

Establishing the Training Needs of Kenyan University Fashion and Apparel Design Graduates

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Abstract

The production of textiles and apparel plays a vital role in the economy of countries. The university training should be designed to boost the growth of the fashion and apparel (FA) industry. The objective of this paper is to determine the training needs of Kenyan university fashion and apparel design graduates. 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 undergraduate fashion and apparel design students (UUFADSS) and university fashion and apparel design graduates (UFADGs). Purposive and snowball sampling were employed to select 177 respondents. Data collection methods were questionnaires 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 and pie chart. The UFADGs lacked specialization, had little practical experience and industrial exposure. In view of the finding, this paper recommends that the universities should liaise with FA industries and design a more practical fashion and apparel design (FAD) curriculum as well as ensuring maximum exposure of UUFADSS to the industry.

Keywords: Training Needs, Kenyan University Fashion Design Graduates.

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1. Introduction

Globally the textile and apparel trade is crucial to economic development of most countries. The African Growth and Opportunity Act (AGOA) was good news to 37 African countries in the south of Sahara as it enabled them to access the United States markets duty free. However, 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) saw the Asian countries thrive in world markets and this meant that poor African producers were no longer protected from stiff [1]. 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 [2]. 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 [3]. Lack of trained manpower, high costs of production, competition, unfavourable working conditions and lack of government support are problems facing the Kenyan apparel industry [4]. Otiso [5] points out that, 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.

Bosibori [6] found that apparel manufacturing firms in Nairobi were faced with inadequately trained and skilled manpower and managerial problems. Essential skill training is, therefore, necessary for industrialization hence economic growth, leading to development and the creation of employment. An assessment of manpower utilization in Kenyan industries by the Directorate of Industrial Training (DIT) revealed that technical graduates had no hands-on experience, had poor work attitudes and were inflexible [7]. The study also stated that, due to little co-ordination between industries and universities, industrial attachments were poorly planned and supervised. A report by the United Nations and the DIT further indicates that Kenyan universities' training lacked a link to the industries: most employers spent up to two years retraining their recruits to equip them with skills [8]. The above studies points out lack of adequate training for the Kenyan apparel firm workers and the studies have attributed this inadequate training to unclear human resource development for FA industry in the Kenyan universities. The objective of this paper therefore is to present information on the training needs of UFADGs.

The textile industry in Kenya is relatively diverse and can be divided broadly into four main areas of production as follows: cotton growing and ginning; yarn and thread production; fabric manufacture and apparel manufacture. The apparel industry falls under garment manufacture. Kenya's apparel industry consists of firms that vary in size and technology. Data on the distribution of firms in Nairobi showed that: 94% were very small enterprises, employing from one to six persons and 1.5% were medium scale, employing from 11 to 50 workers while large firms employ more than 50 persons and constituted 1.4% of all firms in Nairobi. Small enterprises were located in markets, kiosks and private houses whereas medium and large ones are located in factory premises [9]. However, the number of expatriate workers in most of the large and medium scale firms was low (2%) and they mainly came from outside Kenya [10]. The Kenyan university undergraduate fashion and apparel design programs (UGFADPs) train manpower for the FA industry, yet the above author suggest that expatriates for the industry mainly came from outside. The observation led the current study to determine whether the UFADGs have training needs that may be making them unfit for jobs in the FA industry.

Training needs are defined as ways of thinking and acting that workers lack or which cause them to perform below the desired standard. Their behavior at work shows a need for improvement in their knowledge, skills and attitudes and therefore calls for in-service training [6]. Sometimes, this training is necessary due to changes in the industry such as new technology. The training needs are best determined from the workers themselves using a systematic approach. This can be through interview, questionnaires asking them what they feel about the jobs or observation. Once training needs are identified, they can be used in developing more strategies for further training. In order for career and technical education to meet its obligations to society, business and industry, it must continue to identify employability and workplace skills and to transmit those skills to students by the identification and prioritization of competencies needed on the job [11].

Rao and Joshi [12] note that educationists should be cognizant of entrepreneurship requirements of the FAD training. They proposed that educators, including universities, had an obligation to meet students' expectations with

regard to preparation for the economy in which they operated. Anonymous [13] identifies the skills and competences required by university graduates in a fashion retail context in South Africa. He found that, in the South African fashion retail industry, graduates lacked personal attributes that were relevant to the work situation. This training need was evident during job searching as fashion retailers preferred graduates with some form of exposure to the industry through work integrated learning since this exposure to industry helps in the professional maturity of the students before they entered the job market. Anonymous [13] found that graduates of clothing management from Cape Peninsula University of Technology were generally snatched by the industry because of work experience and readiness that they had acquired through the work-integrated program. On the other hand, fashion design students from the same university did not easily get working opportunities in their respective industries because their training did not integrate learning with work. An assessment of manpower utilization in the Kenyan industry by the Directorate of Industrial Training [7] revealed that technical graduates had no hands-on experience and poor work attitudes. Observation from the above studies led the researcher to determine knowledge on the training needs of UFADGs that may be inferring on the relevance of existing Kenyan UUGFADPs to the manpower needs of FA industry.

Moncarz [14] points out that: design is the critical arena for the FTA industry: the overall design process may fix almost 90 percent of total production cost of a product and the apparel design process was found to be the most critical in the product's life cycle. According to him, design has the greatest impact on the manufacturability, production costs and product quality of any process in the apparel manufacturing cycle. He further recommended that the design process itself needed to be studied in order to develop the appropriate design tools and information systems. Moncarz [14] observes that it had reached a point where retailers without particular design knowledge, were designing apparel. He notes that there were many experts from both academia and industry who had good ideas for applying technology to improve apparel design engineering but they were not in a position to initiate the needed actions. That unique blending of knowledge and rigorous training required for an apparel industry professional would amplify the voice of the experts. Moncarz [14] also suggests that research and development necessary to create new information infrastructure should be done at universities, industries and independent laboratories. He emphasises that efforts were required to establish new information technology for the FTA industry and that standards should also be reviewed and management and technical consultants should advise on relevant training for individual firms. Academia is needed to add courses, related to new technology, to the curriculum and expand vocational training. Standards relevant to the FTA industry should also be included as part of instruction and research. To effectively utilize the new technologies, education and training must be provided throughout the industry by educational institutions as well as the industry itself. Subsequently, better trained employees would be more productive and produce higher quality products. In line with Moncarz's [14] suggestions, the current study endeavored to provide data on the training needs of UFADGs.

As indicated in Kenya's Vision 2030 (Transforming National Development), one of the key areas to focus on is the manufacturing sector where apparel production fall. Among the interventions to exploit science and technology in the sector is to invest in skill training and strategic research in the industry [15]. The Kenya Vision 2030 human resource development goals include providing access to quality education and training at all levels and, to promote skilled manpower development to industry by deepening technological knowledge [16]. The presidential circular No. 1/2008 sets out the mandates as Manpower Development Policy, vocation training, Directorate of Industrial Training and other sub-sectors. Among the strategic objectives in the National Manpower Development Policy are: enhancing the quality of education and training and popularize open and distance learning at all levels by 2015; ensure adequate supply of skilled manpower at all levels for the industry and enhance research and capacity building; strengthen linkages between industry and training institutions. The Ministry of Labour has been ensuring that these institutions are responsive to the needs of the industry by administering trade tests, examinations and placement of candidates for industrial attachments. Public universities, which are also concerned with training, are under the Ministry of Higher Education are not left out in this program [16, 17]. According to Riechi [18], an effective manpower development and employment policy framework should be developed so as to provide for the establishment of necessary linkages and networking among all stakeholders such as educational institutions especially the universities, relevant ministries and departments associated with human resource development.

A fashion designer can be involved in any of the jobs in the apparel industry (fashion designing, pattern making, garment assembly, quality control, fashion merchandising or fashion retailing) depending on size of the firm and level of specialization. Fashion and apparel design programs at Kenyan universities cover most or all of these areas depending on the institution. Training results in an understanding of what a job entails and facilitates efficient

performance. This training may be carried out before a person begins employment (pre-service training) or during the course of one's working life (in-service training). Those working in the apparel industries should be trained in the specialized skills involved. Machine operators and other workers need technical skills, not necessarily through formal training, while management staff requires both technical and managerial skills. The technical skills of garment design, cutting and sewing, are obtained in institutions offering courses in apparel design and construction. Managerial skills may also be offered as part of their curriculum or in specialized management institutions, seminars and/or workshops [6].

In Kenya, training in fashion and apparel design is offered at four levels [19]: Artisan courses in garment making are offered at youth polytechnics and in some technical institutes. This training takes two years and is targeted at primary school leavers. Three year craft courses in garment manufacture are available to secondary school leavers at institutes of technology or technical training institutes. Secondary school leavers may also take a diploma course in clothing technology at national polytechnics and technical institutes or courses in clothing design and construction at private fashion design colleges such as Everlyne School of Design in Nairobi. Public universities that offer fashion and apparel design include Kenyatta, Egerton, Maseno Universities, Chepkoilel University College (now UoE) and Kenya Polytechnic (now Technical University of Kenya -TUK). UEAB is the only private university that offers degree courses in fashion and apparel design.

In order to enhance the competence of university graduates in Kenyan industries, Thuo [20] recommends a stronger and constant link between the industry and universities. He reiterated that interaction between the university and industry through joint research ventures, representation of industry in university management boards and donation of equipment to universities should be enhanced. According to Muigai *et al.* [21], all university degree programs should be constantly reviewed to ensure that they reflect current demands for skills required. Maiyo and Amondi [22] observe that the fashion and apparel design training in the Kenyan universities did not tally with the industry's needs, hence recommended collaboration between the apparel industry and these training institutions in designing the curriculum. Kurz [23] encourages a closer association of FAD departments to the fashion industry. Studies to address university education and training development for industrialization and economic development and on how well training in fashion related studies meet the needs of the industry have been recommended (20, 6). There was need, therefore, to establish whether there is collaboration between academia, Kenyan universities and industries in meeting the manpower needs for Kenyan FA industries hence the training needs of the Kenyan UFADGs.

2. Materials and methods

The study used a descriptive survey research design to establish the training needs of Kenyan UFADGs. 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.

The study sought information from the Kenyan university fashion and apparel design undergraduate students (UUFADSs) as well as university fashion and apparel design graduates (UFADGS) who had graduated within the last five years from the time of data collection (January 2011). Ninety nine (99) UUFADSs in the selected 5 university fashion and apparel design (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 3rd and 4th 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 (UUFADSs) was therefore 99.

Fifty four (54) UFADGs and 24 of their employers were selected through snowball sampling. The first group of graduates and employers that were known to the researcher were selected and this group then identified others who were known to them. 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 total sample size for UUFADSs and UFADGs and their employers was therefore 177 respondents.

2.1 Data collection methods

Self-Administered Questionnaires which were both structured and unstructured, were distributed by the researcher to UUFADSs UFADGs and employers of university fashion and apparel design graduates (EUFADGs) /supervisors. The administration of the questionnaires was done manually and by electronic mail.

When the respondents 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. Document review of UUFADSs' industrial attachment reports was also done.

2.2 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 pie chart.

3. Results

The findings from the document analysis of the industrial attachment reports, given by UUFADSs and field supervisors and responses from UUFADSs, UFADGs and EUFADGs gave an indication of training needs of UFADGs.

The training needs of UFADGs was determined by asking the UUFADSs whether they felt that they required additional training apart from what they had acquired at the university, whether the UFADGs felt that the training they underwent at the university was relevant to their current positions in the FA industry; if they required additional training to enable them accomplish their FAD jobs better; establishing the UFADGs perception on their employers attitude to the job performance of UFADGs and by identifying the weak areas in the UUGFADPs as perceived by the UFADGs. It was also established by seeking the respondents' perception on the relevance of UUGFADPs to the FA industry. Table 1 shows the weak areas in the UUGFADPs as perceived by the UFADGs.

Table 1. UFADGs' perception on weak areas in the UUGFADPs

Weak Areas	Frequency	Percentage (%)
Inadequate practical skills	48	89
Inadequacy of essential learning facilities	45	83
Poor CAD / CAM experience	40	74
Curriculum should be reviewed	39	72
Inadequate industrial exposure	34	63
Obsolete technology	32	59
Few reference	12	22

Note: Multiple responses were allowed

Source: Field data from UFADGs' Responses

The most mentioned weak areas in the university undergraduate fashion and apparel design programs (UUGFADPs) according to majority of the UFADGs (48, 89%) as shown in table 1 was too much theory and less practical training

that would impart hands on skills especially in areas such as apparel construction, inadequacy of essential learning facilities by 45 (83%), irrelevance of CAD software used to fashion design and lack of CAM software (40, 74%), need for curriculum review by 39 (72%), inadequate industrial exposure by 34 (63%) and obsolete technology by 32 (59%). Table 2 shows suggestions by EUFADGs on areas that needed to be improved in the UUGFADPs.

Table 2. Areas for improvement in UUGFADPs as suggested by EUFADGs

Area	Frequency	Percentage (%)
Practicals	20	83
More industrial exposure	18	75
Need for Curriculum review	18	75
Modern technology	15	63
Creativity	10	42

Note: Multiple responses were allowed

Source: Field data from EUFADGs' Responses

Table 2 indicates that the most challenging areas in the UUGFADPs, from the views of the EUFADGs were the Kenyan UUGFAD curriculum should improve on: practicals as suggested by 20 (83%) of the employers, the UUFADSs should be given more exposure to the FA industry according to 18 (75%), need for curriculum by 18 (75%) and more use of latest technology hence modern machines and IT by 15 (63%).

The following training needs as reflected from the document review and responses from UUFADSs, UFADGs and EUFADGs were established.

3.1 The UFADGs had low industrial exposure

The industrial attachment reports indicated that UUFADSs needed: more experience in the use of industrial machines; more industrial exposure to instill confidence in the students and more creativity in FAD.

Thirty four (63%) UFADGs and 18 (75%) EUFADGs as in Tables 1 and 2 respectively, noted that the UFADGs lacked experience on market-relevant selling strategies and current fashion market trends:

The problem with the FAD graduates is that they lack confidence in their work. But if confidence is instilled in them, they can make excellent designers (EUFADG respondent No. 15, 2011).

The employers just let the UFADGs to practice on the job until perfection level was reached. According to the EUFADGs, most retraining was done on the job especially to update the graduates on new technology and every time there was a new concept in the fashion market. The result on lack of industrial exposure by the Kenyan UFADGs differs with Anonymous [13] who found that graduates of clothing management from Cape Peninsula University of Technology were generally snatched by the industry because of work experience and readiness that they had acquired through the work-integrated program. On the other hand, fashion design students from the same university did not easily get working opportunities in their respective industries because their training did not integrate learning with work hence lacked industrial exposure. Poor industrial exposure by the UFADGs can be attributed to the challenges such as lack of adequate industrial exposure in the UUGFADPs due to few industrial attachment and fieldtrips and less involvement of the FA industry in the UFAD curriculum development.

3.2 The UFADGs lacked sufficient practical experience

The industrial attachment reports further noted that UUFADSs needed more practicals to be able to perform better in the FA industry. The majority (82, 83%) of UUFADSs indicated that apart from what they had learnt at the university, most of them felt that they needed additional training after graduating in addition to what they had learnt at the university. Table 3 presents the areas in the UUGFADPs where the UUFADSs felt that they required additional training apart from what they had acquired at the university.

Table 3: Areas that UUFADSs required further training

Area	Frequency	Percentage (%)
CAD	58	70
Practicals	56	67
Business management	46	55
Freehand cutting	40	48
Use of industrial machines	30	36
Designing	28	34
Garment making/stitching	22	27
Pattern cutting	21	25
Fashion marketing	16	19
New equipment technology	15	18
Interior design	15	18
Drawing	14	17
Fashion illustration	10	12
Modeling	8	9
Event organizing	7	8
Printing technology	6	7

N=82

Note: Multiple responses were allowed

Source: Field data from UUFADSs respondents

As shown in Table 3, 56 (67%) UUFADSs required additional training in practicals.

Forty eight UFADGs (89%) as shown in Table 1 observed that the UUGFADPs lacked practical experience as they had theoretical ideas but not practical and, therefore, the training just gave an insight to the FAD industry and, thus, only laid a foundation to pursue a career. The UFADGs argued that most of what the current FAD job required was not covered in the UUGFAD training. These graduates felt that the UFAD training was not enough, thus one needed more practical training:

University FAD training was more manual and has been overtaken by technological changes.....fashion is dynamic; therefore additional training is necessary to keep up with changing times (UFADG respondent No. 26, 2011).

Figure 1 shows UFADGs’ perception of UUGFADPs’ relevance to their current positions.

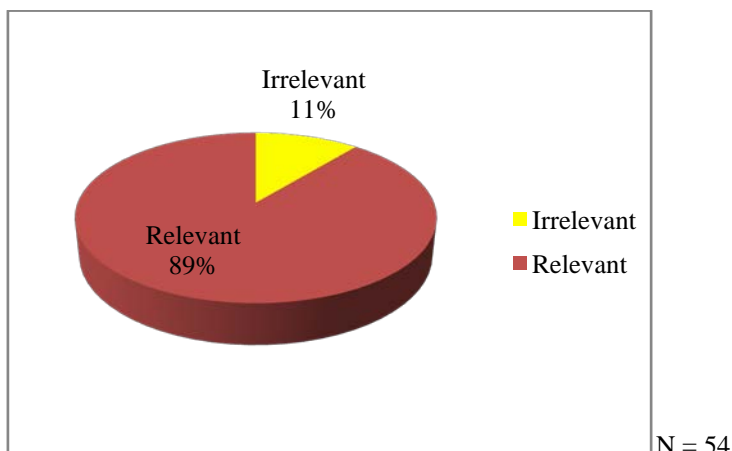


Fig. 1. UFADGs’ perception of UUGFADPs’ relevance to their current positions

Source: Field data from UFADGs respondents

The 6 (11%) UFADGs as shown in Figure 1 who felt that the UUGFADPs' training was irrelevant to their current positions said that the main reason for irrelevance was because the UUGFADPs were too theoretical. Most UFADGs (48, 89%) though said that the training they underwent at the university was relevant to their current positions:

The employers get surprised when a 'whole' graduate of Fashion cannot cut or construct a garment.are seen as timid, more theory oriented, expensive to pay and too informed (UFADG respondent No. 16, 2011)

Most (32, 59%) of the graduates needed additional skills to enable them get the job done by acquiring more hands-on skills to work more effectively in the FA industry.

Twenty EUFADGs (83%) as in Table 2 noted that UFADGs needed to polish on the practical areas. Like the UFADGs, the EUFADGs noted that practical training in UUGFADPs was weak; skills in some areas, such as free hand cutting and garment construction, were not sufficient:

The degree graduates are good in terms of paper work and areas such as marketing, advertising, designing and drafting whereas diploma and certificate holders are better in practicals such as sewing and free-hand cutting. At the end of the day, in fashion designing, a better person is one with more experience not necessarily the education (EUFADG respondent No. 11, 2011).

They lack the practical experience and most of them have never seen the machines we use (EUFADG respondent No. 6, 2011).

The finding concurs with the Republic of Kenya's [7] and Siringi's [8], which revealed that technical graduates had no hands-on experience. The result also agrees with Muigai *et al.* [21] who note that, some of the university curricula have been criticized by employers as theoretical. Rao and Joshi [12] too observed that the Indian fashion and apparel design entrepreneurship education lacked adequate practical exposure. Poor practical experience by the UFADGs can be attributed to the challenges such as inadequate learning materials, equipment and space, less time allocation for practical lessons, too much theory and few industrial attachments hence less industrial exposure.

3.3 The UFADGs lacked specialization

Thirty nine (72%) UFADGs as presented in Table 1 noted that the UUGFADs' training lacked specialization hence the need for curriculum review. The UFADGs observed that the UFAD they trained in gave them the basics and a foundation in FAD though they needed additional training to enable them carry on with their duties:

I needed to learn museum basics on how to handle museum objects/textiles because they should be conserved and preserved (UFADG respondent No. 23 (Exhibition designer), 2011).

According to the UFADGs and the EUFADGs, the FAD programs were relevant though broad-covering all areas in fashion design but not at greater depth as the FAD training gave them only the basic knowledge. Due to the fact that they lacked specialization, the graduates needed to learn more on a field of interest as one cannot do little of everything in the industry:

.....knows a bit of this and a bit of that, lacking in depth skills in real fashion life situation. May be this is due to the limitations of the local fashion education (EUFADG respondent No. 18, 2011).

The finding is not in line with Riechi's [18] emphasis on the fact that specialization in courses avoids competition, which leads to unjustified waste of resources. Lack of specialization in the UUGFADPs can be attributed to repeated or irrelevant courses that were mentioned by the respondents. Teaching courses that were not relevant to the FAD study may result in waste of time in focusing on what was not necessary instead of specializing on FAD areas that were relevant to the FA industry.

4. Conclusion

The following training needs of the UFADGs were established: The UFADGs had low industrial exposure, lacked experience on market-relevant selling strategies and current fashion market trends. The UFADGs lacked sufficient practical experience as most of them required additional training in practicals whereas most lacked practical experience as the university training programs had more theoretical ideas than practical. The UFADGs lacked specialization as they observed that the UFAD they trained in gave them the basics and a foundation in FAD though they needed additional training to enable them carry on with their duties. The UUGFAD training therefore may not have been relevant enough to the manpower needs of the industry as it rendered the UFADGs with the training needs such as lack of specialization, inadequate practical experience and less industrial exposure.

Based on the findings, this paper recommends that the UUFADs should be given maximum exposure to the FA industry. This can be through more industrial attachment sessions, every year from the 2nd to 4th years of study. Exposure to the industry can also be ensured through involving the students in fashion events such as fashion shows, fashion exhibitions, and fashion competitions that are jointly organized by UFAD departments and the FA industry. The UUGFADPS should also be designed to have more practicals than theory and specialization in students' area of interest at a certain level of study.

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