxis-Exergesis Model which consisted of exploration, production, and evaluation, were adopted for the study. Personal interview was the principal data collection instrument used in collecting data from 12 purposefully sampled traditional Asante Kente weavers from six different communities in the Ashanti region of Ghana. The findings of the study revealed the possibility of fusing the two cloth production techniques to produce one common cloth that was named IKKente. The study recommends that this yarn decoration method should be encouraged among dyers and weavers to boost the local weaving industry in Ghana.

KEYWORDS

Asante Kente, ikat technique, traditional weaving, Ghana

INTRODUCTION

From the mid-1970s, the textile sub-sector of Ghana dominated the manufacturing sector and contributed significantly to the livelihood of Ghanaians employing about 25,000 workers [1]. This was once a booming industry but has not received the needed patronage in recent years [2]. The Trade Liberalisation reforms among West African countries hastened the demise of many textile factories in Ghana largely due to the importation of textiles and other apparel. Inadequate infrastructure, obsolete machinery, lack of trained manpower, decentralized and fragmented nature of the industry, besides

the inflexible labour laws, are the in-house challenges facing the textiles industry in Ghana [1]. Notwithstanding, the local *Kente* weaving industry of the Asante of Ghana continues to receive massive attention locally and internationally. The strip-cloth weaving is an age-old tradition across West African cultures. *Kente* weaving is one of the numerous weaving traditions in Ghana that has transited generations for centuries among the Akan (referred to as *Kente*) and Ewe ethnic groups (referred to as *Kete*). There are varied ideologies regarding the origin production and marketing of the final product [3]. *Kente* weaving as a traditional cultural art has been largely known to have been practiced by the Asante people of Ghana since the 17th century though other accounts trace its roots in a long tradition of weaving in Africa back to about 300 B.C. [4]. The Asante *Kente* is said to be unquestionably the most popular and best-known of all African textiles because it is produced in greater quantity, exported to more places, and incorporated into a greater variety of forms than any other African fabric [5,6].

The Asante *Kente* is woven in villages such as Bonwire, Woonoo, Maape, Adanwomase, and Ntonso, outside Kumasi, the capital of the Ashanti region [3]. It has been an Akan symbol of royalty and sacred cloth worn only in times of extreme importance and was a cloth produced for only kings in the olden days [7]. Over time, the use of *Kente* became more widespread and was adopted by people in Ivory Coast and many other West African countries [8]. The once handmade and reserved for the exclusive use of the Asante ruler, now proliferate the Ghanaian markets through cheap mass-produced reproductions. However, its importance has remained and is held in higher esteem [9]. The Asante *Kente,* an icon of the Ghanaian and broadly African cultural heritage around the world is identified by its dazzling multi-coloured patterns of bright colours, and geometric shapes [10]. The richly coloured and intricately patterned hand-woven Asante fabric (*Kente*) has motifs and designs with philosophical meanings and colour symbolism that serve as a medium of communication to the indigenes [11].

The word *Kente* comes from the word *Kenten*, which means basket. The very first *Kente* weavers used raffia, or palm leaf fibres, and wove them into a cloth that looked like a basket hence the name *Kente*. There are more than 300 different weaving patterns of *Kente* cloth. Each weaving pattern has a name and its meaning. The meanings come from past events, religious beliefs, political ideas, and social customs. *Kente* weaving has evolved greatly since it was first produced in terms of material, production, and usage. In the early years, raffia was primarily used then came the use of traditionally hand-spun cotton before the introduction of synthetic yarns [7]. The practice of traditional dyeing of yarns has gradually paved the way for the use of ready-made dyed yarns easily acquired from the market. Today, the *Kente* fabric is from rayon, cotton, and silk, making it affordable for a greater number of people. New patterns with new meanings easier to produce are constantly designed, but many of the original patterns are also still used in weaving [3]. From being the reserve of Kings and Chiefs for special occasions, the use of *Kente* has become widespread to include being used as

casual wear. *Kente* and its production have undergone dynamic changes over the period.

There are instances where warp has been patterned, doubled, or stamped with ink or dyes with *Adinkra* designs to improve its aesthetic appeal, patchy yarn dyeing has not been introduced in the *Kente* industry. The purpose of this study was to design and produce an Asante traditional *Kente* by adapting the *Ikat* yarn weft and warp sheet dyeing decoration technique.

Ikat Fabric Decoration Technique

Historically, *Ikat* textiles are among the most well-known and well-recognized fabrics in the world, and they have been made in different places, Central and Southeast Asia, Middle Eastern and African countries, Central and South America, India, and Japan [12]. The word *ikat* is derived from the Malaysian verb *mengikat*, which means "to tie." Research has shown that the practice originated independently in different continents. *Ikat* is a process as well as a style of weaving that uses a resist dyeing process similar to tie-dye on either the warp or weft before the threads are woven to create a pattern or design [13]. *Ikat* is a yarn-resist dyeing that involves the sequence of tying and dyeing sections of bundled yarn to a pre-determined colour scheme or pattern, before weaving. In this process, the patterns and decorations are created by using a particular procedure in which bundles of thread are repeatedly tied with a resist material and dyed by immersion in a dye bath, ensuring that the colour is only fixed to the regions left exposed [14]. Thus, the dye penetrates the exposed sections, while the tied sections remain undyed. At times the dye forces itself to penetrate through the tied section due to the method of tying and material used in tying. The resultant product is referred to as warp-ikat, weft-ikat, or either double-ikat or compound-ikat [14]. The patterns achieved by the process on the yarn are then woven into fabric. It is a difficult and time-consuming process that results in creating blurry or feather-like designs on the yarns before weaving. This process involves careful sorting of threads before and after dyeing [15]. Typically, the procedure involved in *ikat* production includes the following:

First, all the threads which are to be dyed the same colour in precisely the same areas along their lengths are bundled together. Areas of these threads that are not to be exposed to the dye are bound tightly using a dye-resistant material (e.g. polypropylene). The bundles of yarn are soaked in the dye; those areas that are bound in the dye-resistant material remain unexposed to the dye so that only the unbound areas are dyed. The bundles of threads are removed from the dye and allowed to dry. The dye-resistant bindings are removed. The threads are then bundled again and rebound so that the previously dyed sections are covered up and some or all of the previously bound sections are exposed. The dyeing process is then repeated. When dyeing is complete, the dyed threads are carefully laid out on the weaving frame and weaving can commence [16].

The type of yarns used is location or geographical-dependent. Examples of the yarns that

were previously used included cotton, silk, ramie, hemp, banana fibres, and some other plant fibres [12]. Madagascans use indigenous silk, bark, raffia, and hemp to weave their *Ikat* cloth. Silk *Ikat* shawls are called '*lamba*' in Madagascar. Many of the motif shapes and forms are not easily recognizable, probably because of one, the uncontrolled penetration of the dyes, and two, the different cultural undertones. *Ikat* fabrics are mostly known in abstract and geometric forms but craftsmen in Japan are known for producing pictorial scenes in *Ikat* fabric. Both in Japan and throughout the world, *Ikat* or *Kasuri*-dyed textile designs were most often abstract or geometric forms. Japanese designs are designed on futons, sleeping blankets, and jackets. Motifs are also associated with the values of the community and the way of life of the community can be inferred from the motifs. Many of the motifs are created with inspiration from nature. Ancient *Ikat* motifs are imbued with spiritual significance among Austronesians. A prominent and notable figurative zoomorphic representation is crocodiles. Fear and awe of crocodiles have a deep spiritual significance for Austronesian communities. The orthomorphic representation is suggested as a depiction of victims of headhunting activities. Flowers, stripes, and arrow head-type effects are identified as widely used motifs [17]. 'Feathers' and/or lozenges consist of patterns with widespread colours in blue, brown, cream, reddish-brown, red, cream, and tan or combinations of these colours dyed with madder (reddish brown and brown) and indigo (blue) [18,19]. In other literature, the representation of people in *Ikat* is associated with ancestor worship [19,20].

Like that of *Kente* of the people of Ghana, *Ikat* is also a ceremonial cloth, which relates to major life events and everyday wear. It is known for its intricate designs. The intricacy of the design determines how prestigious and valuable the fabric is. Such weaves are reserved for high-ranking members of the society. Traditional colours used for *Ikat* weaves are usually colours of red, black, yellow, blue, brown, and shades in between the undermentioned colours. Colours are consciously mixed to get specific colours or shades but sometimes some colours run into some colours to form a unique colour unpredictably.

Ikat **Contra** ***Kente*** **Techniques**

The above literature has shown that both *Ikat* and Kente fabrics have quite a lot in common; they all play a significant role in garments, statues, wealth, and also as spiritual symbols. The only difference is that *Kente* is woven mostly by men in Ghana, while *Ikat* is done by women in the ancient countries. A similar *Ikat* weaving effect is known to be practised by Northern Ghana weavers, specifically Daboya smock weavers [3]. However, dyers at Daboya dye their warp yarns with indigo dyes in dye pits for several days, and after they are dried, they are woven into strip cloths, which are joined to form the *fugu* cloth.

Kente is woven on a loom known as *kofi nsadua* whilst *Ikat* is mostly woven on the back strap loom. Mercerized cotton yarns or yarns with high tensile strength properties are used for *Ikat* production. *Kente* is also known to be produced mainly with cotton and rayon yarns with low tensile strength properties as compared to that of *Ikat* production. This research introduced rayon threads as its main yarn material for tie-dyeing, just as weft and warp sheet yarn decoration techniques were used in *Ikat* before *Kente* weaving.

The Fusion Concept

Fusion is the bridge for this aesthetics between the utter uniqueness of the quality of an experience and the analysis or inquiry about it. This research outlines the uniqueness of both the *Kente* cloth weaving techniques and the *Ikat* yarn decoration techniques. The practice and utilization of this unique fusion of the *Ikat* weft and warp sheet yarn decoration techniques and the *Kente* weaving method bring into focus the possibility of this fusion concept as an additional weaving effect in the *Kente* weaving industry in Ghana. The process of fusion is not one thing occurring at a defining spot at one time but the resulting single quality of distribution that occurs within the entire volume of a thing [21]. With this insight, the researchers estimated and predicted that the fusion of the two techniques would introduce a distribution of varied dyed colours within the entire unique cloth woven in the Ghanaian weaving industry. Both clothes have some qualitative unity and are refined by the fusion that capitalizes on the strengths of both while consolidating each other's weaknesses. This research explores the potential of combining the unique *Kente* cloth weaving techniques with the Ikat yarn decoration techniques. By fusing these methods, a new effect can be introduced to the *Kente* weaving industry in Ghana. The fusion process is not a singular event, but rather a distribution of varied dyed colors throughout the entire cloth. This combination capitalizes on the strengths of both techniques while refining any weaknesses. The resulting cloth has a qualitative unity that is both unique and refined.

MATERIALS AND METHODS

This study was carried out using the approaches in the studio-based research design under the qualitative research. The various stages in the studio-based research guided the creative processes used for the production of the *IKKente* which is a fusion of the Ikat dyeing technique with the traditional Asante Kente. The researchers adopted the steps outlined in the Double Helix of Praxis-Exergesis Model [22] which served as a guide for the creative processes in the project. This consisted of exploration, production, and evaluation. The exploration stage included the preparation of the

patchy dyed yarn using the *Ikat* dyeing technique. The production stage involved the weaving of the newly dyed yarns (*Ikat*) into *Kente* Cloth. The evaluation stage involved garnering views from 12 purposively sampled Asante Kente weavers out of the 50 Asante Kente weavers identified as the target population from the Ashanti Region of Ghana. They were purposively selected because they had expert knowledge of Asante Kente and general cloth dyeing including the Ikat dyeing. The 12 study participants were personally interviewed using an unstructured interview guide that sought to find out their knowledge of the newly created *Kente* using yarns dyed from the Ikat technique. The data were recorded, transcribed verbatim, and coded with the aid of the Nvivo software. It was finally analyzed using qualitative thematic analysis.

Weaving and Dyeing Parameters for the Studio-Based Work

This section details the weaving and dyeing parameters such as the materials and tools used for the project. 24 hanks (which is equivalent to 20.160 yards since one hank is 840 yards) were used for the project. Vat dyes were used for dyeing. Three (3) tablespoons of vat dyes were mixed with three (3) tablespoons of caustic soda and three (3) tablespoons of Sodium Hydrosulfite (hydros). The dyed yarns were used for weaving which was done on the traditional *Kente* loom by the lead researcher. This traditional loom produces strip cloth that measures an average of five (5) inches in width. The length varies greatly among males and females. For females, the length ranges between 40 inches and 70 inches while for men, it ranges between 80 inches and 140 inches.

Production Processes

To achieve the overall goal of the study, the activities were executed in two parts; first, patchy colouring of yarns, and second, using the newly dyed yarns (I*kat*) in *Kente* weaving. The following are the tools and materials used to carry out the research; Bowls, Gloves, Loom, Shuttle, Warping Mill, Spool Rack, Bobbins, Alum, Caustic Soda, Hydros, Vat dyes, Yarns, Water, etc.

Patchy Dyed-yarn Preparation (*Ikat* Technique)

Two types of yarns were used for the studio practice. First, rayon yarns were dyed and used as the weft yarns while mercerized cotton yarns were dyed and used as the warp yarns for the weaving of the fabric.

To dye the yarns, yarns were unwound from cones with the warping process. Warping was done with the yarns in a cone form, and crosses were created during warping to help align the warp yarns in the right parallel formation. Warp yarns were tied in various intervals and formations in readiness to resist dyes before being removed from the warping mill for dyeing, as shown in Figures 1 and 2 below. Yarns

were tied in different formations and folds after being removed from the warping mill to add to the intricate design to be produced, as seen in Figure 4 below. After that, the yarns were soaked in water for 24 hours to enable the opening of the pores of the fibres and to remove any sized materials on the yarns for easy absorption of dyes.

Figure 1. Crosses in warping

Figure 2. Tying of the warp yarns at the various sections of the warp

Vat dye solutions were prepared and used for the entire dyeing process. Three (3) tablespoonfuls of dyes (Red, Blue, Yellow), three (3) tablespoonfuls of caustic soda, and three (3) tablespoonfuls of Sodium Hydrosulfite (hydros) were mixed with a 500 ml quantity of cold water in a basin. The weft yarns were table dyed through a gradual pouring of the dye liquor onto the unsecured areas of the cloth. On the other hand, the various sections of the warp yarns were dyed using immersion in different coloured dye solutions. The length of time for each of the dyeing processes was one hour and thirty minutes. This duration ensured high dye affinity] and darker shades of colours at the unsecured sections of the yarns while the secured sections registered lighter shades of the colours creating an interesting patchy effect. This is shown in Figure 5.

Figure 3. Tying of warp yarns at some irregular intervals

Figure 4. Soaking the warp yarns with water

Figure 5. Dyeing of the warp yarns using the Ikat technique with three colours concurrently

In some instances, yarns were folded in a lengthwise way, divided into two halves, and then one half immersed in dye solution and the other half in water. This is where osmosis takes place in dyeing. The dyes run from the part of the yarns into the dye bath and vice versa. That enables the dye to run through the yarn at its own pace creating an interesting pattern if the same effect is to be achieved at the other half. After going through this process yarns were removed from the dye bath and left under shade for oxidization as shown in Figure 6. The dyed yarns were not dried under direct sun. The real expected colour becomes visible with the dyed yarns when oxidation takes place as yarns are left for a day to dry. But where there is no shade to dry the yarns, oxidation can be done in the evening to avoid the sun rays on the dyed yarns. If dyed yarns are exposed to direct sun, it does not enable you to get the expected colour making the dye deviate from whatever colours one wants to achieve.

Figure 6. Oxidation of the dyed warp yarns

After the yarns had been well oxidized and dried to reveal the colours expected, yarns were then put in clean water and rinsed to remove excess dyes. This brightens the colours and the nice patchy dyed yarns were achieved. This is seen in Figure 7 below.

Figure 7. Drying of the *Ikat* dyed warp yarns after the excess dye was washed

Weaving The Newly Dyed Yarns (*Ikat*) Into The Traditional *Kente* Cloth

The yarns were successfully dyed and dried. They were then ready to be woven into traditional *Kente*. The patchy dyed warp was mounted on the traditional loom for weaving as shown in Figure 8. This brought in a new form of warp pattern in the traditional *Kente* weaving setting. Trial weaves were done in Plain weaves using one colour and two colours respectively. Even with a simple plain weave, it exhibited a wonderful design pattern that can never be achieved when using the yarns normally used for *Kente* weaving. The resultant effect can be seen in Figures 9 and 10 below.

Figure 8. Patchy dyed yarns mounted on the traditional loom

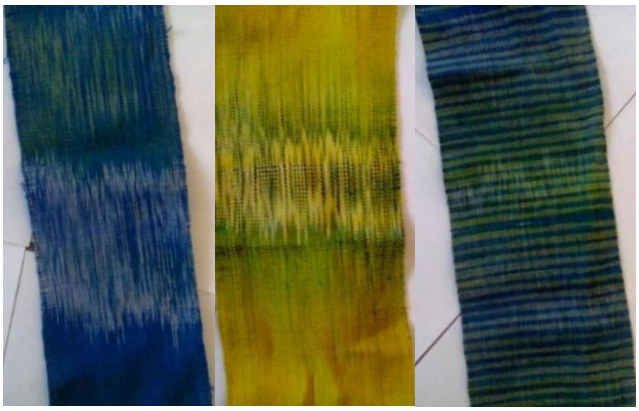

Figure 9. The effect of the patchy dyed yarns after weaving

Figure 10. Weaving of *Nsoroma* (stars) motifs with the Patchy dyed yarn

RESULTS AND DISCUSSION

Observations From The Combination Of The Ikat Dyeing Technique And The Asante Kente Weaving Process

This section presents results and discussion of our general observations from the studio-based research on the Ikat dyeing technique employed and the use of the Ikat dyed yarns in producing the woven fabric. Generally, the Ikat dyeing was successful because the technique helped in producing interesting and colourful yarns that were finally woven on the traditional loom. Before the yarns were dyed, we wanted to take measures to open up the pores of the yarns to enhance the dye affinity [23]. We decided to boil the mercerized cotton yarns for one hour and thirty minutes to enhance their dye affinity. However, we noticed a weakening of the yarns. We observed that all the yarns that were boiled before they were dyed got broken when they were stretched on the loom. However, when we poured the hot water on the yarns and left it for one hour and thirty minutes, we noticed the strength of the yarns was maintained coupled with enhanced affinity to the dye liquor as similarly noted in an organic dyeing of yarns for weaving in a study in Ghana [11].

Moreover, we observed that the resultant aesthetic value of the woven cloth largely depended on the success of the Ikat dyeing technique. When the yarns are dyed well it affects the general outlook of the woven fabric. This was similarly noted in a study on traditional Ikat in North Tapanuli, India [24]. The researchers observed that the aesthetic value and acceptance of the traditional Ikat Ulos fabrics largely depended on the successes of the dyeing. We realized that the patchy effects from the Ikat dyeing were much realized in the plain weave patterns. However, the patchy effects were less evidenced in the more complex weave patterns. While this view is based solely on our studio-based

research, another study that has explored the Ikat dyed yarns for weaving has suggested the use of it for only the warp yarns while the weft yarns are not dyed for better representation of the Ikat patchy effects even for complex weave patterns [24]. In our research, we dyed both the weft and warp yarns in the Ikat dyeing technique. This might probably account for the less representation of the Ikat patchy effects when they were woven into complex weave patterns.

Evaluation Of The Effectiveness Of The Fusion Of The *Ikat* Dyeing Technique Into The Traditional Asante *Kente* Weaving

The section presents the views of the 12 study participants who were interviewed using an unstructured interview guide with items focusing on the effectiveness of the incorporation of the Ikat dyeing technique into traditional Asante *Kente* weaving.

Theme: Effectiveness of the Incorporation of Ikat Dyeing Technique into Traditional Asante Kente Weaving

Sub-Theme 1: Uniqueness of the incorporation of ikat dyeing technique into traditional Asante Kente

All the twelve study participants mentioned that the incorporation of the ikat dyeing technique into the traditional Asante *Kente* has made it unique when compared to the known traditional Asante *Kente*. These were some of the significant views expressed:

“This fusion concept is brilliant and needs to be commended. The final cloth should named *Akunini Tam* (Cloth for distinguished persons) because it skilfully combines two complex textile production processes which are dyeing and weaving (Kente Weaver, 87, Bonwire, Personal communication, 19-08-2019).”

"Everybody wants to see variety and so are our clients. Therefore the incorporation of the ikat dyeing into the traditional Asante *Kente* would be welcomed due to the variation in its outlook (Kente Weaver, 58, Adanwomase, Personal communication, 21-08-2019).”

A Kente seller at Onno said that “the newly created Kente cloth intimated that due to its uniqueness, it should be reserved for only Asante chiefs. This is because Asante chiefs are usually distinguished from their subjects by the uniqueness of their cloth designs and/or patterns (Kente Seller, 39, Onno, Personal communication, 26-08-2019).”

Sub-Theme 2: Incorporation of the ikat dyeing technique is likely to boost the marketability of the traditional Asante Kente

One of the master *Kente* weavers was very excited about the innovative concept, asking the researchers to organize a workshop to orient the local *Kente* weavers on how to incorporate the

Ikat dyeing technique into their traditional *Kente* weaving. He mentioned that it could open a new marketing window for them:

"I think people love variety and this fusion of the Ikat dyeing technique with the *Kente* will boost the sales of our local *Kente*. I am sure people will love to buy them (*Kente* Weaver, 58, Adanwomase, Personal Communication, 25-08-2019)."

Over the thirty years I have been in the Kente industry, I have realised that clients love to see different techniques employed. They are willing to pay for it if it has enhanced the value and aesthetics of the *Kente.* That is exactly what your design has done. As a result, I am certain it would help boost the sales of the *Kente* (*Kente* Seller, 69, Bonwire, Personal Communication, 24-08-2019)."

These findings support the view in the literature that variations in textile designs in production can potentially enhance the aesthetic and market values of textile clothes [25]. Hence, the combination of the Ikat dyeing technique with traditional *Kente* weaving has heightened the value of the indigenous Kente cloth. The feedback from this research has shown that if the Ikat dyeing technique is incorporated into *Kente* production, it would boost the weaving industry in Ghana. This will help in enhancing the *Kente* clothes produced, as an added value to boost the *Kente* market.

CONCLUSION

The dyeing technique of Ikat combined with the Kente weaving process was used to produce *IKKente.* The study could serve as a platform for dyers and weavers for both *Kente* weavers and dyers in the Kente industry in Ghana to enhance their skills in dyeing and weaving. The uniqueness is based on the patchy effect of colouration introduced into *Kente* weaving in Ghana. Wide production and use could help improve tourist attraction and the economy at large. This yarn decoration method is encouraged among dyers and weavers to boost the local weaving industry. The fitness of organic dyes for the yarns used in weaving should be researched. Also, future research could potentially investigate the environmental effects of the fusion of the Ikat dyeing into the local weaving in Ghana.

Author Contributions

Conceptualization – Gyasi I; Methodology – Adom D; Investigation – Gyasi I; Resources – Gyasi I, Oppong CE; Writing-original draft preparation – Gyasi I, Adom D and Oppong CE; Writing-review and editing – Gyasi I, Adom D, Oppong CE; Supervision – Asmah AE. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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