

# Contribution of Kenyan University Undergraduate Fashion and Apparel Design Programs towards the Manpower Development for the Kenyan Apparel Industry

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## Abstract

Worldwide, the contribution of university fashion design training programs towards the manpower development for the fashion and apparel (FA) industry cannot be underestimated. The objective of this paper is to identify the contribution of Kenyan University undergraduate fashion and apparel design programs (UUGFADPs) towards manpower development for Kenyan FA industry. Descriptive survey was used to collect data at Kenyatta, Maseno, Egerton, University of Eldoret (UoE), University of Eastern Africa-Baraton (UEAB) and fashion and apparel design (FAD) firms in Nairobi, Nakuru, Mombasa, Athi River, Eldoret and Kisumu. The target population was Kenyan university departments offering UUGFADPs as well as their graduates. Purposive and snowball sampling were employed to select 208 respondents. Data collection methods were questionnaires, in-depth oral interviews, and document analysis. Qualitative data were coded according to patterns and themes and presented descriptively. Quantitative data was analyzed and summarized using descriptive statistics then presented in tables. Findings indicate that Kenyan UUGFADPs contributed to FA industry through research, training for various roles, job creation and community development. this paper recommends that for the UUGFADPs to give maximum contribution to the apparel industry, the FAD departments and FA industry should establish strong university-industry linkages and that the Kenyan government, through the relevant ministries should support the FA industry by job creation and identification.

**Keywords:** Contribution, Kenyan, University, Fashion, Apparel, Design, Apparel, Industry.

## 1. Introduction

The worldwide production of apparel plays a vital role in the economy of countries. Globally, the apparel industry provides employment to millions of people, mostly women workers in nearly 200 countries [1]. Most African countries experiences a decline in the production of textile and apparel following globalization of trade in the early 1990s. The Kenyan apparel industry is one of the most important contributors to industrial development because it is labour intensive and employs both skilled and unskilled labour [1, 2]. Though there was a decline after the

liberalization of the Kenyan economy in the early 1990s, the African Growth and Opportunity Act (AGOA) enabled apparel exports to the United States to rise from 33.5 million US dollars in 1998 to 249.3 million US dollars in 2007 [3]. Generally, the Kenyan apparel industries have created 50,000 direct jobs and 150,000 indirect jobs [4].

Since early 2005, the advantage to the African countries, Kenya included has been under threat due to a surge in textile imports from China and Asia following the end of a global quota system. The removal of the quota restrictions under the World Trade Organization's (WTO) 30 year-old Multi-Fibre Arrangement (MFA) meant that poor African producers were no longer protected from stiff competition by Asian mass producers [5]. Asian countries have enjoyed unlimited access to the world markets ever since the quotas were lifted. Most African countries, such as Egypt, Nigeria, Ethiopia, South Africa and Kenya, among others, have experienced a similar threat from the Asian apparel producers following the expiry of the MFA agreement. African producers could not compete with the more efficient and subsidized firms from Asian countries that are producing high quality products, capturing all markets and at competitive prices [6]. As a result of the competition, Kenya's EPZs (Export Processing Zones), for example, shed jobs and many investors pulled out in the year 2005 [7]. Lack of trained manpower, high costs of production, competition, unfavourable working conditions and lack of government support are problems facing the Kenyan apparel industry [8].

Among the factors that contribute to the success of Asian textile production, are specialized training programs which ensure steady supply of middle and high-level management for their textile and apparel industry [9]. Propelled to make the apparel industry attractive in worldwide trade in the 1980s and 1990s, India decided to invest in her local fashion education and exposure. Similarly, fashion industry leaders in more developed economies, such as the United States (US) and Australia, went through a similar vision: building through fashion education [10]. Thailand had a low industrial growth compared to other Asian countries because her firms, including FTAs, were operating below full capacity due to skill shortages for instance in almost half of their firms, the IT skills were very poor [11]. According to Otiso [9] and Mager [6], sufficient numbers of high-skilled workers are needed to spearhead apparel design, equipment maintenance and production and marketing in the FTA industry. Such high-skilled workers are lacking in most African countries, Kenya included. In order to fight the intense apparel exports competition from the East, South Africa for instance proposed blueprint strategies such as skill development to propel the fashion industry in the future [10]. Going by the above studies, university fashion training programs have contributed to supply of manpower which enhanced competitiveness in world apparel trade in Asian countries. The studies further imply that most African countries lack high-skilled workers in apparel design. Little is known on whether the Kenyan university undergraduate fashion and apparel design programs (UGFADPs) have made contribution towards manpower development for the fashion and apparel industry (FA). The objective of this paper therefore is to present the contribution of Kenyan University undergraduate fashion and apparel design programs (UGFADPs) towards the Manpower Development for the Kenyan Apparel Industry

Quality educational programs are important and through training, newly industrialized countries, such as Singapore, Korea, China and Malaysia, have experienced rapid development in technology [12]. [9] points out the contribution of Asian university training programs such as that of China's Textile University in Shanghai. He observes that these universities have specialized training programs which ensure steady supply of middle and high-level management for their textile and apparel industry. The manpower training has been one of the factors behind Asian competitiveness in the world apparel trade.

According to Brimble and Doner [11], an educational training should result in provision of services and other consulting activities and research related activities. They observe that graduates sponsored for US textile engineering education greatly contributed to Thai's textile industry. The graduates returned to Thailand between in 1975 and 1990 and worked in the government ministry and tried to influence university-industry linkages. They created university programs in textile engineering and formed the Thailand Garment Manufacturers' Association (TGMA) in 1993, which focused on training industry instructors through short courses on shop-floor productivity.

Rao and Joshi [13] recognize fashion and apparel design education in India as an entrepreneurial avenue. They observed that apparel production in India had provided 40% of jobs in small scale sector and offered an opportunity for entrepreneurship. In the Nigerian Federal University of Technology, the department of Industrial Design offered textile design among other design courses and it reached out to the community and local secondary schools to promote design education [14]. The department had a consultancy unit which worked with state government in its poverty eradication programs and had been participating in sericulture and corset industry projects. The department

also educates the general public on the importance of design education in contributing to sustainable national development.

A study by Thuo [15], to establish university graduates' general competence in Kenyan industries, indicated that the university training had produced good managers who were valued by most employers for their input more than those who were not university graduates. The strategic objectives identified in the Kenyan National Manpower Development Policy in achieving Vision 2030 emphasizes on the fact that university education should ensure adequate supply of skilled manpower for the industry and enhance research in the relevant industries [16]. The above studies recognize the fact that educational programs have contributed to industry through manpower development in management, technological advancement, research and consultancy, entrepreneurship and community development. Any university FAD educational training should know the important contribution of UFAD to manpower development for FA industry so that the training can target the industry needs. This paper therefore sought to fill the above knowledge gap by identifying the contribution of the UUGFADPs to manpower development for the FA industry.

### **3. Materials and methods**

The study used a descriptive survey research design to evaluate the contribution of UUGFADPs towards the Manpower Development for the Kenyan Apparel Industry.

#### *3.1 Study area*

The study was carried out at Kenyatta, Maseno and Egerton Universities, UoE as well as UEAB where the fashion and apparel design programs were offered and had their degree graduates working in the FA industry. The study was also conducted at apparel design firms that have employed Kenyan university fashion and apparel design graduates across Kenya. These firms included business establishments that take care of all aspects of apparel: from designing garments and selling finished products to the retail trade. These graduates, therefore, were those who were employed in fashion designing, pattern making, garment assembly, quality control, fashion merchandising and retailing in Kenya. The graduates who responded to this study were from FAD firms/industries that were located in Kisumu, Nakuru, Mombasa, Eldoret, Athi River and Nairobi cities. The firms included: RIVATEX East Africa Ltd. in Eldoret and EPZ- ALLTEX Ltd. in Athi River. Buni Ltd., Crown Rockshield, Johari Fashions, Enkele Designs Ltd., Kenya Girl Guide Association, Blue omnibus, Kooro Fashions, Vera Beauty College, Kiko Romeo, Va Bene Fashions, Manchester Outfitters and The National Museums of Kenya were located in Nairobi. APPTec fashion Consultants, ALIVE Design House and AYTOSBEI Fashions were in Nakuru. TITI-my style was in Kisumu and EPZ- KAPRIC Apparels Ltd. was located in Mombasa.

#### *3.2 Population and sampling*

The study population was made up of all the departments in Kenyan universities offering UUGFADPs. The UFAD programs referred to those that were concerned with all aspects of apparel; from designing garments, construction, to selling finished products to the retail market. According to the Kenyan Commission for Higher Education, there were 6 Kenyan universities offering bachelors degree FAD training [17]. These included Kenyatta, UoE, Egerton, Maseno, UEAB and Technical University of Kenya (TUK). The study sought information from the universities which were offering FAD programs and had their graduates having graduated within the last five years from the time of data collection (January 2011). All the universities except TUK had these characteristics. TUK did not have bachelor's degree graduates who had graduated within the mentioned period. The sample comprised 5 UFAD departments' heads of departments (HODs), 26 university fashion and apparel design staff (UFADS) (lecturers and technicians), 99 3<sup>rd</sup> and 4<sup>th</sup> year university undergraduate fashion and apparel design students (UUFADSS), 54 UFADGs who already in the fashion job market and that graduated within the last five years from the time of data collection and 24 employers of UFADGs. The sample size was therefore 208 respondents.

From the 6 UFAD departments that offered UUGFADPs, 5 UFAD departments from Kenyatta, Maseno, Egerton Universities, UoE and UEAB were selected using purposive sampling. The 5 UFAD departments selected had their bachelors degree graduates having graduated within the last five years from the time of data collection and were working in the FA industry. The researcher therefore believed that the 5 departments had the information regarding

the contribution of the UUGFADPs and their graduates and employers working in the FA industry would give feedback relating to the contribution of university undergraduate fashion and apparel design (UUGFAD) training to the FA industry. All the 5 HODs and 32 lecturers and technicians from the selected 5 UFAD departments, were selected through saturation sampling and 26 UFADS were able to respond to the questionnaires.

Nine ninety (99) students in the selected 5 UFAD departments were selected purposively and were all able to respond to the questionnaires. The criteria for selecting the students was based on the level of study, hence the students were all the 3<sup>rd</sup> and 4<sup>th</sup> year students. These students had advanced in their training and had been exposed to the FA industry through industrial attachment. It is also at the undergraduate level that most of the practical skills in fashion/apparel design are imparted to students. It is therefore believed that the students were in a better position to give information regarding the UUGFADPs and the FA industry. The number of respondents from the universities (HODs, lecturers, technicians and students) was therefore one hundred and thirty (130).

In order to establish the product or outcome of fashion and apparel design programs with regard to skill training for the apparel industry, 54 UFADGs who were in the FAD job market and had graduated within the last five years from 2011 and 24 employers of university fashion and apparel design graduates (EUFADGs) were selected through snowball sampling. The total number of graduates and employers that were included in the sample were determined after reaching saturation point and hence respondents from the FA industry totaled to 78. The study sample size was therefore 208; 130 respondents from the universities and 78 respondents from the industry.

### *3.3 Scope and limitation of the study*

The study was conducted in the departments of Kenyan universities offering fashion and apparel design programs (UFADPs). These were programs that were concerned with all aspects of apparel; from designing garments, construction, to selling finished products to the retail market. It was limited to university fashion and apparel design (UFAD) departments of Kenyatta, Egerton, Maseno Universities, University of Eldoret (UoE) and the University of Eastern Africa Baraton (UEAB); and to graduates of the departments (who had graduated within the last five years and were working in the apparel industry) and among their employers. The jobs in the apparel industry included those involved with fashion designing, pattern making, garment assembly, quality control, fashion merchandising and retailing, at small and medium and large scale fashion and apparel industries within Kenya.

### *3.4 Data collection methods*

The following instruments were employed in collection of data:

#### *3.4.1 Self-administered questionnaires*

Separate questionnaires, which were both structured and unstructured, were distributed by the researcher to lecturers, technicians, students, graduates of university fashion and apparel design and their employers/supervisors. The administration of the questionnaires was done manually to students, lectures and technicians and by electronic mail to graduates and employers.

#### *3.4.2 In-depth oral interviews*

The researcher used an interview guide to get in-depth information from the UFAD departments' HODs through in-depth oral interviews which were through face-to face at the respective department and at the respondents' convenience. Sometimes when the HODs were not available, they were reached and interviewed by telephone. Where the HODs were not available, the program coordinators or staff members with the required knowledge about the UUGFADPs were interviewed. When graduates and employers were not able to fill in the questionnaires, the researcher used their questionnaires as interview guides to interview them through telephone while recording their responses.

### 3.4.3 Document analysis

This method involved checking written documents and records to acquire the required information. Information regarding UUGFADPs was established by the researcher through accessing documents such as FAD departments' program manuals / brochures /websites, and industrial assessment reports. The information sought included researches and community participation by the UFADS and UUFADSSs.

### 3.5 Data analysis and presentation

Qualitative and quantitative data deduced from the study were analyzed. Qualitative data was coded according to emerging patterns and then categorized and explained under themes. Quantitative data was statistically analyzed using the statistical package for social sciences (SPSS). Descriptive statistics, namely frequencies and percentages, were used to describe and summarize data. The results were presented in form of tables and written reports.

## 4. Results

This study identified the following areas that the UUGFADPs had contributed in terms of manpower development in the FA industry.

### 4.1 Research in areas relevant to the FA industry

The UFADS were asked to give any researches that they had done in FAD. Determining the studies done by the UFADS in FAD can imply their contribution, hence that of UUGFADPs to the FA industry. The Kenyan UFADS, have done many researches while training the UUFADSSs which, if implemented, can significantly contribute to the FA industry in the 21<sup>st</sup> century. This study noted the following researches as presented in Table 1 that have been addressed by the UFADS in FAD related areas and the general conclusion/ recommendations are given as well.

Table 1. Research areas that have been addressed by the UFADS

<b>Title of the Research</b>	<b>General Conclusion/Recommendation</b>
1. Clothing for inpatients in public hospitals	Hospitals were very poor in terms of clothing
2. Clothing selection among plus size women	Plus size women have a problem in the sizing of their apparel since their clothing is not standardized hence the women had a limited clothing selection from the clothing available to them in the market, unless they opted for custom, tailor made clothing.
3. Socio-cultural factors in clothing selection among the elderly.	The elderly should be empowered in apparel design industry by designing and availing apparel that does not hinder their movement.
4. Fashion adoption by working women	Women have been consuming clothes and not fashion.
5. Purchase of clothing items by professional women in a liberalized market	Kenyan professional women seem to prefer imported clothing, saying that the designs are unique, well made and well fitting.
6. Matching training skills with the job market	Colleges and universities should involve other stakeholders in curriculum development to make the training more market driven.
7. Performance of clothing and textile at Kenya Certificate of Secondary Education (KCSE)	Students and administration had a negative attitude towards clothing and textiles (CT) at secondary schools while the attitude of secondary school teachers to CT was positive. The Secondary school curriculum should include clothing and textiles as optional but examinable subject.

**Source:** Field data from UFADS responses

The following areas for further research in the fashion and apparel design industry were proposed by the university FAD staff: The future of clothing and textiles in secondary schools; Perception of fashion design by rural communities; Impact of Kenyan University FAD graduates/ trace studies in terms of business and employment creation; Ethnic African dress; Fashion merchandising; Use of computer technology in FAD; New textile materials from locally available plants; Body structure for different people in different parts of the world so as to develop relevant sizing charts and the reasons why fashion industry has not picked up in Kenya like in other parts of the world.

The finding on contribution of UUGFADPs to the FA industry through research agrees with Brimble and Doner [11] who observe that graduates sponsored for US textile engineering education greatly contributed to Thai’s textile industry consulting activities and research related activities. The result is also in line with GOK [16] which emphasises that educational programs should enhance research in the relevant industries. The UFADS have therefore contributed to the FA industry through research findings and recommendations while training in the UUGFADPs which, if implemented can significantly contribute to the apparel industry in the 21<sup>st</sup> century.

*4.2 Training for various roles in the FA industry*

The responses from the UFADGs show that the UUGFADPs gave basic training in most areas and were an eye-opener to the fashion industry. All areas covered can therefore help a designer solve everyday challenges. Positions held by the UFADGs included: Fashion designer/consultant, costume designer, graphic designer, fashion marketer, quality controller, fashion design tutor and exhibition designer. The titles used for the positions varied from one FAD firm to another but each position had different or similar roles depending on the firm. Most graduates did multiple roles, for instance one could have been a fashion designer, quality controller and a fashion tutor as well. Table 2 presents the positions that were held by the UFADGs who responded to this study.

Table 2. Positions held by the UFADGs

<b>Position</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Fashion Designers	40	74
Production Managers	22	30
Quality Controllers	11	20
Production Assistant	8	15
Assistant Marketing Executives	5	9
Exhibition designers	5	9
Fashion Consultants	3	5
Assistant Merchandiser	3	5
Costume Designers	2	4
Graphic Designers	2	4
Fashion Design Tutor	2	4

**Note:** Multiple responses were allowed

**Source:** Field data from UFADGs respondents

The position that was held by majority of the UFADGs was Fashion designer as indicated by 40 (74%) of the graduate respondents as indicated in Table 2.

The roles of these graduates included:

Fashion Designers: (40, 74%) Designing new creations, cutting outfits and sometimes stitching, supervising fitting sessions for clients, quality control on laid and stitched garments, record-keeping in tailoring section, supervising cutting and garment construction, supervising tailors in general. Developing designs for corporate clients and also for the company, technical drawing, creating story boards for presentation, giving advice to clients according to their fashion needs, approving designs and creating original patterns for mass production and individual clients, directing tailors on stitching, presentation of garments and customer service and stock-taking.

Production Managers: (22, 30%) Ensuring timely procurement of raw materials and product planning, seeing that production is going on, co-coordinating refresher course training for the garment makers, ensuring that orders are finished on time, working with other designers on costing, fabric cutting quality control, designing of new products and calculation of raw material consumption.

Quality Controllers: (11, 20%) Quality monitoring, ensuring correct pattern sizes are used when cutting fabric, correct pattern laying before cutting, and making sure that the best method of construction is used to assemble the garment.

Production Assistant: (8, 15%) Supervisory, auditing quality and work study especially in mass production.

Assistant Marketing Executives: (5, 9%) Talking to clients and identifying their needs and presenting them to the design team who would develop designs that meet the needs, and promoting company fashion products to the general public particularly targeting fashion clients.

Exhibition designers: (5, 9%) Planning, designing and installation of temporary and permanent exhibitions.

Fashion Consultants: (3, 5%) - Designing, garment construction, sales and marketing and supplies of cloth, tracking fabric and accessories.

Assistant Merchandiser: (3, 5%) Tracking accessories required on production floor and ensuring that the quality of garments produced meet customers' satisfaction.

Costume Designers: (2, 4%) Designing costumes for actors in different roles of filming and TV advertising.

Graphic Designers: (2, 4%) Developing creative designs and converting logos and badges into artwork to be printed for hand embroidery and beading and product packaging, marketing and advertising.

Fashion Design Tutor: (2, 4%) Teaching, supervising and overseeing work done.

It was also necessary to determine if the UUGFADPs had made any significant contribution to the FA industry as perceived by the employers of fashion and apparel design graduates (EUFADGs). Table 3 shows EUFADGs' perception on ways through which the UFADGs hence the UUGFADPs had contributed as far as manpower is concerned.

Table 3: EUFADGs' perception of ways through which FAD had significantly contributed to FA industry

<b>Contribution</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Management (better supervisors/managers)	15	63
Manpower (expertise)	10	42
Creativity (fresh thoughts and insights)	8	38

**Note:** Multiple responses were allowed

**Source:** Field data from EUFADGs

As presented in Table 3, the UUGFAD training, according to 15 (63%) of the EUFADGs, had added the aspect of management producing better supervisors/managers. Ten (42%) of the EUFADGs pointed out that the UUGFADPs had contributed significantly in terms of manpower (expertise). According to the EUFADGs, there was an emergence of professional fashion designers with basic training though they lacked practical skills. The employers however noted that through retraining or review of the UFAD curriculum these skills can be polished. The graduates, as per the views of 9 (38%) employers had also contributed in terms of creativity, with fresh thoughts and insight hence contributed to great improvement in the way of doing things in the FA industry.

The fact that the UUGFAD training has produced graduates who have taken roles in the FA industry agrees with Otiso [9] who points out the contribution of Asian university training programs such as that of China's Textile

University in Shanghai. He observes that these universities have specialized training programs which ensure steady supply of middle and high-level management for their textile and apparel industry and has been one of the factors behind Asian competitiveness in the world apparel trade. The finding is also in line with the strategic objectives identified in the National Manpower Development Policy in achieving Vision 2030 which emphasises on the fact that university education should ensure adequate supply of skilled manpower for the relevant industries [16]. Though the UUGFADPs have trained graduates for the FA industry, the training may not have been effective enough in influencing changes in the Kenyan FA industry as was in the case of Chinese universities that have specialised programs. This could be due to the major challenges faced by the Kenyan UUGFADPs especially the poor Kenyan university-industry linkages and the lack of adequate learning/ teaching resources and facilities.

From the employers' view, graduates were more proactive and receptive to challenges and had higher competence on wider perspective, as they could comprehend difficult and cumbersome tasks within shorter periods of time. The UFADGs were preferred in supervision/ management and creativity as they were perceived by their employers to have better skills in management, higher standards, learnt faster and took initiative to learn. The observation is similar to that of Thuo [15], in establishing university graduates' general competence in the Kenyan industries, which indicates that most university graduates were employed in managerial positions because most employers did value university graduates more than those who were not. This finding therefore implies that the UUGFAD training produced graduates who were better supervisors and managers.

#### *4.3 Enterprise development and job creation*

The UFADGs hence the UUGFADPs, had made a contribution to the FA industry through enterprise development and job creation for other FAD graduates. This is because five of the FAD firms whose graduates and employers took part in this study were owned by UFADGs who had graduated from the Kenyan UFAD departments within the last five years from the time of data collection. These firms were ALIVE Design House, APPTEC fashion Consultants, AYTOSBEI Fashions, Enkela Designs and TITI – my style. The UUGFAD training thus has contributed to the growth of the FA industry through entrepreneurship. This finding is similar to what was noted by Rao and Joshi [13] who recognize fashion and apparel design education in India as an entrepreneurial avenue that had provided jobs in small scale sector and offered an opportunity for entrepreneurship. The UUGFADPs have therefore trained graduates to become entrepreneurs in the FA industry hence creating jobs to other FAD graduates.

#### *4.4 Involvement in community, national and international fashion events*

The UUGFADPs have also contributed to the FA industry by the fact that some of the UFADGs have been actively involved in major fashion events, both locally and internationally. Some of the events that were mentioned, which the UFADGs have actively participated in and worked at backstage, included Fashion for Peace, African Fashion Fair, and seminars under French designer Jean Mark Hale and Cameroon designer Imane Ayissi, African Fashion Fair and Miss Kenya, Fashion Super Model Search. These events have contributed to marketing of Kenyan fashion and culture.

The results on the involvement by UUGFADPs and UFADGs in extracurricular activities related to FAD shows that some constituents were involved in community activities through taking roles such as judges/assessors in fashion shows and exhibitions, environmental awareness through fashion and fashion shows in churches. This involvement in such endeavors promoted the FA industry by giving awareness to the community of the fact that FAD contributes to national development, hence motivating others to join the profession. This finding concurs with Mugendi [14] who noted that the Nigerian Federal University of Technology made a significant contribution to the community in sensitizing on importance of design education to national development.

### **5. Conclusion**

The UUGFADPs have made significant contributions to the manpower needs of the FA industry. This era, the 21<sup>st</sup> century is characterized by a lot of economic crisis such as effects of globalization, unemployment and poverty. In view of the above contributions of the UUGFADPs; through research, training for key roles for FA industry, entrepreneurship and job creation, community development and participation in local and international fashion events, this study observed that the UUGFADPs can be part of addressing the economic challenges in Kenya. Much



can still be achieved through involving the students in FAD entrepreneurship and income generating activities while they are still at the university. This would give further experience in entrepreneurship hence more job creation through FAD. The UUGFADPs can be designed to have community extensions such as training the local community on income generating through FAD. Having a lot of fashion shows and exhibitions and inviting the neighbouring community would also bring more awareness to the community of the fact that FAD is a career that they can be involved in to earn a living. The study further observes that IT being a very crucial area in the 21<sup>st</sup> century, the UUGFAD training should integrate a lot of it for a successful training for the FA industry manpower development in this era. It is also important that the UFAD training should have both local and international university industry linkages so that the training can reflect the global industry needs.

For the Kenyan UUGFADPs to give adequate training for a competitive FA industry in the 21<sup>st</sup> century, this paper recommends that for the UUGFADPs to give maximum contribution to the apparel industry, the FAD departments and FA industry should establish strong university-industry linkages which can include joint research, conferences, seminars and workshops, consultancy, sharing of expertise and scholarships and the donation of materials and equipment to UFAD departments. Further, the Kenyan government, through the Ministry of Labour's human resource development sector and the Ministry of Industrialization, should support the FA industry by job creation and identification so that the UFADGs are absorbed in employment. This will also encourage the growth of local FA industries.

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