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## Evaluation of Sourcing Competency in Sustainable Garment Construction

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## Abstract

**Purpose:** To investigate the competency of the Ghanaian fashion designer in sourcing fabrics and notions.**Methodology/Design:** The study employed a qualitative approach, using interviews, focus group discussions, and observations to collect data along thematic lines for analysis. A purposive sampling technique was adopted to select a total of thirty (30) fashion designers, with fifteen (15) each from the Ghana National Tailors and Dressmakers Association (GNTDA) branches in Dekyemso in Kumasi, and Odumase Zone A in Sunyani.**Findings:** Material mismatch, poor finishing, and low quality are common issues in garment production, attributable to inadequate quality assurance systems. Also, difficulty in selecting suitable fabrics and reliance on non-eco-friendly materials result in environmental and societal waste.**Practical and Social Implications:** Essential skills in sourcing garments are crucial for designers to ensure efficient production, reduce waste, and promote sustainability. By focusing on quality sourcing, sustainable procurement, and compliance, designers can empower marginalised groups and increase accessibility to ethical manufacturing.**Originality:** This work is novel and fills a substantial research gap in the existing literature. It offers a unique perspective, contrasting with other significant studies on sustainable sourcing in the fashion sector that primarily assess sourcing expertise for garment making. While current research focuses on the actions organisations take and the challenges they encounter, this study rigorously assesses the competencies necessary for efficient, sustainable sourcing in garment production.

## Keywords

Quality garments, fabrics and notions, sourcing, competency, sustainability, fashion designers.

## 1 | INTRODUCTION

Global demand for high-quality clothing is driving garment manufacturers to adopt innovative approaches to meet consumer needs. Fashion firms and designers must improve their operations to remain competitive as consumers seek greater value at lower prices (Honu et al., 2020; Rausch & Kopplin, 2021; Chenet et al., 2021; Benyah et al., 2024). This trend underscores the need for sustainable fabric and notions sourcing in Ghana's fashion sector to ensure high-quality garment construction. However, there are several obstacles to sustainable sourcing, including inefficient procurement procedures, limited access to premium materials, and financial constraints (Cadigan, 2014; Manickam & Duraisamy, 2019; Chenet et al., 2021). Fashion designers must overcome these obstacles to become more competitive while upholding sustainability standards.

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Although sustainable sourcing is receiving increasing attention, little is known about Ghanaian fashion designers' approaches to acquiring fabrics and notions. Relatively few studies examine the specific tactics employed by fashion designers in Ghana (Benyah et al., 2024), whereas most current research focuses on broader sustainability issues in global fashion supply chains (Rausch & Kopplin, 2021; Chenet et al., 2021). Furthermore, prior studies have not adequately investigated the skills required of designers to successfully navigate the challenges of sustainable sourcing (Cadigan, 2014; Manickam & Duraisamy, 2019). This lacuna in the literature necessitates a thorough analysis of Ghanaian fashion designers' sourcing methods to create a framework for sustainable garment manufacturing. The ineffectiveness of Ghanaian fashion designers in producing high-quality garments persists and is attributed to multiple factors (Amegbanu & Mpuangnan, 2023; Ahorsu & Eyam, 2023). For instance, in the view of Ahorsu and Eyam (2023), the implementation of a quality control system is critical to improving the quality of constructed garments. This has resulted in an unfortunate situation in which studies assessing the competency of fashion designers in sourcing fabrics and notions to construct quality garments in Ghana are scarce, a situation this study seeks to address. Having the required competency in sourcing fabrics and notions can improve the quality of garment construction by the Ghanaian Fashion Designer (Adikorley, 2013; Anyigba et al., 2023).

This study examines the sourcing practices of Ghanaian fashion designers and their implications for the manufacture of sustainable garments. Furthermore, it contributes to the growing body of research on sustainable fashion in developing nations by highlighting key sourcing issues and best practices. Additionally, it provides helpful information to help manufacturers, designers, and legislators make well-informed decisions regarding the use and acquisition of sustainable materials. It is anticipated that the results of this study will significantly impact policy-making, practice, and literature. By providing concrete data on sustainable sourcing practices in a developing fashion market, the study advances prior research from an academic perspective. In practice, it provides recommendations for garment makers and fashion designers to optimise their purchasing practices for sustainable development in the fashion industry. The study further advances environmentally friendly methods in Ghana's fashion industry, with broader societal implications. At the policy level, it could influence legislative frameworks that promote ethical fashion and sustainable sourcing.

This manuscript is organised as follows: In Section 2, pertinent research on sustainable sourcing in the fashion sector is reviewed, with a focus on key strategies and challenges. The study's research approach is described in Section 3. The results are presented and discussed in Section 4, with special attention to the implications for Ghanaian fashion designers. The study concludes in Section 5 with recommendations and future research objectives.

### **1.1| Fabrics and Notions Sourcing**

Sourcing refers to the process of selecting how and where to procure finished goods or components (Textile Today, 2013; Tang et al., 2018; Mancini et al., 2021). Garment construction will involve selecting the fabrics and notions, and the production or finished-goods vendor with the lowest cost, while maintaining the required level of quality and service. Sourcing fabrics and notions, and sustainable garment production, have never ceased to be interrelated in the apparel industry globally (Jia et al., 2020). It almost seems impossible to make a complete choice of garment without considering how sourcing is undertaken (McNeill & Moore, 2015; Anner, 2020; Arrigo, 2020). This provides solid support for several studies that highlight the role of sourcing fabrics and notions in facilitating high-quality garment construction (De Sousa Jabbour et al., 2023; Bocken & Geradts, 2020). An existing gap that

this study is to bridge. Along the global value chain for clothing production, mass production facilitated domesticating access, reduced costs, and expedited innovation. Purchasing textiles and ideas remains a powerful way to reduce the environmental harm caused by mass production (Akbari et al., 2020; Anyigba et al., 2023). Custom-made clothing is the primary feature of Ghana's garment production market (Nketsiah, 2020). This marketing strategy can help with some environmental and sustainability issues (Arora, 2023; Togobo et al., 2024). Therefore, the ability to source textiles and ideas for sustainable garment manufacturing is essential for Ghanaian fashion designers.

### 1.2| Garment Quality

The concept of quality has been described as the standard by which something is judged against other items of a like kind, and as the degree of excellence of something (Conole, 2016; Allen-Duck et al., 2017). Conventionally, garment quality is perceived as originating from subjective/user-based and objective/product-based dimensions (Keller, 2017). For the fashion designer to deliver a quality garment that meets or exceeds the evaluation criteria of these perceived standards, fabric and notions must be sourced appropriately. This includes an intentional attempt to deploy a quality assurance system that is influenced by sourcing process activities. Hence, the entire sourcing process activities are to ensure quality is not just in product performance in the early usage, but when the product can stand the test of time, when the long-range goal of the product is fulfilled, thereby achieving its intended purpose and contributing to sustainability (Juran & Gryna, 2001; Luan et al., 2022). Many studies have confirmed a strong linkage between sourcing and the quality of end products along the fashion value chain (Shen et al., 2020; Tarigan et al., 2021). For instance, Pongo et al. (2019) report that the quality of sourced indigenous textiles, coupled with poor construction techniques, led to the rejection of garments from Ghana. This resulted in the inability of the Ghanaian garment manufacturers to meet international quality standards prescribed under the Africa Growth and Opportunity Act (AGOA) of the United States of America government. In Keller's (2017) view, the quality of a product presents both challenges and opportunities. Quality poses a problem due to competing products and presents opportunities because it is what the market demands or purchases. Therefore, if local garment manufacturers are to transform the problem of quality into an opportunity, they must strive to improve the quality of their garments beyond that of competing garments from both local and foreign manufacturers by leveraging their competency in sourcing fabrics and notions.

### 1.3| Competency in Sourcing

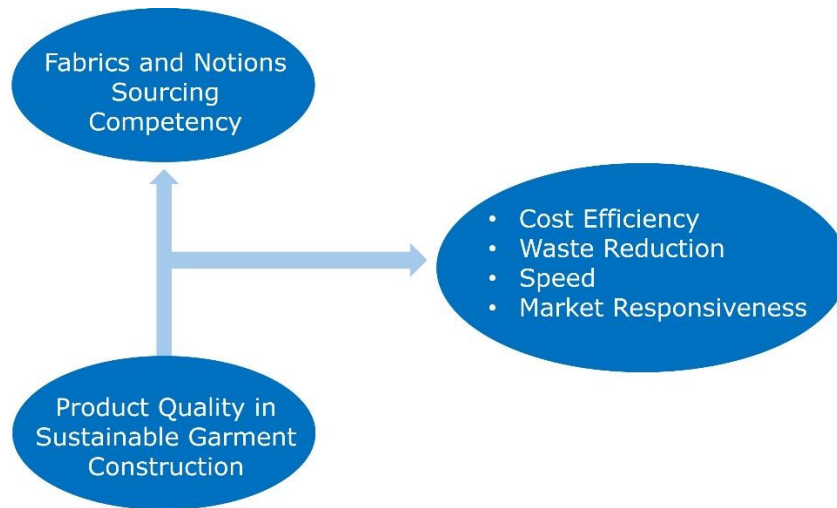
The ineffectiveness of Ghanaian fashion designers in producing high-quality garments persists and is attributed to multiple factors (Amegbanu & Mpuangnan, 2023; Ahorsu & Eyam, 2023). For instance, in the view of Ahorsu and Eyam (2023), the implementation of a quality control system is critical to improving the quality of constructed garments. Having requisite competence in sourcing fabrics and notions can improve the quality of garment construction among Ghanaian fashion designers (Adikorley, 2013; Anyigba et al., 2023). The ability to source materials, particularly in the fashion sector, has become a key factor in garment production. Fashion designers' ability to identify, analyse, and purchase appropriate fabrics and notions affects not only the quality and durability of garments but also the environmental and ethical impacts of their production (Kozlowski, Searcy, & Bardecki, 2018). Sustainable sourcing has become more popular in recent years due to concerns about textile waste, labour exploitation, and the use of synthetic materials.

Sourcing Competency entails more than the ability to identify resources; it also encompasses supply networks, material properties, environmental impacts, ethical considerations, cost-effectiveness, and other factors (Henninger et al., 2016). Traditionally, in many developing countries, such as Ghana, fashion education and practice have focused on sewing and design skills, often overlooking skills related to sourcing sustainable materials (Amegbanu, 2024). Designers cannot access eco-friendly supply chains, nor do they know enough about them, leading to bad fabric and trim choices. The rapid fashion model, the most common model in global supply chains, has fostered a culture of disposability, making it difficult for local designers to identify or prioritise more sustainable options (Niinimäki et al., 2020). A lack of competence among some designers leads them to rely on readily available materials in the local market. This could involve the use of inferior imported materials or low-quality textiles that have negative environmental impacts (Fletcher & Tham, 2019). Due to this lack of knowledge and incompetence, most of their products end up in landfills and contribute to upstream supply chains. Additionally, fashion professionals need to be aware of sustainable textile technologies and sourcing tools to make informed decisions (Shen, 2014). For example, existing databases and sourcing platforms that list environmentally friendly textiles, supplier tracking systems, and ethical trading frameworks have become necessary for modern fashion companies.

In Ghana, fashion groups such as the Ghana National Tailors and Dressmakers Association (GNTDA) have a significant impact on how professionals work, although members' skills remain underdeveloped (Glover et al., 2024). There have been successful collaborative training programs in various areas that have raised understanding of the circular economy, sustainable textile production, and ethical sourcing. These could be used as examples for Ghana's fashion industry (Nkrumah et al., 2023). Research demonstrates that supporting local textile value chains and integrating traditional textile skills with contemporary eco-friendly methods can help protect both culture and the environment (Fletcher & Tham, 2019). In general, although the global conversation about sustainable fashion is still evolving, there is a clear need to base it on the development of local sourcing competence. This includes making it easier for designers to identify eco-friendly fabrics, assessing supplier reliability, considering the environmental impacts of fashion over time, and adopting circular methods of garment production (Nkrumah et al., 2023). Filling these gaps will be important for encouraging sustainable clothing construction and positioning Ghanaian fashion designers as key players in the pursuit of global sustainability.

#### **1.4| Conceptual Framework**

To emphasise efficiency and quality in sustainable garment production, the Lean and Agile Sourcing Model (Vitasek, 2016) and the Theory of Product Quality (Juran & Gryna, 2001) were integrated into the assessment of sourcing competency in garment production. Agile sourcing ensures responsiveness to market changes and innovation in sustainable materials, whereas lean sourcing focuses on waste reduction, cost-effectiveness, and long-term supplier relationships. Ethical supplier selection, cost-effective sustainability, market-trend adaptation, and adherence to labour and environmental norms are important aspects of sourcing competence. Furthermore, rigorous planning, control, and continuous improvement enhance product quality in environmentally friendly production, ensuring longevity, ethical compliance, and customer satisfaction. Through effectiveness, moral accountability, and continuous innovation, this integrated framework improves procurement methods and promotes sustainability in the clothing industry.



**Figure 1.** Authors' own construction of a conceptual framework, adopted from the lean and agile sourcing model (Vitasek, 2016) and product quality theory (Juran & Gryna, 2001)

The framework indicates the relationship between sustainable garment construction capabilities and operational advantages within the fashion industry. According to Kuncoro & Kusumawati (2021), selecting appropriate materials for a product may affect both the number of people who purchase it and their satisfaction with it. The core competencies comprise the textiles and notions sourcing competency, which is the ability to procure the materials and accessories required for garment production quickly and efficiently. The quality of this selection depends on the supplier's skill (Toufighi et al., 2024), and the process is dynamic, meaning it may evolve in response to market demands. This involves selecting appropriate fabrics, threads, buttons, zippers, and other materials required for production (Luisa, 2025; Patil, 2024). The mediating variable is the quality foundation that is sustainably supplied to a piece of clothing. In garment manufacturing, there is a need to maintain high standards of product quality and to adopt sustainable production methods. This entails the utilisation of sustainable materials, ethical manufacturing practices, and robust construction methods in garment production (Rahaman et al., 2024; Roy et al., 2024).

The dependent variables, which are the operational outcomes, are influenced by sourcing competency and quality construction practices. Operational outcomes identify four key benefits coming from robust sourcing competency and sustainable quality practices. These quality practices include cost efficiency, where respondents optimise material procurement and reduce waste, and as a result, help improve profit margins (Aziz Khan et al., 2024); reduction of waste involves minimising material waste through improved planning and sustainable practices, achieved by optimising sourcing and production processes to enhance efficiency and reduce time-to-client delivery (Surjit et al., 2024). Finally, market responsiveness, another quality practice, is the capacity of respondents to adjust swiftly to consumer demands and prevailing market trends. The sourcing competency directly contributes to operational benefits, which are based on sustainable, high-quality construction. This framework serves as a strategic model for fashion companies seeking to balance profitability and environmental responsibility while sustaining competitive advantages in speed and market adaptation.

## 2 | METHODOLOGY

A qualitative descriptive case study design was employed, using 30 semi-structured interviews and observations to assess how fashion designers source fabrics and notions for garment construction. Both the interviews and observations were guided by an interview guide and an observational checklist, which

were provided to participants several days in advance for familiarisation (DeJonckheere et al., 2019). Two pilot interviews with experts in fashion and textile design were conducted for reliability and validity. Both the interview guide, the observational checklist, and the schedule underwent some minor adjustments. Sending both the guidelines and the checklist, and providing detailed explanations, helped participants gain a clear understanding of what was expected of them and what they would be assessed on. The interviews lasted between 20 and 30 minutes, conducted in conventional and open-ended formats at the respondents' workplaces. Both participatory and non-participatory observation were used to study how fashion designers receive clients' orders, source the right fabrics and notions, and use them to construct garments. A special timetable was developed to accommodate this observation plan for participants. Between 1 and 3 participants were observed in a day, across their engagement with clients, from fabric and notions sourcing to final garment construction. The study lasted three to four months, and the time spent on each process depended on the client's order and on the respondent's prior experience with the respondent's processes. With participants' permission, the authors used both a camera and an audio recorder to record the interviews and observe the activities. All of the interviews were recorded and transcribed for analysis.

Also adopting the lean and agile sourcing model approach (Vitasek, 2016), the authors deduced six (6) sourcing guidelines. Thus, the purpose of the garment to be constructed, sources of fabrics and notions, cost of the garment, colour, quality assurance, and construction techniques are addressed to answer the research question: the competency of the Ghanaian fashion designer in sourcing fabrics and notions to construct a quality garment. Insights into current fabrics and notions sourcing practices among the selected fashion designers were also elicited using the earlier-mentioned guidelines, which served as the basic themes.

## 2.1| Sample

The target population for the study comprised fashion designers who are members of the Ghana National Tailors and Dressmakers Association (GNTDA) and who work in Sunyani Municipality (Odumase Zone A) in the Bono Region and in Kumasi Metropolis (Dekyemso Zone) in the Ashanti Region. The study's population comprised the GNTDA, which has an estimated membership of over 3,200 across Ghana (GNTDA, 2020). The Dekyemso Zone and Odumase Zone A branches of the GNTDA have 30 and 50 memberships, respectively (GNTDA, 2020). Dekyemso Zone and Odumase Zone A were selected because, according to Sim et al. (2018), a sample can be drawn from a population when its aims and objectives reflect the characteristics of the entire population. Hence, in this study, the zone groupings within the population (GNTDA members) across the country possess the same problem characteristics empirically identified as the other zones. Moreover, a non-probabilistic purposive sampling technique was used to select the thirty (30) members, that is, fifteen (15) each from the two zones, who were "Madams" and "Masters". The thirty (30) fashion designers were selected because they were members of the respective zones in good standing and were willing to be part of the study. According to Vignati et al. (2022), trainers are expected to transfer the knowledge they have acquired to their apprentices, who, in turn, will soon share this knowledge to preserve posterity (Training of Trainers).

## 2.2| Analysis

The study employed a qualitative method to assess fashion designers' level of competency in sourcing fabrics and notions to produce high-quality garments. NVivo 12, a program for analysing qualitative data,

was used for the thematic analysis. The data analysis was conducted in five steps, as indicated in Figure 2 (Akinyode & Khan, 2018). The analysis simplifies the questions and categorises the interview items based on pertinent theoretical features such as data logging, Anecdotes, vignettes, data coding, and thematic network. Data logging is the process of recording raw data from face-to-face interviews and observations. Anecdotes are instances in which researchers develop a comprehensive understanding of the data collected. Vignettes are a higher level of interpretation beyond mere description, a deeper understanding of the phenomenon, and the capture of themes. Data coding occurs when information is fragmented and classified into text to generate explanations and comprehensive themes. The thematic network organises subjects into three categories: basic themes, organised themes, and global themes (Crosswell & Beutel, 2012).



**Figure 2.** Thematic analysis steps. Adapted from Akinyode & Khan (2018) (This manuscript is published under the conditions of Creative Commons Licenses of CC-BY-NC-SA)

Themes were formed inductively based on the transcripts (responses from the interview) and deductively based on the published themes from the quality standards theory (Juran & Gryna, 2001) as well as existing sustainable fabrics and notions sourcing models (Tarigan et al., 2021; Katsaliaki et al., 2022; Brunet et al., 2020). The main themes generated were 'purpose of garment', 'source of fabrics and notions', 'type of fabrics and notions', 'colour choice', 'cost of production', 'constructional techniques', and 'quality assurance protocols' in line with research questions. Themes were subdivided into sub-themes, such as 'purpose of garment', and were divided into three sub-themes (casual, occasional, and formal garments). The source of fabrics and notions had two sub-themes (fashion designer-sourced and client-sourced). The theme 'type of fabrics and notions' had a sub-theme (eco-friendly fabrics). The theme 'colour choice' had many schemes (neutral, complementary colours, and others). Production cost had three sub-themes (low range, mid-range, and high range). Construction techniques had sub-themes such as quality assurance protocols during construction, with the following headings: pre-, during, and post-construction practices. This is shown in Table 1.

**Table 1.** Thematic Network Structure

Global Themes	Organising Themes	Basic Themes	Sub-Themes
Fabric and notions sourcing	Purpose	Intended use	Casual garments Occasional garments Formal garments
	Sources	Fashion designer source client source	Fabrics and notions
	Type	Eco-friendly fabrics and notions	Organic fabrics, recycled artificial fabrics, and notions, stainless steel zippers, self-made ribbons and buttons
	Colour	Scheme type	Neutral-based, Earth-toned, Monochromatic, Complementary
	Cost	Production cost	Higher range, Mid-range, Lower range

Quality assurance protocols for garment construction	Quality planning	Before production	Body measurement Pattern Preparation Fabric Preparation
	Quality control	During production	Fabric spreading layout cutting Assembling pieces and notions Pressing Neatening
	Quality improvement	After production	Fitting, packaging feedback

Source: Adopted from *Crosswell and Beutel (2012)*

### 3 | RESULTS AND DISCUSSION

#### 3.1| Demographic Data of the Respondents

The demographic data for fashion designers in the Dekyemso and Odumase zones A in Kumasi and Sunyani, respectively, cover the following attributes: gender, age, educational level, and years of professional practice (Table 2).

**Table 2.** Demographic Data of Respondents (n=30)

Variable	Variable category	Frequency (n)	Percentage (%)
Gender	Male	10	33
	Female	20	67
	<b>Total</b>	<b>30</b>	<b>100</b>
Age range (in years)	20-25	3	10
	26-30	13	43
	31-35	9	30
	36-40	3	10
	41 and above	2	7
	<b>Total</b>	<b>30</b>	<b>100</b>
Educational level	Primary	10	33
	J.H.S.	13	43
	H.N. D	3	10
	Degree	2	7
	Non-formal	2	7
<b>Total</b>	<b>30</b>	<b>100</b>	

Source: *Field survey (2023)*

Women are known for their dominance along the fashion value chain ([Majumdar et. al., 2020](#)), particularly in the production phase globally. Table 2 indicates that of the 30 respondents who participated in this research, a clear majority (20; 67%) were female, whilst the remaining 10 (33%) were male. The higher number of females relative to males indicates female dominance in the garment construction value chain in Ghana ([Barrientos, 2019](#)). It confirms that [Majumdar et al. \(2020\)](#) found that the entrepreneurial and employability opportunities within this value chain are not constrained by gender; hence, females take full advantage. Therefore, a fashion designer's competency in sourcing fabrics and notions is imperative for an enabling environment for female-led businesses to thrive. Furthermore, the age group with the highest number was 26-30 (43%), followed by 31-35 (30%), with 3 (10%) in the age brackets of 20-25 and 36-40. Only 2 of the 30 respondents are older than 41. The results show that most respondents are in their youth, consistent with Ghana's definition of youth ([Ibrahim, 2020](#)), and that

youth is characterised by exuberance, energy, vigour, and the ability to learn more quickly. This indicates sustained industry activity. Moreover, the findings on the highest level of education indicated that 23 respondents had a formal basic education up to the J.H.S. level before entering informal apprenticeship training. Of these 23 respondents, 10 have a primary education, and 13 have up to the JHS level. Respondents who had completed higher education up to the tertiary level were 5 out of the total respondents. Although 5, given the sector and demography, it is significant because it can help disseminate any formal support needed to reach them.

### *3.1.1| Respondents' Years of Professional Practice Experience*

All respondents have worked for many years as fashion designers and are therefore considered experienced in this study. The findings indicated that 25 of 30 respondents had more than 10 years of professional practice experience. The rest of the respondents had professional working experience spanning between 0-5 years (2) and 6-10 years (3). This level of experience indicates that most participants have expertise in various garment-making methods, making them experts in the field. Practical experience, knowledge, and long-term habits are relevant to garment making. However, quite significant because of the lack of sourcing competency among such experienced practitioners. The fact that highly experienced designers do not know how to source effectively indicates problems with the industry's training and operating systems, not merely a lack of exposure or practice. It shows that just because someone has been in the field for a long time does not mean they are proficient in sustainable or strategic sourcing, especially when it comes to choosing eco-friendly materials, ensuring purchases are ethical, and being transparent about the supply chain. This finding supports the study's claim that there is an urgent need to integrate formal, theory-based education in sourcing into both traditional fashion training and informal apprenticeship networks. Additionally, 5 of 30 participants had fewer than 10 years of experience; thus, their participation underscores the importance of supporting both ends of the professional spectrum: equipping senior designers with new skills and teaching new designers about sustainability from the outset of their training. The environmental effects make it clear that the industry risks continue to generate textile waste, rely on non-renewable materials, and employ unethical labour practices, unless sourcing practices are changed in a planned and educational way, regardless of how long someone has been in the business. Addressing this problem comprehensively can improve the quality of clothing and the fashion industry's role in Ghana's sustainable development.

## **3.2| Themes Presentation**

In this section, the global, organising, and basic themes are presented, following the research question that evaluates the competence of Ghanaian Fashion Designers in sourcing fabrics and notions to construct high-quality garments. The findings underscore the importance of sourcing fabrics and notions right to produce quality garments.

### *3.2.1| Purpose of Garment*

The study revealed that most respondents do not use the intended purpose of the garments to be constructed as a guideline in their sourcing. A substantial majority, representing 21, 18, and 20, respectively, responded negatively to the application of garment purpose relative to casual, occasional, and formal use cases. [Munasinghe et. al. \(2022\)](#) opined that the intended use case is one of the significant factors to be considered in sourcing fabrics and notions at the pre-design stage. Adding that the

envisioned application of the garment to be constructed must inform the choice of fabrics and notions, and their colouration. Another aspect of the intended use is the occasion and climate for which it will be worn. Contrary to this sourcing guideline, the majority of the fashion designers interviewed were emphatic that the purpose of garments should not be used as a guideline in sourcing. Responses such as;

*"What the garment to be constructed will be used for has no place in sourcing fabrics and notions. I simply go for just what is available and use them"* (interview\_FD001as\_purpose of garment).

*"If a customer places an order for a garment, it is for me to source a befitting fabric and notions without having to consider the intended use of the garment. After all, the intended use is for the customer to decide"* (interview\_FD001bo\_purpose of garment).

Again, applying the garment's purpose as a sourcing guideline is said to address fad by encouraging multiple uses of constructed garments among fashion consumers, thereby contributing to greater sustainability efforts (Kozlowski et al., 2018; Cooper & Claxton, 2022). The use of garment guidelines facilitates fashion designers' decisions regarding fabric selection (Kozlowski et al., 2019; Munasinghe et al., 2022). This assertion was strongly supported by a small number of fashion designers who use the purpose of garments as a sourcing guideline.

*"I will first establish the desired usage of the garment to be constructed with my customer before I settle on the type of fabric and, for that matter, the notions to be used. This is very basic in my attempt at sourcing"* (interview\_FD0012bo\_purpose of garment).

*"On most frequent occasions where customers come with their own fabrics to be sewn for them, I will agree with my customer on how the garment will be constructed and how it will be used. I frequently instruct or recommend a different use for the garment based on the fabric the buyer provides, or we agree to a completely different fabric if the previously determined use of the item is to stand. If the fabric does not meet the requirements of the use case"* (interview\_FD009as\_purpose of garment).

By adopting sourcing practices that account for the garment's purpose and embrace circular-economy principles, such as reuse and repurposing, as suggested by Nkrumah et al. (2023), Ghanaian fashion designers may enhance sustainability and address the challenges posed by rapid fashion.

### 3.2.2| Sources of Fabrics and Notions

The study found that most respondents have difficulty finding appropriate fabrics and notions for garment construction. A substantial number of respondents (18 of 30) reported that they could not consistently find and purchase appropriate fabrics and notions for their garments. They said this was because they lacked easy access to them, could not assess their quality, lacked strong supplier networks, and were unsure how textiles performed. On the other hand, a few respondents (12 of 30) indicated that they could identify appropriate materials by considering factors such as fabric type, durability, design intent, and how well the fabrics and notions would perform for the intended garment. The ideal source for sourcing fabrics and notions must be identified. Shen et. al. (2020) describe sourcing done from outside the company by a third party as an outsourcing type. Similarly, where sourcing is carried out by an employee within the organisation for and on behalf of the organisation, as an in-sourcing type, regardless of whether in-sourcing or outsourcing is used, implications for all other guidelines must be safeguarded. The fashion designers interviewed were clear about using two (2) sources. First, there is the 'customer-owned source', a sourcing practice in which the client primarily provides fabrics to the

fashion designer for an agreed garment to be sewn. Under this sourcing practice, however, the fashion designer must always purchase the required notions.

*"My clients usually come with their own fabrics but not notions, and insist that I use such fabrics irrespective of whether such fabric matches the purpose of the garment (interview\_FD005 as source of fabric and notion).*

*"It is a question of the customer calling to say I have bought this fabric and want to sew it, are you available to do it for me or not?" (interview\_FD009bo\_source of fabric and notion).*

The second practice is one in which the 'fashion designer' is responsible for sourcing the required fabrics and notions, rather than the client presenting their own fabrics.

*"I will say 90% of my business transactions require that I buy the fabrics and notions myself (interview\_FD007as\_source of fabric and notions).*

*"In almost all cases, except in small instances, I buy fabrics and notions and sew garments as agreed with my customers" (interview\_FD0011bo\_source of fabric and notion).*

Making eco-friendly, locally sourced materials a priority boosts the local economy and reduces the carbon footprint associated with importing textiles. Designers may create one-of-a-kind items that honour cultural history and support environmental sustainability by using indigenous textiles such as batik and kente, which are produced through traditional, sustainable processes (Doyle, 2023). Fashion designers can therefore empower clients to make decisions that promote sustainability when they are informed openly about the environmental effects of different materials. Designers may promote a culture of conscientious consumerism by informing customers about the benefits of eco-friendly materials and design principles. This cooperative decision-making process ensures that the client and the designer share a commitment to sustainable practices.

### 3.2.3| Type of Fabrics and Notions

The study found that most respondents did not carefully consider the type of fabric and notions they used in relation to design or sustainability considerations when selecting materials for garment production. Only 7 of 30 participants reported choosing materials based on how well they performed, such as how long they last or how well they breathe (durability and comfort). 10 out of 30 thoughts about the competitive edge of fabrics or notions in terms of how unusual they are or how well they appeal to the market. Notably, only two respondents considered environmental sustainability by selecting eco-friendly fabrics or notions. These results indicate a significant gap in sourcing techniques, with insufficient focus on how materials function, how to differentiate from competitors, or their environmental impacts. Sourcing the appropriate fabrics and notions influences all other sourcing guidelines in this context. The respondents shared opinions regarding three (3) basic themes. Research by Júnior et al. (2022) emphasises that fabrics and notions with the right properties for a given application are essential for ensuring product performance. Whereas a greater number of respondents do not consider garment performance relative to the choice of fabric and notions, a few do.

*"Fabric is fabric so long as it appears nice, particular to the customer, yes, it is ok" (interview\_FD0010as\_type of fabrics and notions).*

This comment became a common theme among the majority who do not consider product performance when selecting fabrics and notions for garment construction. On the other hand, comments such as;

*"I look out for fabrics that can withstand the rigorous and regular pressure of hand and or machine washing, irrespective of the purpose of the garment. It certainly cannot be just any choosing any fabric"* (interview\_FD0012bo\_type of fabrics and notions).

*"Making garments for regular casual use, for example, will require garments that can withstand regular pressure of tear and have moth resistance as well"* (interview\_FD003bo\_type of fabrics and notions), which goes to confirm the use of product performance as part of the greater type of fabric and notions as a guideline in sourcing.

Furthermore, a study by [Uddin et al. \(2023\)](#) underscores the importance of fabric selection and the type of notions in sourcing to maintain a competitive edge. Overall, respondents agreed that customer satisfaction is essential to business success. However, most of them prioritise customer satisfaction by delivering fabrics and notions with greater appeal.

*"My customers continue to do business with me because I give them fabrics and notions that tend to provide an instant look and attractiveness"* (interview\_FD005bo\_type of fabrics and notions).

On the contrary, the small minority proposed that it is important to go beyond appeal, *"I will make a choice of fabric and notion type for how it drapes well on the wearer in addition to the nice look it presents"* (interview\_FD008bo\_type of fabrics and notions).

There is an increasing emphasis on eco-friendly fabrics and materials in response to consumer demand for sustainable products ([Jaheer Mukhtar et al., 2024](#)). This aspect is easier to practice when there is in-sourcing. Eco-friendly notions such as buttons, zippers, and trims play a significant role in the overall design of garments and accessories and directly influence consumer perceptions and preferences ([Dhir, 2020](#); [Islam, 2023](#)). For the few who use this preposition, customer feedback such as;

*"I find my fabric-made button is unique, and it sets itself apart from the usual plastic or metal type that is used"* (interview\_FD004bo\_type of fabrics and notions). *"I have received a lot of praise and profit on undertaking renovation or recycling of existing garments for my customers. They usually cannot see the renovated garment as new with a glowing appeal"* (interview\_FD009as\_type of fabrics and notions).

Therefore, to meet the growing consumer demand for environmentally friendly products, Ghanaian fashion designers have a unique opportunity to incorporate sustainable sourcing strategies, particularly through circular economy practices. Designers may improve sustainability and attract eco-aware customers by emphasising in-sourcing and using eco-friendly fabrics and notions. Applying such materials supports the local economy and reduces the carbon footprint associated with importing fabrics ([Leal Filho et al., 2024](#)).

#### 3.2.4| Cost of fabrics and notions

The study indicated that fabric and notions prices are a significant factor in respondents' sourcing decisions, often more important than other factors such as quality or sustainability. 22 of 30 respondents reported that they often used higher-end fabrics and notions, either because their clients preferred them or because they considered them more prestigious. At the same time, 23 people reported using medium-range materials regularly, indicating a preference for balancing cost and quality. It is notable that 18 of 30 respondents also obtained their materials from the lower-cost category, particularly when creating for clients on a budget or for mass-market orders. This trend indicates that cost sensitivity is a significant factor in sourcing decisions. However, many designers adjust pricing ranges based on client needs and market positioning, rather than on formal material assessment criteria.

Sourcing decisions in garment construction are complex and multifaceted, with cost being a fundamental principle that significantly influences the entire production process (Arrigo, 2020; Hohn & Durach, 2021). Cost efficiency is a central consideration in fabric and notions sourcing decisions. Ye et al. (2023) argues that achieving cost efficiencies in material procurement, manufacturing processes, and transportation logistics is crucial to the competitiveness and profitability of fashion companies. Hence, there must be an effort to procure fabrics and notions at the lowest possible cost without compromising on quality (Shen et al., 2020). Efficient supply chain practices, including demand forecasting, inventory management, and lean production, contribute to cost reduction and improved sourcing efficiency in garment manufacturing (Hasan et al., 2022). Respondents were unanimous on the cost of fabrics and notions being either high or low; however, there could be no compromise on quality, and the customer must be satisfied. Consistent with the above prepositions, a few respondents provided insights into how they use their technical, managerial, and personal skill sets to manage costs throughout the garment production process.

*"I leverage my strong business and personal relationship with suppliers to influence cost, particularly with local suppliers. They make fabrics and notions available, very close to me, and thereby reducing cost"* (interview\_FD0015bo\_cost of fabrics and notions).

However, a substantial majority of respondents suggested that the cost must be passed on to the customer and that there is little the fashion designer can do about it.

*"The idea is that if a customer brings, say, Kente or Lace or any type of expensive fabric and notions, it must attract a commensurate high professional fee"* (interview\_FD0015as\_cost of fabrics and notions).

*"Cost of fabrics and notions will always be high, depending on the type to be bought and how the garment will be used. If a garment is for special occasions like weddings, parties, and so on, you have to go for expensive fabrics at all costs"* (interview\_FD0015as\_cost of fabrics and notions)

### 3.2.5| Colour Scheme Consideration

The study found that most respondents do not use planned colour schemes when selecting fabrics and notions. Only 10 of the 30 fashion designers reported consciously using colour theory principles, such as neutral-based, earth-toned, monochromatic, or complementary colour schemes, when selecting materials for garment construction. Of the 30 respondents, 23 reported that their colour choices were primarily based on what was available in the market or on client preferences, rather than on design principles. This indicates that colour planning is not well integrated into the sourcing process. This suggests that designers need more training in how to utilise colour strategically, how to predict trends, and how to make designs more cohesive and appealing to the market.

Colour is a fundamental element in fashion design, significantly influencing consumer preferences, brand identity, and the overall visual impact of clothing and accessories (Casas & Chinoperekweyi, 2019; Mo, Yang, & Hu, 2023). According to Mitrovic (2024), colour can evoke specific emotions and influence purchasing decisions. Fashion designers often consider consumer preferences and cultural associations when selecting colours for their collections, aiming to create garments that resonate with target audiences (Abraham & Khadaroo, 2021; Ademtsu et al., 2024). As a result, it is vital to match appropriate colours for fabrics and notions used in specific garments. In fabric selection, for example, Kimmons (2020) recommends selecting various shades of the same colour to achieve a cohesive look.

Sengupta (2021) also pointed out that using matching or slightly darker/lighter shades of the same colour for notions such as buttons, zippers, and threads works magic. Therefore, consistent with the above expert opinion, the respondents provided a general technical overview of this theme and its application in sourcing. It was common to hear, "As for colour, it is generally technical and can be perceived or interpreted by individual fashion designers differently." Generally, among the few respondents who apply the colour element in sourcing fabrics and notions, the aesthetic attribute in relation to the garment's purpose is the standard. This implies that complementary design arrangements constitute monochromatic colour schemes in garment formation and are considered aesthetically pleasing (Sengupta, 2021). Samogorov and Konkina (2021) add that in fabric selection, pairing two colours that contrast with each other, for example, blue and orange, creates much more visual interest in complementary colour schemes.

*"I will consider either a common colour shade or multiple colour shades for constructing garments for weddings, for example. This will arouse a sharp look and nice appeal" (interview\_FD0012as\_colour element of fabrics and notions).*

*"Depending on the intended use of the garment, for example, I focus on dull colours for dinner wear which usually attracts the attention my customers want" (interview\_FD007as\_colour element of fabrics and notions).*

On the contrary, most respondents find little or no relevance of colour elements as guidelines for sourcing fabrics and notions.

*"I find every colour combination okay to work with if my customer is okay with it" (interview\_FD00 four as a colour element of fabrics and notions).*

*"Colour is what the wearer defines, and other attempts by me to effect changes may not help. It is always as the customer decides" (interview\_FD004as\_Colour element of fabrics and notions).*

### 3.2.6| Quality Consideration During Garment Construction

Most respondents reported that few quality assurance techniques were employed during garment manufacturing. Only 9 of the 30 fashion designers demonstrated structured consideration of quality assurance procedures during the design process. In many cases, seam lines were not properly depressed, resulting in uneven finishes. It was also typical to get clothes with threads hanging off them. Additionally, preparation for client fittings was often overlooked; in some fashion houses, fittings were skipped altogether or merely suggested by clients when they came to collect their garments. This mistake persisted, which led to numerous fitting problems. This indicates a quality-control issue in the production process. During the study, many observations were made that provide evidence of fashion designers' inability to apply appropriate quality standards during the construction of sourced fabrics and notions. These were observed during the preparation stages, the main assembly stages, and the post-garment-making stages. It was observed that most fashion designers paid no attention to accurate body measurements for the garments they intended to sew. Fabrics were not tested before cutting, and, to complicate matters, aligning patterns along the correct grain lines was a significant issue because most preferred freehand cutting to pattern use. The few designers who could use the pattern had not mastered its usage properly. For example, during the study, at a production house of R025, this occurred after a client took her garment home and returned it to the fashion designer.

*"Madam, I could not view my own image in the mirror when I fitted the garment at home. What happened? We purchased a suitable fabric for this dress, but the fit did not go well at all. Was it the measurement you took or the nature of the fabric? In fact, I am dissatisfied with this garment. Do whatever you can to correct this. I have a few days left to attend this programme, and if you fail to deliver on time, I will not come here again.*

Quality assurance is a pivotal component of sourcing, ensuring that products meet or exceed predetermined quality standards for sustainable use. [Shen et al. \(2020\)](#) and [Tarigan et al. \(2021\)](#) underscore the vital connection between consumer expectations and quality in the fashion industry. Consumers expect the garments they purchase or order to meet specific quality standards, including those for fabric and notions, construction, and finishing. Meeting these expectations is essential for brand loyalty and customer satisfaction. Due attention and commitment to quality are more likely to withstand market fluctuations and changing consumer preferences. Sourcing high-quality materials and ensuring impeccable craftsmanship are essential for building and preserving brand integrity ([Do Mar Pata, 2023](#)). Fashion designers must, therefore, during their professional practice, aim at continual improvement informed by feedback from clients and institutional culture, to adhere to protocols and effect necessary changes ([Thomas, 2020](#); [Wijethilake et al., 2023](#)). By applying Juran's Trilogy (Quality planning, control, and improvement), Ghanaian fashion designers can foster continuous improvement, maintain high quality, and enhance customer satisfaction, ultimately contributing to the growth and sustainability of the fashion industry.

#### 4 | IMPLICATIONS OF FINDINGS

The study found that fashion designers exhibited a high level of technical competence in core garment production processes, particularly in selecting seams, finishing edges, applying interfacing, and using pressing procedures. These skills are closely aligned with Garvin's dimensions of quality, particularly performance and compliance. This indicates that many designers can meet and maintain the production standards expected of them. However, there was a significant deficit in the availability of fabrics and notions, which affected the overall quality and utility of the garments. Inconsistent material selection often resulted in poorly structured garments, durability issues, and a loss of beauty. This lack of talent indicates a significant gap between production and materials management, which affects both product quality and sustainability practices. To address this, it is very important to connect formal and informal training systems. It is recommended that formal theoretical education be integrated into informal apprenticeship systems. This will ensure that designers not only learn to sew garments but also to source materials and textiles and to follow sustainable procurement procedures. Additionally, providing master craftspeople with tailored in-service training will help them better understand how textiles function, the properties of fibres, their environmental impacts, and how to source materials ethically. This will help them make better decisions about how to use materials. Additionally, a framework for technology and idea transfer, supported by strategic partnerships, would enhance flexibility and ensure that people in the informal sector are aware of new sustainable technologies and circular design patterns. This will help reduce fabric waste, stimulate reuse, and promote zero-waste pattern cutting and upcycling, all of which are important for environmental protection.

It is important to encourage collaboration between fashion designers and textile suppliers. This kind of cooperation would facilitate just-in-time purchasing, reduce material mismatches, and make the local supply chain more responsive. These connections may be strengthened by creating spaces where people can share ideas and collaborate to generate new ones that are responsive to both market and environmental needs. The Ghana National Tailors and Dressmakers Association (GNTDA) should set and enforce national quality standards that cover not only fit, stitching techniques, and construction methods, but also the durability of materials and the environmental impact of garment production. This will make people more accountable and raise standards for environmentally friendly clothing across the board. The government needs to establish competency-based training centres that teach eco-design, sustainable

sourcing, and social compliance, in addition to technical competencies. These centres should be open to both new students and experienced craftspeople. This would make industry-relevant education more accessible and inclusive.

These changes, which are based on Lean and Agile manufacturing concepts, will not only make the business more responsive to market demands, improve quality control, and enhance operational efficiency, but also help employees gain power, promote ethical labour practices, and protect the environment. Ghana's fashion industry can become globally competitive and socially responsible by integrating sustainability into both its production and training systems. This will help the economy grow and enable the country to achieve the Sustainable Development Goals (SDGs), particularly those related to decent work, responsible consumption, climate action, and industrial innovation.

## 5 | LIMITATIONS OF THE STUDY

This study is limited by the geographical coverage of GNTDA members in Kumasi Dicheamso and Sunyani Odumase Zone A, respectively, which may restrict the generalisation of the findings to other regions and the entire country of Ghana. This research phenomenon should be explored in other geographical areas to generalise the findings. Furthermore, the sample size of 15 members per Zone was based on meeting inclusion criteria, which could also affect the representativeness of the sample.

## 6 | CONCLUSION AND FUTURE STUDIES

Ghanaian fashion designers are essential to garment construction; however, many are incompetent at locating suitable fabrics and notions, which lowers the quality of the finished product. Although they are sometimes excellent at garment construction, they frequently select inappropriate materials due to limited knowledge of fabric and thread properties. Training sessions that enhance sourcing abilities and emphasise the value of hands-on learning should be organised regularly for fashion designers. The Ghana National Tailors and Dressmakers Association (GNTDA) should implement training programs on eco-friendly sourcing and circular-economy techniques, in addition to enforcing sustainability-focused quality standards. In addition to solving sourcing issues, enhancing partnerships among textile producers, importers, and fashion designers will promote the creation of sustainably produced, locally made garments. To promote fair wages and preserve traditional craftsmanship, fashion designers should prioritise ethical procurement from regional craftspeople and approved suppliers. Future studies should examine customer preferences, the integration of technology into garment production, and fabric performance. To enhance garment quality and sustainability, a mixed-methods approach that incorporates surveys, interviews, experimental studies, and case analyses can yield deeper insights and improve the industry's sourcing practices.

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### DATA AVAILABILITY STATEMENT

Upon a reasonable request, the corresponding author will make the datasets created and/or analysed during the current study available.

## ETHICAL APPROVAL STATEMENT

The Ethics Committee at Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, Kumasi, approved the set of questions prior to data collection. The respondent was informed about the purpose of the study; therefore, his consent was obtained before he proceeded to answer the interview questions. Also, the confidentiality and anonymity of respondents was assured.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work, the author(s) used ChatGPT(OpenAi) as a language-support tool in order to assist with grammar refinement, clarity of expression, and academic writing structure. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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