
Screen-Printed Adinkra Symbolic Fabrics in the Production of Female Fashionable Office Suits

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Abstract: *Adinkra* symbols are visual symbols among the Akan in Ghana. These symbols represent objects that encapsulate evocative messages conveying traditional wisdom, life and beliefs. The Akan mainly use the symbols for producing funeral cloth or fabric as wrapper for men and women (especially the elderly class). There have not been much creativity and innovation regarding the use of adinkra symbols for female fashionable wears. Black and indigo hues are employed for printing adinkra cloth and these hues are associated with mourning among the Akan. Thus, using adinkra cloth for fashionable wears poses many challenges to fashion designers due to the characteristics of the cloth. This research is anchored on Vygotsky's creativity theory and Baumgarten aesthetic theory. The study employed qualitative research design and studio based approach. This study seeks to employ selected adinkra symbols for the production of fashionable suits for women. The objectives were to use the Akan adinkra symbols to suit the contemporary demands of the fashion industry, apply screen printing technique to produce adinkra cloths with synthetic pastes, develop innovative fabrics with adinkra symbols that can withstand different tailoring processes and produce fashionable suits from the redeveloped adinkra cloth. The findings revealed that adinkra cloth, if redesigned into innovative fabrics can withstand major tailoring processes such as pressing, fusing and moulding. Looking at the results, it was established that employing screen printing technique for producing adinkra cloth has the tendency to improve the characteristics of the original cloth; thereby making it possible to withstand different tailoring processes. The study recommends effective education on the patronage of locally made clothing with indigenous symbols in order to promote the traditional textile industry.

Keywords: Adinkra Symbols, Akan People, Office Suit, Innovative Fabric and Tailoring

1. Introduction

The *adinkra* are visual and indigenous symbols among the *Akan* in Ghana. These symbols mean farewell and represent objects that encapsulate evocative messages conveying traditional wisdom, life and beliefs. The symbols, since their invention have been predominantly used for the production of funeral cloth as wrapper for men and women. The colours used for this particular cloth decoration are mostly black and indigo, which symbolize mourning among the *Akan* people in Ghana [1].

The *Ashanti* are the custodians of *adinkra* symbols and their cloth production. Nana Kofi Adinkra, a leader of the

Gyaman in Ivory Coast invented the symbols [2]. He further argues that the *Ashanti* in a war, defeated the *Gyaman*, captured and killed their king and took captive of his artisans into the *Ashanti* kingdom. It is at this period that the *Ashanti* began using the symbols as motifs for textile production.

The symbols are many with diverse meaning and symbolism. The total number of *adinkra* symbols is not yet ascertained since new ones always feature on the traditional textile market. A survey conducted reveals that the main *adinkra* symbols available for use by the local textile producers are sixty (60) in numbers [3]. The symbols are used for their aphorism and aesthetic reasons. This has made it possible for designers and artists to explore the symbols in different ways.

Obviously, the symbols are not limited to Ghanaian cloth production alone, but the world at large. They are used in fabric production, with the symbols representing historical events, human behaviours, attitudes, animal behaviours, plant life, and objects or shapes. The *adinkra* symbols are also incorporated as motifs in architectural designs, furniture, book covers, jewelry, plastic products (chairs and bowls) and clothing accessories [3-6].

Motifs offer a greater opportunity for the identification of certain textile fabrics, especially those used for clothing. The traditional African textiles that are produced in very stylish and significant colours constitute one of the attractive textiles making wave in most part of the world. African textiles are made with colourful hues and intricate symbols as motifs that convey meaning to the people's culture [7]. This is an indication of the importance of symbols and their symbolism, reflecting their origin or sources as embedded in fabrics or used as embellishments. Clothing and textiles are crucial in the life of humanity. Clothing is a major necessity of life. It is, however, placed in line with food, shelter and air as the basic factors that facilitate the survival of humans [6]. Clothing and textiles involved a range of materials used to cover the body. Adom, D views clothing and textiles as key identifiers of people's nationality or identity [8]. In this regard, the culture of people is exhibited through the type of clothing they wear or the textiles they produce for sale. Apart from giving identity to a nation, clothing establishes the values and traditions of individuals. It also advances and enhances the image of a country. Clothing serves an important role in the development and transmission of culture in the world.

Today, clothing or textiles with traditional symbols is largely seen as a vehicle influencing the culture of people from different parts of the world. This is because the world is now a global village where travelling to different places is made simple. In the process of moving from one place to another, people are influenced with numerous cultures, mostly in the field of fashion (clothing and textiles).

In view of this, it is believed that all the nations in the world have unique fashion and clothing, which distinguish one nation from another [9]. Nigerians produce *Akwete* and *adire* fabrics. The Malians produce the *Bogolan* cloth while South Africans are associated with *shew-shew* indigo cloth. Ghana cannot be excluded from the number of countries with peculiar reference to traditional textiles. Ghana is popularly noted for its production of *adinkra* cloth, *fugu* and *kente*. There have been several innovations regarding development of traditional textiles in Ghana for the past decades. Technology has contributed in the sphere of *kente* and *fugu* weaving as compared to *adinkra* cloth printing [4].

The exclusiveness of Ghanaian textiles in the area of symbolism indicates the nation's culture, values and aspirations [10]. Textile designs that have excelled and cherished by collectors and museums worldwide are those designed with indigenous symbols. Throughout history, symbols have been explored to indicate or express ideas, communicate meanings and convey emotions.

In the area of cloth manufacture, colour plays a very

significant role without which the aesthetic nature of the motifs in the fabric would not be felt. Colour is used in relation to the purpose behind the construction of the cloth. However, if the cloth is meant for funerals organised on either Thursday or Saturday in Ghana, as in the case of *adinkra*, then it has to be decorated with black, indigo and red respectively. In the Ghanaian context, these colours signify sadness, bereavement and aggressiveness. Besides, if the cloth ought to be used for thanksgiving service, especially after funerals on Sunday, then it definitely has to be decorated with black and white hues.

Irrespective of the cultural significances associated with the *adinkra* symbols, the *Akan* mainly use the symbols for producing funeral cloth as wrapper for men and women (especially the elderly class). The nature of the wrapper coupled with the drapery characteristics on the human body, does not encourage youth patronage of the cloth. This drapery style of dressing has been maintained among the elderly for centuries. Black and indigo hues are predominantly employed for printing *adinkra* cloth and these hues are associated with mourning in Ghana. Thus, using *adinkra* cloth for fashionable women wears poses many challenges to fashion designers because of the characteristics of the cloth as inherited or influenced by the production method and dye application [11]. *Adinkra* cloth is not washable because it lacks colourfastness and thus, tends to become hard after printing. This phenomenon does not promote good tailoring processes [12]. The application of *adinkra* symbols as motifs on fabrics and colours used can be altered to make the cloth more applicable for producing classic and fashionable wears such as female suits, jackets, vest, party wears, dinner wears, wedding gowns and many more.

The overall aim of the study is to employ selected *adinkra* symbols as motifs for the production of fashionable suits for women. The specific objectives directed at answering the research questions are to use the *Akan adinkra* symbols to meet the contemporary demands of the fashion industry, apply screen-printing technique to produce *adinkra* cloths, develop innovative fabrics with *adinkra* symbols that can withstand different tailoring processes and produce fashionable suits from the modified *adinkra* cloths.

In order to achieve the aim and objectives of the study, the following questions were formulated to guide the study:

- 1) How would *adinkra* symbols be used to meet the contemporary demands of the fashion industry?
- 2) What printing technique would be applied for producing *adinkra* clothes?
- 3) What procedure would be adopted to develop innovative fabrics with *adinkra* symbols to withstand different tailoring processes?
- 4) How can fashionable suits be produced from the *adinkra* modified cloths?

2. Literature Review

The Concept of Adinkra Symbols

The invention of *adinkra* symbols has series of conflicting

tales. Oral tradition reveals that *adinkra* symbols were initially originated from *Gyaman*; an ancient kingdom of present-day Cote D'Ivoire. Asmah, A. E. believes that the *Asante* cannot claim a total ownership of the indigenous creation of the *adinkra* symbols [4].

Whatever the evidence, the accepted truth of history surrounding the creation of the symbols by different schools of thought suggest that, the *Asante* in an attempt to expand their territory close to the northern and western part of Ghana encountered in a fierce war with the *Gyaman* who lived in Cote D'Ivoire [1]. The aftermath of the war was that the *Asante* defeated the *Gyaman* people, took captive of the indigenes and captured their king who was the original inventor of the symbols. The king was finally killed and his artisans brought to the *Ashanti* land precisely Kumasi. The introduction and translation of the symbols to the *Ashanti* kingdom marked the beginning of *adinkra* printing cloth. The captive artisans were made to work with the *Ashanti* artists simultaneously on the symbols and assigned renowned names according to the *Akan* proverbial meanings to them. Bowdich, T. E and Oduol, S jointly believe that the motifs were in later periods transformed into stamps and used as printing blocks to stamp fabric or cloth manufactured from cotton [13, 14].

Some of the symbols stand for sorrowful issues and moments [15]. This is because the defeat and capture of the *Gyaman* king (Nana Kofi Adinkra) pained and greatly affected the people (*Gyaman*). The eventual death of the king inspired the names of the symbols; *adinkra* –‘meaning farewell’. Oral tradition holds that the then *Ashanti* king joined the *Gyaman* land to the *Akan* territory but prior to the death of Nana Kofi Adinkra, the artists especially those taken as captives were desirous of expressing their sorrow through patterned cloths produced and such tradition has been maintained. What actually spearheaded the conflict between the *Asante* and the *Gyaman* was linked to the duplication of the *Ashanti* Golden Stool by the ruler of *Gyaman*. For the *Asante*, the Golden stool is very sacred, even up to this modern age due to traditional preservation. The strife amongst the *Gyaman* and the *Asante* became a military conflict around the nineteenth century [16].

Concurrently, Delaquis, E. N and Boateng, B share common views as further evidence concerning the emergence of *adinkra* symbols into the *Ashanti* kingdom [17, 18]. They observed that the symbols emerged from cross international relations and trade with the Muslim traders. Trading activities then expanded across the Sahara, to North Africa and beyond. However, most of the symbols bear *Twi* (*Akan*) names. It is not clear to say that the symbols are from Arab world even if there are forms of similarities of *adinkra* with that of Islamic symbols [19]. A close observation by Rottary, R. S reveals certain measurement of mystical impact on the symbols, but the truth remains unchangeable [20].

Securing dyes for printing appeared problematic to the *Asante* because they only copied the symbols without ascertaining what printing pastes or dyes the *Gyaman* used for decorating the cloths. Fortunately, the then *Asantehene*

(Nana Osei Bonsu-Panyin) ordered his military men to undo the *Gyaman* king's regalia, critically studied it and finally arrived at a peculiar plant dyes for the printing. The production processes for acquiring these dyes then appeared very tedious [8].

Ntonso, *Bonwire*, *Asonomaso* are the main towns in *Ashanti* region where *adinkra* cloth production is mostly carried out [21]. Additionally, these towns offer several training to apprentices and students on attachment programmes in local printing and dyeing respectively.

Nubour, C assessing the uses of *adinkra* symbols in fabric designing, believes the symbols are used for funeral clothes [22]. He asserts further that the darker shades of *adinkra* cloths are mostly worn during Saturday's funerals. The black and white cloths are usually worn for thanksgiving ceremonies, naming ceremonies and parties. This same type of *adinkra* cloth is worn during the funeral rites of the first child of a couple known as 'sodo' by the *Ashanti*. Prominent functions (durbars) also experience the parading of *adinkra* cloths. For example, on such occasions, the kings and traditional priests' regalia are inscribed with specific *adinkra* symbols.

Adinkra cloth comes in different patterns of design. There are four main types of *adinkra* cloth [3, 21]. They are *mpakyiwa* (plain background); *nhwimu* (linear marking type); the *kente* strip and the *nwomu* type.

2.1. *Adinkra* Symbols and Their Philosophical Meanings

Communication plays a vital role in human lives. In relationship matters, it is observed as an invaluable substance in the *Ashanti* culture and tradition. The *Akan* ethnic group, being the universal umbrella of several clans or factions, has a distinguished characteristic, which is its capability to communicate messages and ideas through symbols [23]. The *Ashanti* kingdom, being the principal component and constitutes the majority group of the *Akan* tribe does not underestimate the use of communication through symbols and other mediums.

In the *Ashanti* culture, people share ideas through symbols and signs. The mode at which these symbols are transmitted only understood by the people of the same culture or have understudied such different cultures over time. In effect, people's languages are mainly systems of symbols and motifs as coined by one of the greatest philosophers- Aristotle; "spoken words are the symbols of mental experience and written words are true replica of the meanings of words, things, actions, emotions, behaviours and ideas of a people". Symbols of the same culture are typically understood through cultural assimilation, acculturation and migration [24].

Adinkra symbols have similar connotations and philosophically in line with Aristotle's assertion discussed earlier. Frimpong, C et al. consider the symbols as geometric and pictorial in nature that indicates ideal concepts and values of *Ashanti* people [25]. The symbols offer valuable advice in matters concerning proverbs, folklores and historical events that cut across issues involving people's daily activities. They are vividly employed in all facets of life.

The exact number of *adinkra* symbols cannot be ascertained. Several authors and researchers present different numbers. Tetteh, V. A and Rottary, R. S record fifty (50) symbols in their separate publications while others suggest nearly hundred symbols [11, 20].

Glover, A, Abissath, M. K and Arther, G. F. K, together with the researchers' field trip to some of the prominent *adinkra* printing towns identified almost eighty (80) symbols used in the traditional printing industry in Ghana [12, 26, 27].

It is worthy to note that the symbols are reviewed on the grounds of two separate studies by Tetteh, V and Kuwornu-Adjaottor, J. E. T. The major aims of these authors were to compile the exact number of popular *adinkra* symbols. An exploratory method was adopted to organise and interpret the symbols.

Below are some commonly used *adinkra* symbols in relation to female behaviours, attitudes and aspirations in life.

2.1.1. Duafe (Wooden Comb)

Wooden comb (*Duafe*) is among the symbols developed by the Gyaman's king and his artisans. It is a symbol of behaviour or attitude that shows high moral standard especially among females. Philosophically, it connotes an attractive or useful quality of women and their everlasting love. Gyekye, K reviewing this particular symbol writes that the wooden comb is designed for the *Asante* women for plaiting or combing their afro hairs [29]. It is highly regarded as an important tool in female body decoration or adornment. The comb is one of the household items used during puberty rites of the *Asante* girls. In the course of puberty rites, *duafe* is offered to the girls by their fiancés together with items such as mirror, perfume, stools, sandals and traditional pomade.

There is a unique plaiting hairstyle called '*dansinkran*' among the *Ashanti* of Ghana and the '*Duafe*' is the best comb for bringing out such hairstyle. The queen mothers have their own way of styling their hairs from the young women and girls in the *Ashanti* communities. He continues to argue that the comb offers series of lessons to people [29]. Individuals should accept the encouragement of personal dressing to effect beauty and hygiene in order to be appreciated in their societies. Regardless of living in the technological world, abandonment of one's cultural heritage for western culture and values should not be the prime motive of Ghanaians (African) as the best practices. The western people carry different hairs and then have diverse hairstyles and chemicals that suit their hairs with regards to the environment they find themselves. Borrowing an aspect of western hairstyles is not wrong entirely but should conform to local way of dressing.



Source: (Tetteh, 2006)

Figure 1. Duafe Symbol.

2.1.2. Dwannimen (Ram's Horn)

The Ram's horn (*Dwannimen*) is one of the commonly used symbols among the *adinkra* in the local cloth production of the *Ashanti*. According to oral tradition, the ram's horn symbol represents concealment, humility, strength, wisdom and education. The strength of the ram is in the horn. Adom, D et al. share similar views concerning the symbolism of the ram's horn but their interpretation only concentrate on the humility and strength [3]. When it comes to struggle and fighting, the ram is capable of fighting fiercely its enemy but submissively humble it's self towards the slaughterhouse. The philosophical message in the behaviour and nature of the ram, indicates that individuals, especially leaders and those occupying high positions can be powerful, strong and influential, but should have some sorts of consideration attached to their operations or activities in the society.

This however, teaches everyone to learn humility irrespective of their background and affiliation to people in high positions. People need to cultivate the habit of humility irrespective of how powerful and influential they are in the society.



Source: (Tetteh, 2006)

Figure 2. Dwannimen Symbol.

2.1.3. Mako Symbol (Pepper)

Mako as an *adinkra* symbol is a shortened form of the Akan proverb "*Mako nyinaa mpatu mmere*," literally "All peppers (presumably on the same branch) do not ripen simultaneously."

This proverb teaches the greater ones to help the less endowed with the implicit comprehension that fortunes could reverse so that they would also need someone's help. As the Akan say, "*mmere dane*," literally, "Time changes" - so any advantage one may have now, may not stay forever. "*Mako nyinaa mpatu mmere*" could also be an exhortation or encouragement to those behind to strive for advancement and not resign to fate. That someone has attained greatness shows that it is attainable and at all cost possible. Undoubtedly, some may shoot ahead first but eventually others can catch-up; eventually all the peppers will ripen.



Source: (Tetteh, 2006)

Figure 3. Mako Symbol.

2.1.4. Sankofa Symbol

This symbol appears in two different forms, but the commonly used one represents a bird turning back to fetch or pick something from the back or behind. This symbol is widely employed in *adinkra* cloth production. In the literal sense, the motif or symbol depicts a message of ‘return and get it’, ‘learning from history’ or ‘go back and fetch’. The *Ashanti* embrace this symbol so much for the message it carries to those willing to learn. In the symbolic perspective, it is not a mistake to rectify ever-committed wrongs. Moving forward, learning from experiences is a better phenomenon to build and prepare for future opportunities. The meaning of the *sankofa* symbol is not far from the adage; ‘better late than never’. In the *Ashanti* local dialect, it says, “*se wo were firi na wo sankofa a yennkyi*”. However, this implies no taboo to fetching or returning to pick something one has forgot or rejected with or without apparent reasons. Commenting on the *sankofa* symbol, Adom, D et al. consider its symbolic nature as reawakening of the *Ashanti* of their experiences, values, traditions and cultural practices that once elevated the *Ashanti* kingdom above some other tribes in Ghana [3].

According to the same authors, offences can be humbly corrected to foster peace and tranquility in the society. The message of the symbol is applicable in marriage, business (employer and employee relationship), politics and all matters involving peaceful human relations where mistakes and offences are not far from happening. The *Ashanti* (*Akan*) strongly have faith in their ancestors and always ready to emulate and follow the right paths and experiences laid down by the old generation [28]. Consultation with the aged for wisdom is practiced by the *Ashanti*. In the contemporary living, abandonment of one’s good and treasured culture for foreign values and customs that have little or no better influence on the local populace is considered misleading and a stark deviation of peoples’ heritage [30].



Source: (Tetteh, 2006)

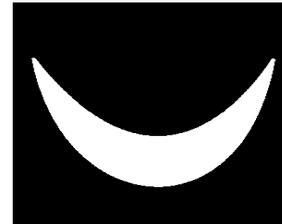
Figure 4. Sankofa Symbol.

2.1.5. The Moon (Osrane)

The moon (*osrane*) forms part of *adinkra* symbols with the symbolic interpretation as patience and confidence as expressed by [31].

Contemplating on the moon as *adinkra* symbol, Yanka, K relates that the *Akan* communities in the olden days were dominated and ruled by women because of their attributes [32]. The *Ashanti* believe that women possess qualities of patience, faithfulness and humility as factors that necessitate societal and national governance and development. Currently, in the enstoolment discourse among the *Akan*, the queen

mother plays keen role for the enstoolment and distoolment of kings and chiefs. Philosophical lesson deduced from the symbol indicates the influence of women in the society. Women are hospitable, faithful, generous, charming and most of all national development greatly depends on them. The qualities numerated earlier imply that empowering women in to high positions and offices are the means to check and control corruption in society [28]. The *Ashanti* believe that women in leadership positions are morally upright and righteous. This has raised much concern to offer necessary protection to women both at home and national levels.

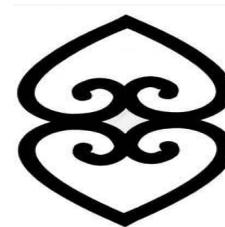


Source: (Tetteh, 2006)

Figure 5. Osrane (The Moon).

2.1.6. Asase ye Duru (The Earth Has Weight)

Asase ye duru literally means “the earth is heavy or has weight” [11]. The earth is always ready to hold anything that falls from the sky without complaining. It is asserted in the *Akan* traditional setting that when the sky is exhausted of carrying its load, it drops them down to the earth. An interesting aspect about this assertion is that, the sky feels the earth has nothing to worry about but rather satisfied always. Symbolically, *asase ye duru* stands for divinity, providence, power, wealth and authority [26]. In the philosophical sense, it is believed all powers come from the earth. This concept admonishes people living on the earth to be vigilant and to live beyond reproach since there are gods watching and recording the acts of the inhabitants on the earth.



Source: (Tetteh, 2006)

Figure 6. Asase yeduru (“Earth weight”).

2.2. Evolution of Suits Development

The origin of suit is specifically not known. The first designers who introduced this craft of sewing still remain anonymous. It is also uncertain as to where the earlier designers obtained ideas for producing suits and jackets. Researches reveal that the first lounge suit became popular in the middle of nineteenth century, which means there had been several developments until this particular era. Suits have over the years designed for noble individuals (men)

especially those from the royal families in the Great Britain. They are clothes or garments that symbolise manhood and entail beauty, dynamism and the qualities that genuinely define the concept of a man [33]. Suits have been in use for many centuries and have experienced different changes regarding style, fabric and functions. Despite all these, the prime meaning and philosophical core of their production remain same [33].

The Great Britain is the home of tailored suits because finer woollens and worsted fabrics for customised works are made in England till today. British tailored suits have distinctive characteristics which make them fit well than suits from any other country. The padding of the shoulder through to the sleeve head, chest, seams and hem of the suit are the sole influence of accurate and perfect fit [33].

Italian suits also came into the scene with different style effects but were not the same as the British suits. Neapolitan tailoring (Italy) employs softer fabric than that of the Britain. Padding was not done in most cases throughout the fabric but rather half way the garment. The sleeve head of Italian suit is not raised up as that of the Great Britain. Italians employ the shirt-sleeve style for fixing their suit sleeve. The shaping of the side seams is also not done close to the body [33].

Looking at the regional variations of tailored suits, American first tailored works appeared in the 1920s and however became popular in the 1950s with its own features. American suit has the shoulder line extended above the shoulder bone and this does not allow the crown (sleeve head) to lie exactly on the bone and as result, makes the sleeve pull, or fall a little from the shoulder bone. Suits made in America are somehow 'baggie' with the shaping not definite as that of the Great Britain [34].

History of suits is easily analysed considering its decade developments. Modern suits on the world market emanated from the ideas and inspirations of the early trends. Social, economic and cultural settings and occurrences of the past decades are the main contributors that influenced the current trends of suit manufacture.

Men fashion in the 19th century witnessed a major turning point in respect of style and fabric selection. In the Western world, this was the period of climaxing the Victoria era which gave rise to a new trend for men's clothing. They again write that men's fashion started experiencing different changes that could make men appear good and presentable at all occasions [34].

The nineteenth century era experienced the transition of Victoria frock suit to sack suit. A common characteristic of this period was the wearing of three-piece suits, which comprised a sack with a matching waistcoat or vest for men. Using contrasting trousers also became fashionable. Another way of wearing suits then was using same fabric for both jacket and trousers (pants). However, contrasting waistcoat or vest was popularly worn under the suit. Trousers or pants for jackets were made ankle high with turn-ups or cuffs. Introduction of fullness such as pleats, darts, creases and tucks were very common at the back and front sections of men's trousers and skirts.

Production methods of suits were subject to strict rules and people were punished for breaking specific dress code rules. Social and cultural factors helped eliminate the aforementioned rules during the middle of the century. The 1910s suit and jacket for men and women appeared similar to the former ones [34]. The only variation was that, during this period, men of the middle and working class added caps to complement their dressing.

The World War I affected fashion trends and as a result, fashion remained static, which effected conservatism and practicality. The aftermath of the war came the use of short jackets (influenced by military uniforms) with either two or three buttons. The early 1920s encouraged the wearing of long tailcoats and pinstriped suits. The choice of fabric colour, tie and shoes were all favoured in the same era. Fashion trend during World War I was characterised as re-appropriation of clothing associated with the war, but ended up differently. Designers of suit later resorted to narrow revers (lapels) and slim or straight trousers. Single-breasted jackets were worn on double-breasted waistcoat. The use of hats was class-coordinated [34].

The 1930s suits experienced a slight change of the 1920s as many people wanted to look popular in terms of clothes they wear. Notwithstanding, constructional processes of suits became flexible to satisfy large scale production [33].

The 1940s and 1960s did not witness any major changes in constructional methods. Suit produced within these periods had inspirations from early developments. Brighter colours were introduced into suit manufacturing, as people needed very stylish clothes for disco in the 1970's and 1980's respectively. Suits in early 2000 appeared in pastel colours, very short and were associated with vent openings at the back. Buttons were either two or three and could match any trousers [33].

A critical look at the suits and jackets developments reveals that the current suits on the market are inspired by the old trends. Old and modern ideas for suit manufacturing have remained similar just that the 21st century trend encourages brighter colours than before. Closed-fitting styles are also common these days [34].

Although women's suits may not date back to the 1600s the way men's do, they nevertheless have a colourful, boundary-pushing history. The first notable appearance of a woman making a man's suit her own was in 1870 when actress Sarah Bernhardt began wearing her "boy's clothes" in public. At the time, a woman wearing a man's suit was scandalous, but this controversy did not keep her from further challenging gender roles [33].

The female suit saw a brief lull in popularity after the Second World War as many sought a return to traditional domestic roles after the mass influx of women into the wartime workforce. Christian Dior's "New Look" embraced the 1950s housewife look with nipped waists and full skirts. But by the 1960s, the suit was back in full force as an unprecedented 40% of women had joined the workforce. This decade saw many watershed moments in equality with the Equal Pay Act of 1963, the Civil Rights Act of 1964, and a Presidential act

banning discrimination based on gender in 1967. The sixties also witnessed Andre Courreges' reintroduction of the suit into elegant day and evening-wear [34].

By the 1980s, the percentage of women in the workforce had grown to over 50%, and the decade became known for the iconic "power suit". With Giorgio Armani championing androgynous shoulder pads and the over-sized jacket silhouette, the stereotypical look for women in business was born [35].

In 1993 trailblazing Senators Barbara Mikulski and Carol Moseley-Braun led the charge to overturn the ban on women wearing trousers on the Senate floor. It is hard to imagine that as little as 25 years ago a woman could have been expelled from Congress for wearing pants [34].

2.3. Theoretical Framework of the Study

The study employed creativity and aesthetic theories. The creativity theory as propounded by Vygotsky (1968) underscores the ability to improve on established ideas into new ones and to integrate new borrowed ideas into previously organized systems or situations. Vygotsky further explains creativity as a way by which new and existing ideas can be combined in a different form to meet contemporary trend. This theory is relevant to the study because it serves as a tool to comprehend the importance of revisiting an existing concept in a more creative phenomenon to meet or solve contemporary issues.

Aesthetic theory by Alexander Gottfried Baumgarten

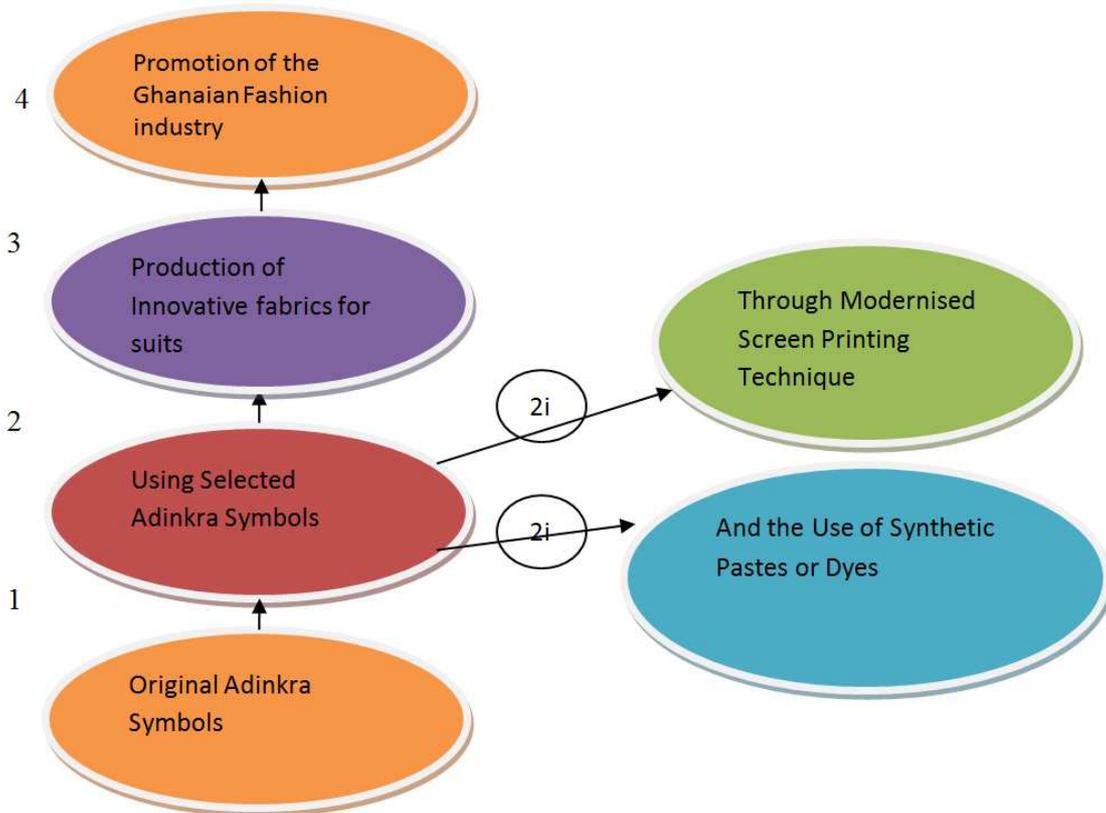
(1714-1762) and as expounded by scholars such as Immanuel Kant, Gustav Theodor Fechner and Theodor Adorno (1990) was also used.

This theory according to Baumgarten and Fechner lays emphasis on beauty as the fundamental requirement by which inventions and innovations are appreciated within a particular social context.

Immanuel Kant states that aesthetic implies science of beauty and appreciation of beauty. Adorno explains aesthetic as beauty and functionality of inventions and innovations as the key factors responsible for acceptance. Aesthetic theory is important for this study because it highlights the need to attach beauty to new creations and innovations in order to satisfy the taste of the people. The inculcation of creativity and aesthetic theories cannot be underestimated since the acceptance of new products largely depends on the ability to outsell its existing concept.

2.4. Conceptual Framework of the Study

From the conceptual framework as diagrammatically outlined, it can be deduced that there is the need to promote the Ghanaian fashion industry through the use of traditional symbols. In an attempt to build the relationship between the dependent, independent and the intervening variables, the study employs the original *adinkra* symbols in a selective manner for the production. Screen-printing technique and application of synthetic dyes are seen as catalyst for the production of innovative fabrics and suits.



Source: (Researchers' Construct, 2021)

Figure 7. Conceptual Framework for the Study.

3. Materials and Methods

The study employed qualitative design but technically, the whole concept was about studio-based research and as a result relied on studio activities for executing the project. Mills, M. C believes that studio work or activity entails the application of techniques, tools, materials and aesthetic analysis to obtain new dimension of knowledge or ideas [36].

Tools, equipment and materials used included: cutting shears, curves, tape measure, sewing machine, worked tables, electric iron, screens, dyes or pastes, cotton fabric and sewing threads.

3.1. Production Techniques

The production of the office suits was carried out in three major stages. The first stage involved the collection of some *adinkra* symbols for the fabric production while the second and the third stages had to do with the pattern making and the sewing of the suits respectively. The symbols were chosen based on their meaning and association in respect of female characteristics and aspirations in life. However, the symbols were used as motifs to make several compositions on paper. The compositions on the paper led to the production of the fabrics (screen-printing technique).

3.2. Production Stages

Stage 1: Fabric Production (Sketches and Compositions of the Symbols)

In all, a total number of three (3) symbols were employed as motifs for making the fabric through screen printing technique. In view of this, three different fabrics were made and used for the production.

The symbols were basically selected because of their association with females' attitudes and behaviours. For instance, *dwanninmen* (ram' horn) symbolises humility and strength, which is directly related to female natural character and behaviour. *Mako* (pepper) symbol forms part of the few selected symbols. It stands for inequality and uneven development. For most women, irrespective of the treatments they go through in life, they continue to strive for equal opportunities and developments in the society. Women are noted for their ability to learn from past experiences. It takes time for a woman to forget and abandon something important and this particular attribute associated with women influenced the choice of *sankofa* (Return and get it) symbol. The arrangements below outline the production procedures carried out by the researchers.



Source: (Tetteh 2006)

Figure 8. *Dwanninmen Symbol (Strength).*



Figure 9. *The Strength Cloth Composition.*

Medium: Computer Aided Design on Paper

Size: 14" x 16"

Source: Studio Work (Researchers, 2021)



Figure 10. *The Strength Fabric.*

Medium: Screen Printing on Fabric (CAD)

Size: 14" x 16"

Source: Studio Work (Researchers, 2021)



Source: (Tetteh, 2006)

Figure 11. *Mako Symbol.*



Figure 12. *Equality.*

Medium: Computer Aided Design on Paper

Size: 14" x 16"

Source: Studio Work (Researchers, 2020)



Figure 13. *Equality Fabric.*

Medium: Screen Printing on Fabric (CAD)

Size: 14" x 16"

Source: Studio Work (Researchers, 2021)



Source: (Tetteh, 2006)

Figure 14. Sankofa Symbol (Knowledge).

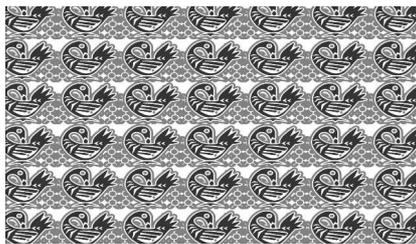


Figure 15. Knowledge Fabric Composition.

Medium: Computer Aided Design on Paper
 Size: 14" x 16"
 Source: Studio Work (Researchers, 2021)

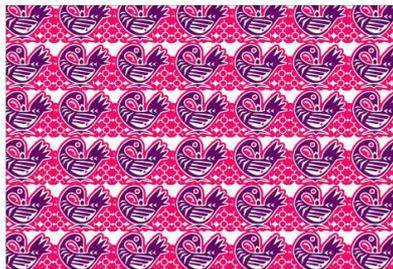


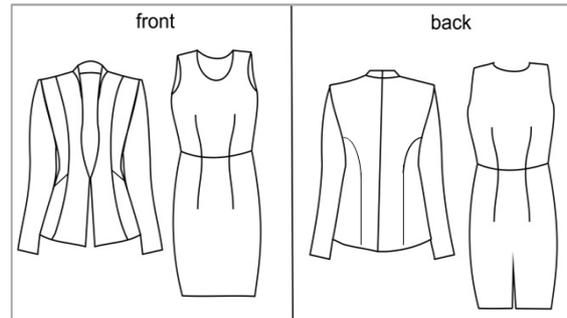
Figure 16. Knowledge Cloth.

Medium: Screen Printing on Fabric
 Size: 14" x 16"
 Source: Studio Work (Researchers, 2021)

Stage 2: Presentation of the Suit Styles, Pattern Production and Finished Work

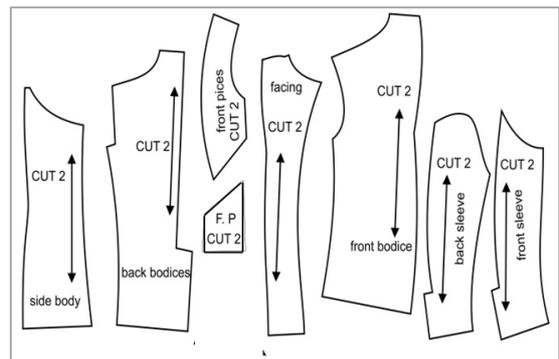
This section of the production processes presents the various suit styles together with patterns and the finished works in a systematic manner. For easy identification of the styles, different names were assigned to them. The names include African Queen, Perfect woman and Smart look suits respectively. The source of inspiration for the African queen suit emanated from current trend of suits worn by young ladies in the banking sector. On the other hand, the Perfect woman suit was inspired by female legal workers especially lawyers. The smart look suit idea and inspiration also came from the way female secretaries in the public and private firms wear their suits these days. The nature of the suits makes them appear smart and attractive.

A. African Queen Suits



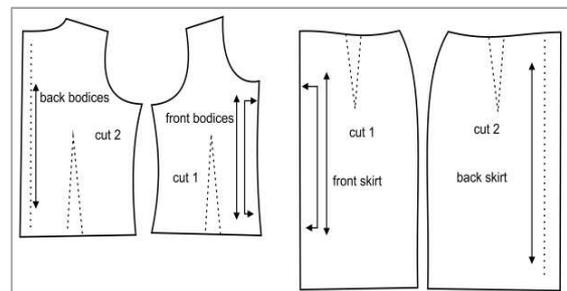
Source: Studio Work (Researchers, 2021)

Figure 17. African Queen Suit.



Source: Studio Work (Researchers, 2021)

Figure 18. African Queen Suit Patterns.



Source: Studio Work (Researchers, 2021)

Figure 19. African Queen Inner Dress Patterns.



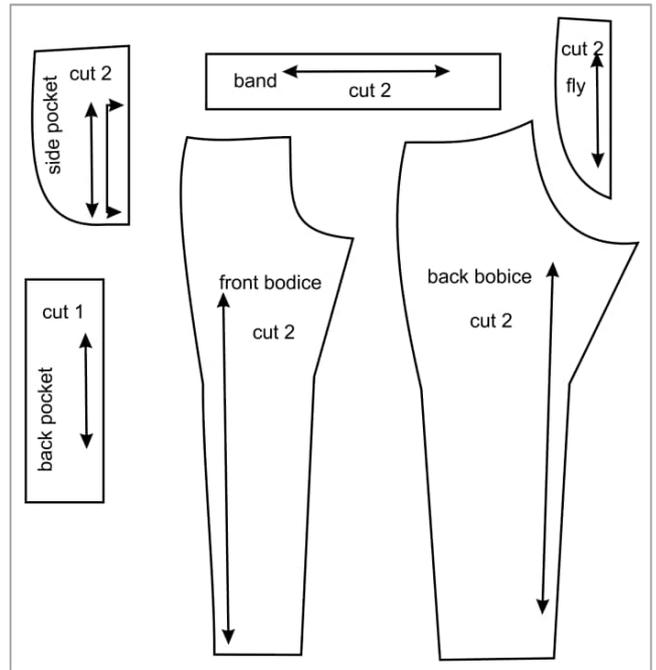
Source: Studio Work (Researchers, 2021)

Figure 20. African Queen Suit (Front).



Source: Studio Work (Researchers, 2021)

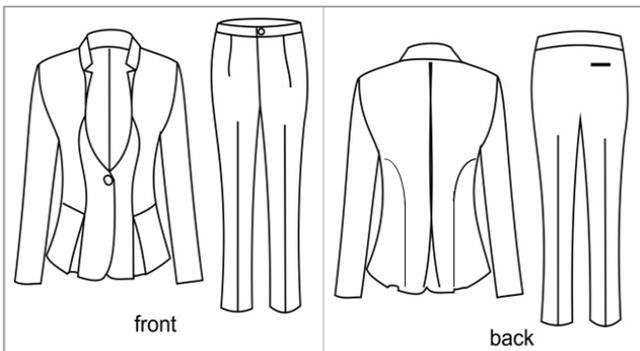
Figure 21. African Queen Suit (Back).



Source: Studio Work (Researchers, 2021)

Figure 24. Perfect Woman Trousers Patterns.

B. Perfect Woman Suit



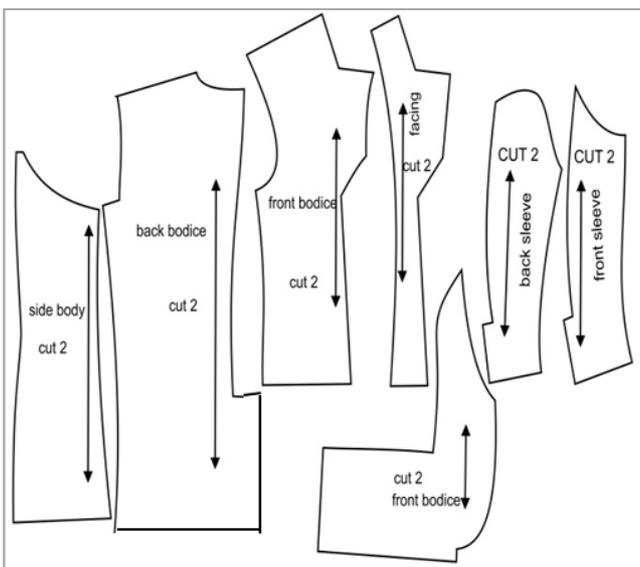
Source: Studio Work (Researchers, 2021)

Figure 22. Perfect Woman Suit.



Source: Studio Work (Researchers, 2021)

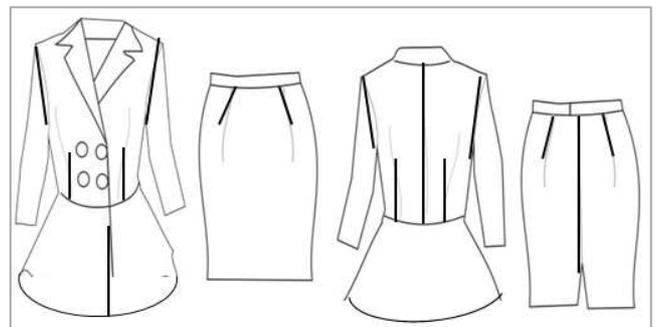
Figure 25. Perfect Woman Suit (Back and Front).



Source: Studio Work (Researchers, 2021)

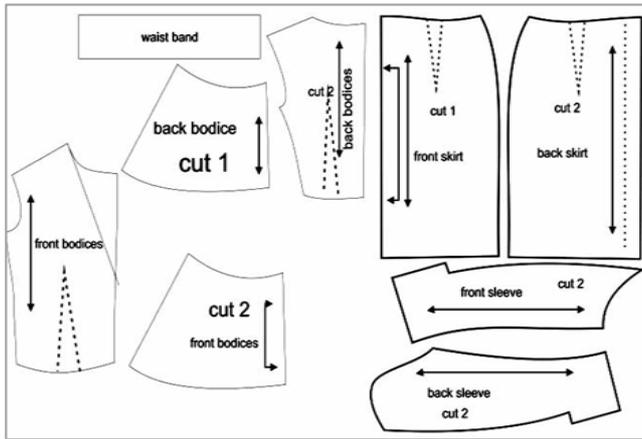
Figure 23. Perfect Woman Suit Patterns.

C. Smart Look Suit



Source: Studio Work (Researchers, 2021)

Figure 26. Smart Look Suit.



Source: Studio Work (Researchers, 2021)

Figure 27. Smart Look Suit Patterns.



Source: Studio Work (Researchers, 2020)

Figure 28. Smart Look Suit.



Source: Studio Work (Researchers, 2021)

Figure 29. Smart Look Suit.

4. Results and Discussion

This project is considered unique by the researchers in the sense that previous studies related to this research mostly concentrate on the symbols without necessarily putting them into physical products. A close related study to this research was carried out by Opoku, M et al. in 2019. Even with that study, the researchers redesigned some of the symbols for the production of men's suits, and the results of that study could not exhibit the original features of the *adinkra* symbols.

Although, the two studies employed studio based approach, the former used Batik technique as compared to the latter which employed Screen-printing technique in order to maintain the tradition associated with the symbols.

The discussion of the suits is specifically based on the individual style or design specifications. Notwithstanding, the parameters used to analyse the garments (suits) include the nature of the revere (lapel), collar, number of buttons, position and type of vent, constructional or style lines and the fabric used. The philosophy behind the creativity and aesthetic theories helped in choosing the colours for the fabrics, motifs arrangement and the suits' styles. Some recommendations have also been outlined to ensure proper care and maintenance of the suits.

4.1. The African Queen Suit (Figures 20 and 21)

The African Queen suit is produced with the 'strength' fabric. The fabric is designed with *dwanninmen* symbol (lamb's horn) which symbolizes strength. The main colours are dark red and blue-black printed on pink background. The red colour represents aggressiveness and enthusiasm which portray the character of women in their quest to attain recognition in the society. Even in their fight to acquire high positions and equal opportunities, women are also cool in terms of attitude and this attribute is in consonance with the meaning of the blue-black colour.

Considering the features of the style, it comes with a built-up neckline, princess line (from the shoulder to the jacket hem), long sleeve with vents and back centre line incorporated into a vent opening. The style can be used for parties, church service, office wear and other official functions.

The jacket together with the inner dress should be treated with care. Constant washing and ironing are not advisable since that can destroy the colourfastness of the fabric.

4.2. The Perfect Woman Suit (Figure 25)

The Perfect Woman suit is designed in a close fitting style. The fashion fabric for the construction is solely an *adinkra* cloth as redeveloped through screen-printing technique. The style comes without a revere (lapel) and has one button closure around the waist. On the other hand, it has a princess line incorporated into a dart, and this dart however runs from centre front of the jacket to the hem line. The princess line, while ending at the hem of the jacket, is designed to create inverted pleat just for functional and decorative purposes of the style. All the features mentioned are attributed to the front

section of the jacket. The back view comes with vent opening at the centre back. Again, the style has a mandarin collar which is somewhat high in order to keep the wearer warm. The jacket has long sleeve with vent opening at the hem.

The fabric used for the perfect woman suit is the fabric titled “Equality”. This fabric is designed with *mako* symbol (pepper) representing inequality and uneven development in the society. The symbol was chosen in connection with women’s aspirations and the fight for equality among people in the society. The colours used are red and blue which represent aggressiveness and peace. Looking at the style, it falls in line with current trend of female suits on the market. The suit apart from its official uses can be worn at other special occasion such as parties, wedding, and church services. The uses of the suit as mentioned appear more contemporary as compared to the ordinary uses of *adinkra* cloths. Maintaining the perfect woman suit requires proper handling and care. This suit does not require frequent washing and ironing. Dry cleaning and ironing from the inside is highly recommended.

4.3. The Smart Look Suit (Figures 28 and 29)

The smart look suit is designed with the fabric tiled “knowledge”. *Sankofa* symbol constitutes the motif in the fabric. The name of the fabric and the meaning associated with the symbol has something in common. The fabric is printed with red and violet colours. Violet colour suggests imagination and spirituality while red in this domain represents energy and strength. Undoubtedly, all these attributes conform to female characters and aspirations. The jacket front has revere (lapel) which extends to the natural waist and this effect calls for one button closure. Again, the style has long sleeve and bespoke collar. The back section has no vent opening but a style line at the centre back. The jacket is complement with a skirt which can be taken to parties, churches and other equally important functions. Proper care is required to maintain the suit for longer period. It can be washed and iron but should be done diligently and not on frequent bases.

5. Findings and Recommendations

The findings revealed that *adinkra* cloth, if redesigned into innovative fabrics can withstand major tailoring processes such as pressing, fusing and moulding. What this means is that, the original *adinkra* cloth is not capable of undergoing much of the tailoring processes due to the characteristics of the cloth.

Looking at the results, it was established that employing screen printing technique for producing *adinkra* cloth has the tendency to improve the characteristics of the original cloth; thereby making it possible to withstand different tailoring processes. The fabrics produced were able to undergo tailoring processes because after printing, they were subjected to strong heat to permanently fix the dyes. Again, a medium weight fabric (substrate) with little elastane finish which is good for tailored garments was used for the printing.

On the other hand, the concept of employing synthetic dyes rather than the conventional vegetable dyes made the process of production faster and more effective.

The existing *adinkra* cloth cannot be laundered under normal circumstances but with the improvement rendered to the cloth, the new fabric can be washed with soft or mild detergent.

Regarding the application of creativity and aesthetic theories, the study revealed that old concepts can be modified and reinvigorate to meet or serve modern needs. However, this phenomenon tends to validate and authenticate the theories as still relevant in the practice of art.

The study recommends effective education on the patronage of locally made clothing with indigenous symbols in order to promote the traditional clothing industry.

It will be prudent to accord the traditional clothing industry the support it requires to keep abreast with modern technology.

Adinkra symbols should be employed in the production of children wears just to help maintain the culture associated with the symbols among the younger generation.

6. Conclusions

The study focuses on the use of *adinkra* symbols as motifs for innovative fabric production and construction of female fashionable suits. This phenomenon was influenced by the conventional use of *adinkra* symbols for funeral cloth among Ghanaians, precisely the *Akan*. In spite of the rich meaning the symbols convey, they are however limited to funeral cloth among the elderly people. It had never been possible to use the original *adinkra* cloth for fashionable wears due to the characteristics of the cloth. Several tailoring processes appear difficult, as the cloth cannot withstand pressing, moulding and fusing, which are key factors in tailoring.

After identifying these challenges, screen printing technique was devised to create innovative fabrics with some *adinkra* symbols. Synthetic dyes or pastes were employed for printing the fabrics. Interestingly, the fabrics emerged better with desirable features than the original *adinkra* cloth. The sampled fabrics produced proved beyond reasonable doubt that washing, sunlight and more importantly, pressing, fusing and moulding have no negative effects on the fabrics. Different suit styles were selected and patterns made for them before cutting and assembling.

The results from the study revealed that it is possible to use *adinkra* symbols as motifs, screen printing technique and the application of synthetic pastes for producing innovative fabrics for the construction of female fashionable suits.

Authors Contributions

Conceptualization, pattern making, suits production and resources– Sarah Baiden; production of fabrics, writing-review, discussion and writing-original draft– Moses Opoku; methodology, editing and proofreading - Josephine Aboagyewaa-Ntiri. The authors have read and agreed to the published version of the manuscript.

Conflict of Interest

The authors declare no conflict of interest.

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