Incorporation of Sustainability into Fashion Design Degree Programmes in Kenya

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Fashion design is the art of application of design and aesthetics to apparel and accessories influenced by arts, cultural and social attitudes, technology and politics and varies over time and place (fibre2fashion, n.d).

The creative sector/industry comprises fashion design among other industries. The sector’s contribution to Africa’s “creative economy” and society over many years has been relatively small despite its huge potential (Nzohabenimana, 2016).

Kenya’s textile and apparel sector has the potential to play a key role in transforming the country into middle income status and in creating gainful employment for its fast growing, young population (Republic of Kenya, 2015), such as fashion design university graduates.
Green manufacturing is both the manufacturing of green products and the greening of manufacturing (Republic of Kenya, 2015) or cleaner production—the continual re-design of industrial processes and products to prevent pollution and waste generation at their source and minimize risks to human and environment (Manzini & Vezzoli, 2000).

Globally there is a growing population of environmentally (and socially) conscious consumers willing to pay a premium for sustainable products (Republic of Kenya, 2015). Older USA’s “green” consumers aged 65 years and above are a lucrative market for sustainable fashion products. However, marketers should focus on societal rather than personal benefits. The former include concern about their apparel purchase’s impact on the environment, organic cotton producers and a fair price for them. The latter relate to belief that purchasing organic cotton improves their health and their families’ and gives peace of mind (Hustvedt & Dickson, 2011).
In recent years, Africa has been viewed as the final fashion frontier whereby international designers’ collections are inspired by and use it as a backdrop for campaigns. Valentino’s Spring Summer 2016 campaign was shot in Amboseli National Park, Kenya.

Sustainable development is a visionary development paradigm that calls for a convergence between the three pillars of economic development, social equity and environmental protection (United Nations, 2010). Sustainability advocates focus on water and fossil fuel scarcity, such as the cultivation and processing of cotton which consumes large quantities of the two resources in almost direct proportion. About 65kWh of energy is saved for every kilogram of cotton replaced by used clothing (Dissanayake & Sinha, 2012).

The UN’s SDGs that focus on sustainable production and consumption, are 9, 12 and 13 (United Nations, n.d. a).
Fashion production is unsustainable, that is, the products and services, production processes, workers and community. In Kenya the manufacture of textile and apparel, and dyeing and leather is categorized as moderate and high energy-intensive respectively (Ecocare International Ltd, 2013).

Although most of textile solid waste originates from household sources, waste textiles also arise during yarn, fabric and garment manufacture and from the retail industry negatively impacting the environment (Saha, 2014) requiring the application of 3Rs in its management: reduce, reuse and recycle.

Fashion consumption and sustainability are often opposing ideas. The former is a highly resource-intensive and wasteful practice. Sustainability frowns on wasteful consumption (Dissanayake & Sinha, 2012).
Globally, many universities offer fashion design degree programmes from undergraduate to doctoral level. The degrees are variously named, whereby some are stand alone, that is, fashion design while others integrate marketing, merchandizing or interior design.

In Kenya the enrollment of students in the degree programmes has tripled in the past seven years, inspired by the flourishing fashion industry. Hence, the graduates- turned professional fashion designers enter the industry.

Fashion designers are people with a desire to create by combining practical knowledge with artistic ability to turn abstract ideas into formal designs/original apparel and accessories, for women, men and children in haute couture or ready-to-wear (apparelsearch, n.d.).
Synonyms for sustainable fashion include eco-fashion, green fashion and slow fashion among others. The latter term was coined by Dr. Kate Fletcher. “Slow” is an approach in which designers, buyers, retailers and consumers are more aware of the impacts of products on workers, communities and ecosystems” (Craft Alliance, 2012).

Sustainability in fashion design degree programmes entails the design and construction of reversible fashion products and soft furnishings; use of end-of-line (EOL) fabrics; up-cycle; restyle/refashion; entrepreneurship and; communities related to any stage of the product lifecycle are respected and enhanced. A designer who creates the products embraces SDGs 9, 12 and 13 on sustainable production and takes action to combat climate change and its impact while consumers who purchase them implement SDG 12 on sustainable consumption.
Statement of the Problem

The textiles and apparel industry is a major contributor to environmental pollution and employees’ abuse. The focus of cleaner production, product-service systems (PSSs) and SDGs 12 and 13 is on industries. Consequently, university students—prospective stakeholders in the fashion industry are left out of the discourse despite the fact that they eventually enter the industry, first as interns then in formal employment as designers, managers or entrepreneurs. These graduates may influence the design, production and retailing of fashion apparel, accessories, textiles and textile furnishings as well as making policies on the same.
Research Methodology

- Research design: descriptive survey
- Study area: Kenya as the Universities are located throughout the country
- Study population: nine universities, one private and eight public, which offer Fashion Design degree from undergraduate to doctorate.
- Sample size: totaled eight.
- Data collection method: semi-structured questionnaire and photography. The former was administered by electronic mail to either chairmen of departments or programme coordinators. Photographs were taken of apparel, fashion accessories and soft furnishings that reflected sustainability. Already-existing photographs were also collected.
- Data analysis: descriptive statistics such as frequency distribution, percentages and means. Thematic analysis and qualitative content analysis were employed on the open-ended items respectively.
FINDINGS AND DISCUSSIONS

Name of degree programmes

Generally the degree is called fashion, clothing, apparel or textiles design or simply design, supplemented with marketing, merchandizing, interior design or information technology (IT). For instance, Fashion Design and Marketing; Apparel and Fashion Design and; Clothing, Textiles and Interior Design. The degrees may be classified in the Sciences or Arts.

Table 1: Levels the degree programmes are offered

<table>
<thead>
<tr>
<th>Degree</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelors</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Masters</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3</td>
<td>37.5</td>
</tr>
</tbody>
</table>

• Multiple responses allowed

Table 1 reveals the undergraduate degree programme is offered in all (100%) the universities, being the entry level of universities.
Length of time degree programme has been offered
Bachelors degree has been offered for the longest time (mean of 10.5 years) due to it being the entry level of any university programme. Masters and doctoral degree mean of 10 and 9 years respectively.

Number of students in all degree programmes
Most universities (75%) have between 1-100 students in total. Probably the programme is unaffordable by parents and guardians.
**Objectives of the degree programmes**

These influence the course content

1. Train professionals to effectively and competently fit in the fashion and textiles industry both locally and internationally
2. Stimulate creativity and innovation to design, produce and showcase good quality fashion and textile products
3. Provide students with professional competence for both formal and self-employment in fashion and textile design
4. Impart students with knowledge and skills to conduct research in fashion, textiles, clothing, retailing and interior design
5. Prepare students for postgraduate studies in fashion, textiles, clothing, interior design and marketing
6. Create linkage between the department and the fashion, textiles and interior design industry
Number and highest professional qualification of lecturers
Most of the lecturers hold Masters degree (58.7%), Doctoral (30.4) while undergraduate degree holders are the least represented (10.9).

Incorporation of Sustainability into Fashion Design Degree Programmes
Respondents’ understanding of sustainable fashion design
Their understanding of sustainable fashion design would influence its incorporation in the degree programmes. Sustainable fashion design is,
- Design that meets the needs of “green”/eco-conscious fashion consumers
- Fashion business, that is, production and retailing that values employees by training and remunerating them well
- Fashion production that is environmentally-friendly that uses EOL and up-cycle materials, eco-dyes, recycled and reused materials, and low energy
- Durable fashion and textile products
- Fashion and textile products and processes that create economic, social and cultural benefits to disadvantaged/marginalized populations

The finding concurs with Craft Alliance (2012) and Manzini and Vezzoli (2000).
Incorporation of sustainable design in the degree programmes

A majority (75%) of the respondents stated sustainable design is incorporated in the degree programs while 25% reported the contrary. The reasons for incorporating sustainable design in the programmes include,

- To produce graduates who are knowledgeable about the subject to help achieve the UN’s SDGs
- To impart students with knowledge and skills about the concept so as to respond to market needs for eco-friendly products
- To orient students to conduct research on the concept

The reason for not incorporating sustainable design in the degree programmes is that the concept was never discussed when the programmes were being developed and mounted.
Units in the programmes that have incorporated sustainable design

Incorporation of sustainable design in various course descriptions is either explicit or subtle.

- Fashion marketing: textile, clothing and consumers; consumer buying behaviour; market segmentation and targeting.
- Experimental apparel design and presentation: conventional or non-conventional materials; use of traditional and recycled materials to create innovative apparel and accessories.
- Apparel reconstruction, renovation and recycling: for continued use and affordable apparel; remodeling designs to create new effects; repairing apparel.
- Multi-media crafts techniques: health and safety issues in a craft workshop; use of waste, natural and recycled materials to make crafts.
- Textile design: application of African methods of fabric decoration such as *bokolanfin*, indigo dyeing, tie and dye, batik and embroidery; use of dyes from natural sources—plant roots and leaves; production of soft furnishing and apparel.
- Project paper: combination of various factors to develop fashion and textile items that reflect recycling, African influence and other aspects of sustainability.
Home furnishing and interior design: effective use of traditional and locally available materials to enhance existing furnishings of a home.

Apparel for people with special needs: giving consideration for people with special needs in contemporary setting; persons with special needs include children, elderly, persons with disabilities, women breast cancer survivors and pregnant women or situations that create special needs such as hazardous environments; emphasize on aesthetic, creative, innovative, functional and wearable apparel and accessories.

The finding concurs with Abdegalil (2013) in that sustainable production and consumption can be incorporated in existing and new course contents.
## Incorporation of sustainable design by departments

<table>
<thead>
<tr>
<th>S/N</th>
<th>Description</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Developed new courses that integrated sustainability</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>ii.</td>
<td>Re-orient existing courses to incorporate sustainability</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>iii.</td>
<td>Lecturers encourage students to use up-cycle fabric</td>
<td>7</td>
<td>87.5</td>
</tr>
<tr>
<td>iv.</td>
<td>Lecturers stress on trainees to design and construct reversible apparel</td>
<td>6</td>
<td>75.0</td>
</tr>
<tr>
<td>v.</td>
<td>Lecturers stress on trainees to design and construct reversible fashion accessories</td>
<td>5</td>
<td>62.5</td>
</tr>
<tr>
<td>vi.</td>
<td>Lecturers encourage students to design and construct reversible soft furnishings</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>vii.</td>
<td>Lecturers stress on the trainees to use Kenyan made fabrics and materials</td>
<td>6</td>
<td>75.0</td>
</tr>
<tr>
<td>viii.</td>
<td>Lecturers encourage students to restyle products into apparel</td>
<td>6</td>
<td>75.0</td>
</tr>
<tr>
<td>ix.</td>
<td>Entrepreneurship units emphasize on workers being valued</td>
<td>4</td>
<td>50.0</td>
</tr>
</tbody>
</table>
Students’ reaction to incorporation of sustainable design in the units

Positively the students,

- Are very accommodative of the topic, but more sensitization is required
- Show interest in such projects and upon graduation share with lecturers their application of the knowledge and skills to earn a living
- Are excited about it especially when they see examples of sustainable high fashion
- Express great creativity and innovativeness, for instance, use up-cycle patchwork fabric to convert old blankets into beautiful quilts
- Happy to save a good sum of money by using up-cycle fabrics obtained from local tailors
On the contrary, students,

- Feel it is being unnecessarily economical
- Are unhappy about projects with restyling/redesigning and constructing reversible apparel, techniques that are deemed more tasking and require more thought to conceptualize and implement an idea
- Have negative attitude toward using up-cycle fabrics to stitch samples and prefer new fabric
- Generally forget about the topic, are reluctant or not confident to engage in it because lecturers do not stress upon it continually and its limited content in the units
CONCLUSION

The degree programme objectives lack sustainable design. However, the concept is incorporated in various course contents, both explicitly and subtly. Respondents have an understanding of sustainable fashion design and are knowledgeable about its benefits. In the departments, the students employ the concept in course projects mainly through the lecturers’ encouragement. The students express high interest, creativity, innovation and confidence. Lecturers require extensive exposure as they play a crucial role in the innovative learning process.

The implication for the study is that Universities need to re-state degree programme objectives to incorporate sustainable design, which is then stipulated in the course contents so as to create awareness among the students and faculty of its importance in addition to help achieve UN’s SDGs specifically 9, 12 and 13.
Skirt made from second-hand curtain

Pair of shorts with appliqué and trimming of up-cycle kitenge (African print fabric)
Necklace made of scrap metal

Shoes restyled with up-cycle kitenge
Old sweater restyled to handbag and combined with up-cycle *kitenge*

Set of jewellery made of discarded CDs
Patchwork, reversible quilt

Shoe organizer made from cotton and appliqué using up-cycle fabric
High fashion inspired by the Pokot’s leather clock trimmed with up-cycle *kitenge*