

Analysis on Students' Performance to Promote Gender Equality in Creative Fashion Design

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ABSTRACT

The fashion industry has prospects and it can help to project the economy to compete with the international market. However, the extent of gender imbalance emerging from the Fashion Department of Kumasi Technical University is becoming a threat to the future of the industry. This paper is aimed at creating awareness of the extent of gender imbalance and promoting the inclusion of more male fashion students in fashion institutions. This was achieved by conducting an analysis of gender performance in Creative fashion design processes. The study employed educational Design and Quantitative research methods with a descriptive style of analysis. With a sample size of n=191, a structured questionnaire was distributed to participants on different occasions during class hours to gather relevant data for the study. The results showed that, though the female students were more than the male students, the male students performed better than the female students in terms of creative fashion design processes. Most of the students were of the opinion that the famous fashion designers in history and the present day are men. Also, most of the students responded that the best fashion designers in their locality are men. The study recommends that society needs to be educated and encourage more male students to take up fashion as a career.

Keywords: performance analysis; gender equality; fashion students; fashion design; creativity

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1. INTRODUCTION

The Ghanaian fashion industry has prospects and it can be harnessed to project the economy to another level, just as it is doing for most advanced countries around the globe. The fashion industry, globally is contributing greatly to unemployment reduction and economic growth (Ikram, 2022; Khurana, 2022). According to Luo (2020), the development opportunities in the fashion industry are unprecedented. However, the extent of gender serotype is becoming a major threat to the growth of the industry in some parts of the world (Perkasa, 2018). The situation can be related to most fashion institutions in Ghana where gender imbalance emerging from student enrolment is raising a lot of concern to facilitators of fashion design departments. It is anticipated that this can pose a major threat to the growth of the fashion industry if nothing is done about it. Since the inception of the polytechnics, there has been quite a gap between male and female students' enrolment in the fashion department of Kumasi Technical University, and in recent years, the situation looks quite alarming. Figure 1 shows that from 2011 the percentage difference between male and female students was 1.8% (Male = 49.1% and female = 50.9%) and it increased marginally to 8.2% in 2012. Over the years the percentage difference

kept increasing, and unexpectedly, there has been a considerable increment from 20% in 2014 to 49.2% in 2022. With the introduction of higher programmes in the department, the recent figures are even more alarming. The percentages of gender enrolment in the current study shows that male students and female are about 10% and 90% respectively.

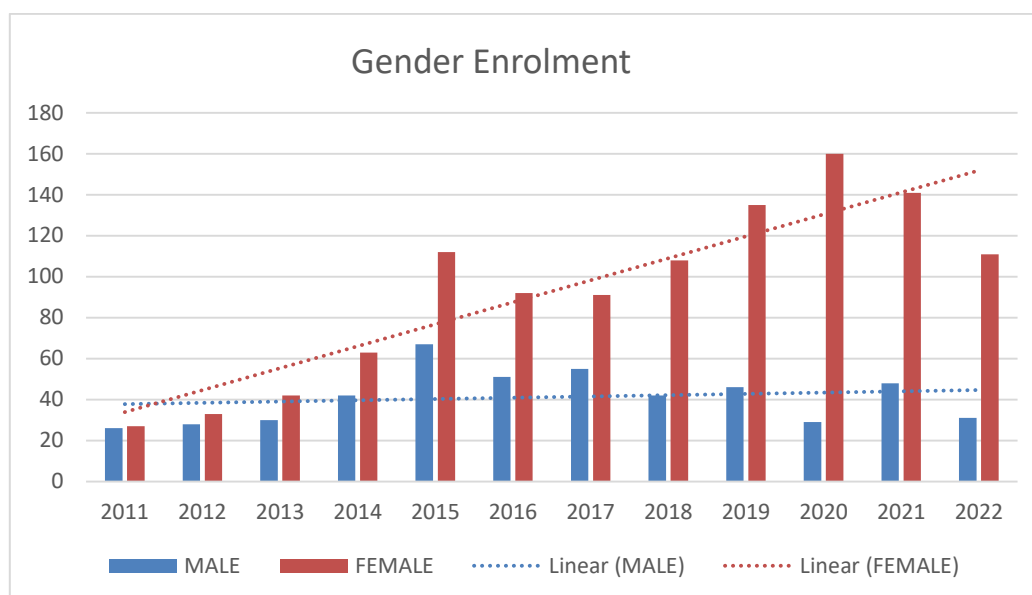


Figure 1: Gender Enrolment in Fashion Design

On the other hand, when an observation was made on the same students in other departments, there were a lot more male students than female as remarked by Debrah (2022). Research in the labour market has proven that there are a lot more women in the fashion industry than men as compared to other industries (Bain, 2018). However, the situation is expected to reduce as the society begin to appreciate the prospects of the clothing/fashion design career.

There have been a lot of concerns raised about gender in career choices and obviously, most of these discussions dwell on discrimination against women (Miotto & Vilajoana-Alejandre, 2019). This has drawn the attention of gender inequality issues towards women in education and in most career choices. However, according to Perkasa (2018), there are gender stereotypes in some societies and parts of the world where men are indirectly denied equal opportunity to pursue a career in the fashion industry. The author posits that the fashion industry in such regions can grow rapidly if men are offered the opportunity to take active part in the industry. History and current development in the fashion industry show that men have a greater impact on the fashion industry and their truncated involvement can be a major threat to the growth of the industry in any community (Kent, 2003). As the industry aspires to be one of the best in Africa and competitive in the world market, this area is very critical to promote creativity as it has been done in the past. Nonetheless, while past studies focus on the employment status and performance of Art students in the industry (Howard, et al., 2021), strategies to improve fashion design programmes with regards to its mission and vision in tertiary institutions (Mbatha, 2023), the interest of rural male students only in vocational programmes (Gudyanga, et al., 2019), etc. the present study focuses on the performance of both genders at the tertiary education level and admonishes male students to embrace fashion design as a career.

The fast-growing nature of the fashion industry has shifted the attention of most researchers to fashion leadership, fashion influencers, the job security of graduates in the sector, the welfare of staff and progress of fashion departments at the tertiary level (Workman & Lee, 2017; Lang & Armstrong, 2018; Howard, et al., 2021; Rensburg, et al., 2023; Mbatha, 2023; Shin & Lee, 2023; Laszkiewicz & Kalinska-Kula, 2023). Analysis and comparison of gender performance of tertiary students in fashion design programme has therefore received little attention from researchers. This presupposes that the key roles played by men in the past to sustain the fashion industry and the promising future of the sector as a result of the incredible performance of male students would be out of sight in research if attention is not drawn to the situation. To fill this gap, the present study seeks to analyse the performance of male and female students at Kumasi Technical University to promote and encourage the involvement of more male students to take up fashion design as a career.

Literature Review

The Polytechnics and Technical universities were established in Ghana with a mandate. They were to focus on providing high caliber career-focused technical personnel, possessing knowledge-based modern skills for various sectors of the economy. For industry, they are crucial for transforming knowledge and ideas into goods and services through production processes. They are needed to ensure and sustain efficient productivity in the industry (Ansah, 2012). The Fashion Departments of the Technical Universities as part of the agenda, were established to build competence in technological and scientific development in the field of Fashion Design and Textiles studies to boost the Ghanaian economy (Amos, 2013).

With such expectations, fashion designing in higher learning was to operate differently from conventional fashion design, to promote the industry as a competitor in the international market. Fashion design concepts are based on designs that can lead to change in society. With the limited resources, it is anticipated that the fashion institutions research and unearth ideas that does not only bring solutions to overcome problems but also come out with ideas that offer opportunities for innovation in the fashion industry (Manavis et al., 2017). In most cases majority of women are employed to help in the labour force, yet further studies suggest that the higher decision-making and creative processes which sphere head the affairs of the industry are done by men (Bain, 2018).

According to the European University Association report (Peters, 2014), progress towards a knowledge-based society and economy will require that universities, as centres of knowledge creation, and their partners in society & government give creativity their full attention. It is therefore important that the critical factors that can project the industry should be identified and promoted.

1. Gender and career choice

Researchers are still investigating the causes of influence of career choice among students at the beginning of their career (Abe & Chikoko, 2020). Correll (2001) investigated how cultural beliefs about gender differences influence the early career –relevant choice of male and female. It is therefore stated that cultural viewpoints on gender are usually discussed based on individuals' bias perceptions of their competence at different career-relevant task, as against actual abilities. Consequently, people consider this gender perception differences accepted in their cultural settings when making career choices. Thus; cultural and societal viewpoint about gender positively and negatively lead men and women in many different career decisions (Perkasa, 2018).

In many societies, most especially Africans and some part of Asia, certain vocations are preserved for men and others for women. There may be no strict rules on these choices but societies in these regions have some gender bias perceptions on such career choices. In Ghana for instance, indigenous

woven and dyed fabrics (Kente and Adinkra respectively) in the Ashanti region is associated with men while marketing of the fabrics are sometimes reserved for women (Boateng, 2011; Cohen, 2019).

2. Tracking students gender performance with Teaching and learning analytics

The study began with the implementation of Teaching and learning analytics to inform decision in the creative fashion design process. Teaching and Learning Analytics focuses on the measurement, collecting, analysis, and reporting of data about learners and their context in order to better understand and optimize learning in specific areas of education (Siemens & Gasevic, 2012). The analytics implementation of the study was to monitor and understand individual student's Creative designing processes regularly, in order to support and guide them to a successful goal (Dobozy, 2016). The purpose of the study was to track the strengths and weaknesses of both male and female students who are admitted from different backgrounds into the fashion department. In the processes of the analytics implementation, there were a lot of interesting trends in the female and male performance which prompted the researcher to search further in this direction. Prior to this, Nagy (2016) conducted a study on the Evolution of a Practical Analytics Tool for Staff and Student Engagement which was aimed at Tracking and Visualizing Student Effort. The result showed that teachers were able to assess students' behavior such as "effort" in a practical way (Kellaghan, Madaus & Raczek 1996), and the visual analytics also provided insights into gender efforts, among other things, which formed the basis for productive dialogue between staff and students. Such data are usually taken from the Learning Management System (LMS) log files which provides insight to students' engagement in the course. However, it does not always show the actual performance of students. There has been a lot of research in learning analytics in the area of Business, medical science and others but research in the area of fashion, gender and development of creativity with Learning Analytics (LA) tools is rare.

3. Creative Fashion Design

One key area that can guarantee the prospect of the fashion industry is the creative fashion design process. It is therefore advocated that in order to achieve the goal of becoming an international competitor, the fashion design industry needs to pay attention to its creative design processes because creativity is an integral and important part of the fashion design process (Asemsro & Obinnim, 2020). Thus; the fashion design and vocational institutions should consider and give the creative fashion design process full attention (European University Association, 2007). With the absence of creativity in design, there would be no potential for innovation, thus, where creative ideas are applied, they translate into commercial value (Munford et al., 2012). This study therefore focuses on the creative design aspect of the fashion designing processes, and try to relate it to the revolutionary experiences of the fashion industry in the past to reveal certain trends that can help the industry today. Guilford (1981) outlined four core features in measuring creativity when practiced. These comprise originality or innovation; elaboration; fluency and flexibility.

4. The need for Learning Analytics for decision-making in higher fashion institutions

According to Elia (2011), in the discussion of educational issues, regardless of the approach, the following questions frequently come up: How successful is the chosen course? Does it satisfy the student's needs? How can the requirements of students be met? What interactions are most productive? How may they be made even better in the future? Having observed the productivity of the fashion department over a decade, the researchers have been asking similar questions; having been confronted with the current complexity of the faculty with influx of technologies, number of enrolment and dynamic nature of the fashion industry (Eshun, 2012). The researchers have come to realise that the best way to improve the situation is to have a better insight into students' progress in all the fashion design processes or activities

in order to predict or prescribe the needed solutions to improve the industry in the country (Saqr et al. 2017 & Demetrios, 2017).

Elia et al. (2018), further state that, because traditional methods rely on student evaluation, the analysis of grades and attrition rates, and instructor perceptions, which are typically gathered at the end of a semester or completion of a course, their approaches to addressing the aforementioned questions have not demonstrated to be particularly effective. As a result, learning evaluation and analysis are often poor in quality. Lack of appropriate feedback and self-reflection tends to delay intervention and impede the rate of progress.

2. METHODS

The quantitative research method coupled with an educational Design and a descriptive survey design was used for this study. This allowed the researchers to analyze the performance of male and female students and also ascertained the perception of students on the subject. In order to effectively measure the performance of students in the creative fashion design process, the researchers adopted the core aspects of the Functionality, Expressiveness and Aesthetics model (FEA) (Stokes & Black, 2012; Chae, 2022; Lee, et al., 2023) which has been widely used by a lot of educators as an assessment guide for fashion consumers and students. These areas were: Self-concept, fit of Garment, colour combination, Drawing skills and Beauty.

Data collection covered two major areas including students' project works and their individual views independent from their projects. The various programs (Btech-4yr, Btech-Top up, Diploma and HND) were visited on different occasions during class hours and structured questionnaire was delivered to solicit their views. Also, data was gathered from the teaching and learning analytics process in the classroom to assess their performance. The data obtained through the questionnaire and classroom projects was analysed with 'Jamovi' statistical software. The targeted population of the study was fashion design students engaged in the teaching and learning of creative fashion design in the Faculty of Creative Arts and Technology, Kumasi Technical University (FCAT, KsTU). With the purposive sampling technique, 191 students were selected for the study and the research participants were 140. Purposive sampling is considered to be appropriate when the researcher can have close access to data from the target group who also have specific knowledge in the field (Zhi, 2014).

3. RESULTS AND DISCUSSION

Some commentators in the fashion industry are raising gender-related questions on whether it is true that most famous fashion designers are men (Quora.com, 2022). With this notion, the researchers conducted related research to find out the opinion of the fashion community in KsTU. The questionnaire was adapted from UNESCO Bangkok and Korean Women's Development Institute (2013) and was edited to focus on the direction of this study. The total number of respondents was n=191. Tables 1 and 2 show the distribution of the category of the respondents. According to the ratio of the student population, the figures show a fair representation of the whole faculty.

Table 1. Respondents according to Programme

Levels	Counts	% of Total	Cumulative %
Btech(4yr)	25	13.0 %	13.0 %
Btech top up	1	0.5 %	13.5 %
Diploma	55	28.6 %	42.2 %
HND	111	57.8 %	100.0 %

Table 2. Gender

Levels	Counts	% of Total	Cumulative %
Female	146	76.4 %	76.4 %
Male	45	23.6 %	100.0 %

The ages ranged between 'below 19 years' to 'above 40 years' with heterogeneous educational backgrounds. The sample was purposefully and conveniently chosen due to the nature of the study, as it seeks to gather information purposely for the assessment of students' performance.

Analysis

The researchers conducted a reliability test to ascertain the reliability of the data and concluded that the data was very reliable at 0.984 according to Cronbach's Alpha of >0.7 . This also means there was consistency in the way peer assessors awarded the marks. Table 3 shows the mean, standard deviation and the Cronbach's alpha.

Table 3. Scale Reliability Statistics

	mean	sd	Cronbach's α
scale	4.69	1.86	0.984

1. Gender Performance analysis and discussions

Gender performance is an interesting and a bit controversial issue. Table 4 presents a detailed statistical interpretation of the data, showing the performance of the male and female students in the study. According to the table, the total performance of all projects in each of the criteria was $n=368$ for females and 192 for male. Colour had one missing number for female, hence $n=367$. In all cases, the mean values for male were higher than that of the female. Again, the maximum performance values in each of the criterion for the male were higher than those of the female. Although male students performed better than females, it should be noted that the researchers in the present study observed increased interest of students in the fashion design programme. This discovery is contrary to a study by Mbatha (2023) who reports a decline in students' interest in the Fashion Design Programme of Walter Sisulu University due to improper planning and exploration of the mission and vision of the department by management. The results obtained in this study on the performance of male students, however, suggest a promising future for the Fashion department of Kuamsi Technical University and the fashion industry as a whole.

Table 4. Descriptives

	Gender	Feel	Fit	Colour	Drawing	Beauty
N	Female	368	368	367	368	368
	Male	192	192	192	192	192
Missing	Female	0	0	1	0	0
	Male	0	0	0	0	0
Mean	Female	4.38	4.42	4.66	4.60	4.90
	Male	4.56	4.66	4.86	5.00	5.26

Table 4. Descriptives

	Gender	Feel	Fit	Colour	Drawing	Beauty
Median	Female	4.67	4.80	5.00	5.00	5.33
	Male	4.69	4.80	5.00	5.20	5.85
Standard deviation	Female	1.83	1.85	1.94	1.89	2.03
	Male	1.81	1.82	1.95	1.97	2.11
Maximum	Female	8.30	8.00	8.30	8.00	9.00
	Male	8.80	9.00	9.00	9.00	10.0

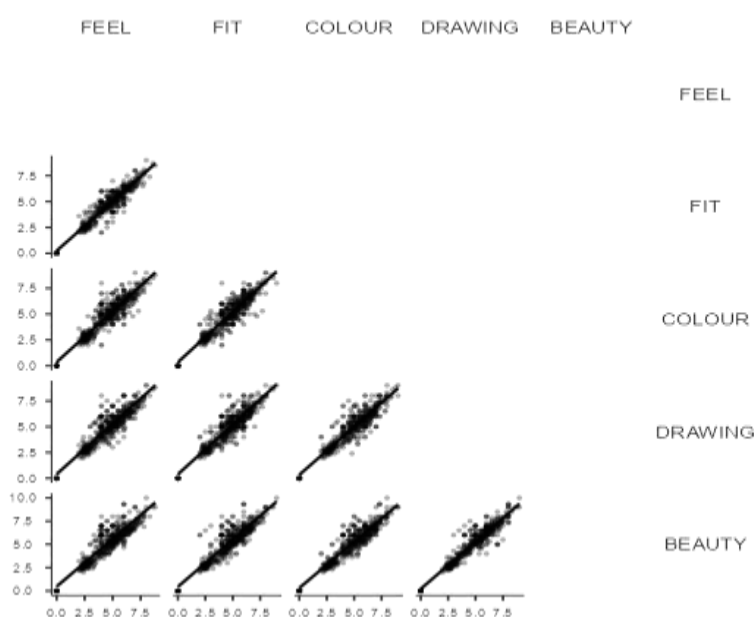


Figure 2. Plot

The scatter plot shown in figure 2 above gives a description of performance of both male and female and it also shows the trend of the performance. This suggests that both genders progressively performed better and because of this positive correlation, the progress of one gender had no negative influence on the other (Zaid, 2015).

2. The results of the gender survey

The results of the gender survey was analyzed under the following headings:

a) Students with Fashion Background and Preferred course

Before coming to the fashion department, most of the students preferred to do other courses like Textiles (only) and Graphics than to do Fashion design. On the contrary, 133 representing 69.3% of the respondents in the recent survey responded that they had an interest and chose fashion as a career. Out of the total number ($n=191$), only 16 male students and 45 females did fashion-related courses before coming to tertiary. Further, 34 male students out of 45 responded positively that they would like to pursue fashion as a career. The positive attitude of male students toward fashion design as observed in this study is in contrast with results obtained in a similar study by Gudyanga, et al. (2019). The authors (Gudyanga, et al., 2019) discovered that only 10% of male students are willing to pursue Fashion as a

course. Again, perceived career image is noticed in the present study to be a contributing factor to the willingness of male students to pursue fashion design in tertiary institutions. This result corroborates Morgan and Shim's (1990) assertion confirmed by Hodges and Karpova (2009) that pursuing a degree in fashion is self-motivated with perceived career image being a contributing factor.

b) Male and female production choice

From the study, 158 representing 82.7% of the respondents prefer to do Unisex (both men's and women's clothing) after school. This affirms that the issue of bias to either tailoring and dress-making in this context was eliminated and could not influence the response of the respondents.

c) Famous fashion designers in the world based on gender

The study sought to know whether the respondents agree that the famous fashion designers from the past to the present in the world are men. It could be observed from Table 5a that, 41.1% and 25.0% of the respondents 'agree' and 'strongly agree' respectively that the famous fashion designers in the world are men. Again, from Table 5b, 44.5 % and 19.9% of the respondents 'agree' and 'strongly agree' respectively that the famous fashion designers in recorded history are men. The students' response in agreement with Rensburg, et al. (2023) establishes the fact that although females are dominating the industry (McRobbie, 2013), male fashion leadership is unequivocally felt in the sustenance of the industry.

Table 5a. Do you agree that the famous fashion designers in the world are men?

Levels	Counts	% of Total	Cumulative %
Agree	79	41.1 %	41.1 %
Disagree	33	17.2 %	58.3 %
Neither agree nor disagree	23	12.0 %	70.3 %
Strongly Agree	48	25.0 %	95.3 %
Strongly Disagree	9	4.7 %	100.0 %

Table 5b. Do you agree that the famous fashion designers in the past are men?

Levels	Counts	% of Total	Cumulative %
Agree	85	44.5 %	44.5 %
Disagree	33	17.3 %	61.8 %
Neither agree nor disagree	27	14.1 %	75.9 %
Strongly Agree	38	19.9 %	95.8 %
Strongly Disagree	8	4.2 %	100.0 %

In connection with the above statistics, the history of fashion reveals that the modern industry, based around firms or fashion houses run by individual designers started in the 19th century with Charles Frederick Worth who, beginning in 1858, was the first designer to have his label sewn into the garments he created. Before then, clothing was mainly a household vocation, usually identified with women (Bendall, 2023). Worth is known by fashion historians to be the founder of haute couture and is also credited with revolutionizing the business of fashion (Milbank, 1985).

Christian Dior was a French fashion designer, also known as the founder of one of the world's top fashion houses 'Christian Dior SE', which is now owned by the parent company LVMH. Dior's remarkable influence in the world of fashion occurred in 1947 with his creative well-known introduction of the New Look collection which revolutionized the fashion industry after World War II. He has a lot of fashion houses all around the world and they could be identified in all five continents (Sauer, 2018). These are just a few of the male designers who initiated the creative fashion design we see today. It can then be

concluded that, although there are a lot of women in the fashion industry, the performance or the influence of the men-designers has a greater impact on the industry.

Again, Table 6 shows that the majority of the respondents (108=56.8%) responded that even within their local community, the men designers perform better than the female designers (83=43.2 %). Finally, a clue from the history and performance in the study also gives an indication that encouraging and attracting more male students to take fashion as a career will go a long way to promote the fashion industry.

Table 6. Best Designers in the respondent's locality

Levels	Female	Male	Total
Female Designers	76	7	83
Male Designers	70	38	108

Unfortunately, most societies in the sub-Sahara have created an environment where fashion is a preserve of female students and quite not long ago, it was reserved for students who do not perform well in formal education. In Ghana, not until the late 1990s, most male students were shy to identify themselves as fashion students and most of the parents were not in support of their male wards taking fashion as a career. Over the years, some Technical Universities have experienced similar gender issues which have triggered drastic interventional measures. One such intervention is the institution of scholarships for female students willing to pursue engineering and TVET programmes, which was necessitated as a result of the low patronage of female students in these programmes (Debrah, 2022). The Fashion Department on its part has had a hard task of counseling male students on the prospect of the clothing industry and how it can improve their lives.

3. Practical implication

The researchers believe that such education, as stated above, needs to be revived and extended beyond the boundaries of the school to encourage male students to pursue fashion careers. In this way, the fashion industry can attract more male students and it will go a long way to project the fashion industry and also serve as a solution to the unemployment menace in the country.

4. CONCLUSION

Teaching and learning analytics are gradually growing very fast and it is bringing in new dimensions to revolutionize the educational environment to meet the current complexities in higher educational institutions. Unlike theoretical courses, project-based courses have been challenged with detailed analysis of students' performance (formative assessment). This study has provided a detailed analysis of gender performance which is a critical consideration in the fashion industry. There have been challenges of gender serotype and questions on gender performance in promoting the fashion industry. Yet, the fashion industry exploration revolves around the past, present, and future and it is prudent to reflect on the past development in order to solve current problems. The study has recollected from the past and current analysis that men have a lot to play in the promotion of the fashion industry and their truncated involvement can be a threat to the industry. It is therefore recommended that Government and institutional interventions like scholarships, public education and career Guidance & counseling should be intensified, especially for male students to pursue fashion programmes to promote the industry (Debrah, 2022). The researchers believe that this study can be a foundation for further research into the matter and to find the root cause of this issue for the development of processes to curtail this problem.

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