Processes Deployed in Construction of Ghanaian Traditional Costumes in the Technical Universities in Ghana

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Abstract—**Even though multiple studies have been done on traditional costumes in most developed countries over the years, only a few of such studies have been done in the context of Ghanaian Traditional Costumes. Specifically, not a single study is found on construction of GTCs in Ghana and the need of emphasis of GTCs over western costumes as part of the Fashion Design and Technology programme (FDP) in Technical Universities in Ghana. This study sought to investigate the processes employed in construction of GTCs in fashion design and technology programme in the TUs. It adopted convergent mixed method design through which qualitative and quantitative data was collected from students, lecturers and HoD affiliated to six out of the ten TUs in Ghana: Accra, Kumasi, Sunyani, Cope Coast, Tamale and Ho. Target population was 1265 comprising head of departments (HoDs), lecturers and students. Simple random sampling was used to select six universities from the ten TUs. Purposive sampling was used in sampling 24 lecturers of fashion design including HoDs, and Proportion sampling was used to sample 306 FDSs. Total sample size was 330. A combination of descriptive statistics and multiple regression analysis was used to interrogate relationships between processes employed by lecturers and construction of GTCs. The results showed that the lecturers employed R-T-W production processes in teaching construction of Ghanaian traditional costumes. However, there were numerous challenges in the efforts to promote construction of the GTCs. Therefore, the study concluded that addressing the challenges can enable more constructions of the GTCs by the students during and after graduation from Fashion Design and Technology programme.**
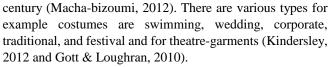
Index Terms—**Costume Construction Processes, Ghanaian Traditional Costumes, Fashion Design and Technology, Technical Universities**

I. INTRODUCTION

Worldwide in history, every nation has traditional costume. Costume is an ensemble and unit of clothing outfit specially designed and worn by a precise ethnic group for a specific event or occasions the costume also function as a mark of national identity. Kpessa-Whyte and Tsekpo (2020) noted that tradition of making garments is as old as mankind itself, to the times of 2500 BC when the first evidence of printed fabrics has been traced. The earliest of printed textile and probably garment have also been traced to the 15th century (Macha-bizoumi, 2012). There are various types for example costumes are swimming, wedding, corporate, traditional, and festival and for theatre-garments (Kindersley, 2012 and Gott & Loughran, 2010).

Every country or ethnic group has historic traditional costumes that are passed from generation to generation (Dikko, 2018). Advancement in technology over time has seen much more progress in the development of new designs of fashion designs, this has seen the development of the ready to wear garments from hand-made garments. However, Tawfiq and Marcketti (2017) indicates that traditional costumes (TC) are integral part of one's culture and are used to express country, region, group, or individual cultural identity. Yang, Shafi, Song, & Yang (2018) stressed the importance of cultural tradition preservation not only to maintain community identity but also to provide economic benefits and other values. Further fabrics used for the traditional costumes have unique printed textile design that depict their tradition.

Globally, for instance, the kilts of Scottish, gypsy costume of Romani and kimonos of Japanese are typical examples of traditional costumes that describes their identity as a group of people. Japanese women heavily adopted western costumes for their daily wear. However, they wear their traditional costume such as silk kimonos on special events (Patrick, 2005). Audita, Figueiredo, Gurrieri, & Figueiredo (2023) state that Indonesians women wear kebaya traditional costume to reflect their origin. (Minhus & Huie, 2021) alludes that wearing traditional costumes brings about togetherness, simplicity, aestheticism, self-confidence and cultural revival to individuals and nation as a whole. Yang et al. (2018) explained that, the traditional costume industry is regarded as a means of protecting and endorsing cultural apparel. Tawfiq and Marcketti (2016) further detailed that, traditional costume plays a very paramount roles in western Saudi Arabia especially in the Saudi women's livelihoods. He states that, the costume has rich history for events such as weddings. Costumes in India rest on ethnicity, geography, climate, and cultural traditions (Raifa & Joy, 2019). They further state that, India National Traditional Costume (Dhoti) has great personification in relations to fibres, weaves, colours, symbols and some traditional costumes are used for spiritual and idol worshiping.

In Africa, precisely West African, some traditional costumes like Kaba & slit and Batakari are common traditional costumes among others. Dikko (2018) further explains that, in Nigeria traditional costumes are used to

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identify social status in the society such as traditional rulers and royal class. The Eswatini do not allow foreign costumes in their important officials' national rituals of kingship and other events. The Emaswati realised that costume clothing enacts a crucial role in grooming individual and national identity (Aris, 2007). Notable traditional costumes that are still in use include those of Nigeria. Remarkable and protected over time (Kpessa-Whyte, 2020). New clothing and designs such as suits, shirts, skirts, coats and jackets but with incorporated African designs have been introduced in the market and offer a great challenge to the local designs due to changing fashion trends from globalization effects all over the world. This is the new challenge presenting against the local designs (Quartey, 2006).

In Ghana traditional costumes are held in high esteem because they are beautiful, depict the culture and ancestral heritage of the country. When worn it gives a distinctive atmosphere of dignity and exhibits that classic apparel of fore bearers (Essel & Amissah 2015: Kwakye-Opong & Adinku, 2013). Since memorial of Ghanaian democratically elected governments, all the presidents elect wore either of the three of Ghanaian Traditional Costume (GTCs) (Quaicoo Essel, 19 C.E.). The costumes are worn during national and official events like the inauguration of elected presidents, parliament, courtesy calls, and corporate offices.

The Ghanaian traditional costumes are also worn to church, marriages, festivals, naming, outdooring, funerals, and parties. This confirms how Ghanaians cherish and value their traditional costumes. Examples of Ghanaian traditional costumes are Smock, cloth-drape, Dansikran, Kaba & Slit, Batakari and jumper and among others. Due to the importance of the costumes, March 2023 which was the 66th Ghanaian Independence Day (Ghana month) was mark with beautiful and colourful traditional costumes in various ways throughout the month. Others were traditional drumming and dancing, foods, story-telling's, and others (MyjoyOnline.com, 2023).

Ghana's history and politics are taught across the education levels in the country, but little attention is given to traditional costumes construction leaving room for adoption of western costumes (Dzramedo, Ahiabor, and Gbadegbe 2013). National Higher Diploma (HND) in Fashion Design Studies at the Technical Universities (TUs) in Ghana is a three-year programme whose principal objective is to prepare students to identify, adopt and use local materials to develop and change of the fashion and textile industry (TTU 1st Cong. 2017). The HND fashion design programme equipped fashion students to be versatile, high calibre personnel, give comprehensive and broad technical training in the field of fashion design.

The programme enhances students' creativity, makes them self-employed, creates employment, and additional studies opportunities (TTU 1st Congregation, 2017). However, the emphasis on foreign costume construction over Ghanaian Traditional Costumes during the fashion design programme has been the concern of Ghanaians. In addition, Ghanaians are gradually losing their identity through foreign costumes. Therefore, there is the need to investigate strategies deployed in the construction of Ghanaian Traditional Costumes in the

fashion design programme in Technical Universities in Ghana. .

II. STATEMENT OF THE PROBLEM

The construction of Traditional Costumes has become a very significant part of vocational education in Ghana. Due to the overriding aim of expanding job opportunities in technical, protecting and endorsing cultural apparel in vocational training. Promoting and preserving the local heritage through fashion and education awareness programmes is very important to Ghanaians. Ghanaian TCs define Ghanaian culture in dressing and clothing globally and are worn to formal and non-formal ceremonies. It has been observed that due to the importance attached to the Ghanaian traditional costumes' majority of Ghanaian wears it to work on every Friday. Also, Higher National Diploma fashion design programme objective is to train learners to become endowed with the requisite knowledge, skills and competence in both local and foreign costumes.

However, the dominance of construction of western Costume over Ghanaian Traditional Costumes neglecting the objective of constructing much Ghanaian Traditional Costumes during the HND fashion design programme is now the major problem facing the authorities of technical universities. Currently the few Ghanaian Traditional Costumes in the market are mostly produced by aged Ghanaian Tradition Costume fashion designers. Ghanaians are also concerned why the young designers in the country are not interested in the Ghanaian Traditional Costumes construction. The insufficient involvement in Ghanaian Traditional Costumes by young designers may be the result of inadequate construction of the same in fashion design programme. Therefore, this study minimises the gap of foreign costume over Ghanaian Traditional Costume and add knowledge to fashion design programme module contents.

III. LITERATURE REVIEW

A. Brief History of Ghanaian Garment Production

Every country or region has its own individual identity, which is expressed through traditional or unique attire, customs, folk songs, and language (Tajuddin, 2018). Being patriotism to one's traditional costume dresses makes it inherently self-protective (Caeiro, Ang, Ham, Martins, Elizabeth, & Aldaz, 2020). Ghana is an African country with a diverse culture, one of which is the country's bright and flamboyant textile legacy (Adikorley, 2013). Traditional clothing and body modifications (e.g., makeup and perfumes) reflect national culture and historical heritage. These also include all the objects, garments, and body modifications that encapsulate the history for specific members of a community (Tawfiq & Marcketti, 2017).

Every nation or region has its own distinct identity, which is expressed by traditional or distinctive clothing, customs, folk songs, and language (Tajuddin, 2018). Before colonialism and the introduction of contemporary garment construction, Gold-Coast, now Ghana, was producing and wearing garments (traditional costumes). Some of these costumes are Smock, Kaba and slit cloth-drape, jumper, jalabiya, dansikran, batakari. Although there is no scholarly study to prove, one-on-one interaction with some elderly Ghanaian

who learned the contemporary apparel trade through an apprenticeship in the early colonial era affirmed it.

B. Social and Economic Benefits of Traditional Costumes

Market demand is the starting point of every business market investigation study. The fashion industry has become a long way and is now one of the world's labour intensive and ranked fifth globally in employment (Khan & Roy, 2023). It is the primary work to determine market demands and endorse training objectives (Jiang and Dong 2017). Garment's quality is very important in persuading shoppers' buying conduct. Swinker & Hines, (2006) suggested that clothing criteria that can influence potential buyers: as fabric, fibre content, construction details, brand or designer labels, country of origin, and store image. Fashion designers are tremendously modernising their countries traditional costumes which made them a great relieved from highly competitive global fashion market (Licence, 2015). Wang (2017) showed concerned about rapid increase in IT changed low-cost made to costume brand market to penetrate both local and international market. However, most of the brand designs are low-level and full of multiple imperfections.

Wang recommended fashion institutions keep up line quality costume designs to meet market demand. (Workman & Cho, 2013) (Wu & Delong, 2006) claimed that preferences in clothing are affected by the culture in which a person nurtures individual differences such as gender, fashion roll module, clement, and the need to touch. They are also different because of context. According to Lu (2015) a contemporary review into the garments market in the USA and peoples' republic of China deduced that qualities taking into considerations by buyers in the assessment of clothes, quality differs. Syduzzaman, Rahman, Islam and Ahmed, (2014) borrow heavily from the international organization for standardization and says quality is the totality of characteristics of a whole that has the capacity to meet the clear and unclear needs of consumers.

For Syduzzaman et al. (2014) there is no single universal definition of quality, with some people viewing quality as "performance to standards, meeting the customer's needs or satisfying the customer." According to the researchers, the best definitions of quality encompass "conformance to specifications, fitness for use, value for the price paid, support services, and psychological criteria". There are many studies on market demand for clothing, but none investigate any precise costume.

C. Processes Employed in Construction of Traditional Costumes

Contemporary fashion design process is composed to the following key processes; these include survey ideation/mood-board, sketches patternmaking, sourcing, spreading and cutting, assembly, fitting and review of prototype, design approval Frings (2008). Mood Boards are qualitative research tools used in the design industry that are considered to be an important element of the design process since they encourage creative and inventive thinking (Cassidy, 2011). This entails both exploratory and convergent thinking, which involves narrowing down options to discover the best solutions. Mood boards are used to explore, visualize and communicate hard-to-express ideas.

Ideation is the process of generating original ideas that define and examine desirable aspects of a design project where designers constantly alternate between divergent thinking, which involves exploring as many solutions as possible, and convergent thinking, which reduces alternatives to find the best solutions (Koch et al., 2020). As a data gathering approach, mood boards allow designers to interpret and communicate difficult or abstract aspects of a design brief, and their application to inspire participant conversation is still under-studied (Spawforth, 2021). During the design of traditional customs, it is the duty of the designer to collect the inspiration, compile the ideas and create the mood board. During the design of traditional customs, it is the duty of the designer to collect the inspiration, compile the ideas and create the mood board (Jaiswal, 2017).

Fashion illustration is the graphic aid used to illustrate design in fashion magazines and books and it is a piece of art in which fashion is clarified and shared (Mandal, 2017). For a designer seeking to communicate their design blueprint, technical drawings are a must-have. Simply put, they are two-dimensional, diagrammatical rendition of your designs drawn in solid line and representing as much detail as possible (design pattern) (Omotoso, 2019). The technical sketch (also known as "flat") is the most significant of the various styles of sketches which are drawn to size, with sewing and design details included (Xu, Mok, Yuen & Yee, 2016). According to Kochar (2019) Tech Pack is a collection of documents created by technical designer, patternmaker or product developer to describe the fashion product concept to a producer for them to convert the knowledge into actual product for the customers to purchase.

Lindh noted that, availability of specific expertise, favourable government policies, or low commodity and labour costs can help bumper construction of Ghanaian traditional costumes. However, sourcing for traditional costumes can be limited since each culture has its own unique requirements that are not marketable across borders. Labat & Bye (2017) suggested that fit sessions should include product development decisions that go beyond the fit of the garment to design appraisal. Ejeimi, S., Sparks, D., and Yan, R. N. (2018) stated that, fashion leaders' eagers to wear clothes if they reflected heritage, appeared modern in terms of style lines. The garment production sector has developed in terms of manufacturing and selling during the previous two decades. Several studies have documented this history, highlighting the transfer of manufacturing across the garment commodities chain as well as strategic actions made by the major players in the garment sector as part of the globalisation process (Taplin, 2014).

The Design Process in 9 Simple Steps

Source: Points of Measure (2021).

According to Tuna (2018) garment production is a well-organised process that transforms raw materials into final goods, the process includes steps like laying, marking, cutting, sewing, inspecting, finishing, pressing, checking and packing. Rose, Castro, Andres & Prestoza (2018) assert that student attainment depends on capable teachers, which is vital for institutions to make learning better for all learners. Similarly, highly trained teachers are well acquainted with knowledge in using all possible training procedures to impart lectures to the students. Jiang & Dong, (2017) mention integration of network and traditional textbooks information, diffusion, concept, objectives, content, teaching context as a current information source of traditional costume design. Creativities must be fortified with fashionable cognition, perdition, and innovation application ability.

Rose et al (2018) stated that teachers compliant with the true nature of a classroom, adopt specific plans that will equip them to, from time to time assess teaching-learning undertakings. Akhtar (2007) suggested lecture as the best/successful approach to add on knowledge grasping and promote a direct change in environmental attitudes. In contrast Alaagib et al., (2019) claimed that the lecture-style method does not encourage much lane on one instructing style and that teaching based practical examples enhances the absorption of facts-based information and students achieved significant scores, brought up a change in learning behaviour towards the environment. Based on the above scholars' studies, the Study investigated the processes and phenomenal use in teaching construction of Ghanaian Traditional Costumes in the TUs in Ghana.

IV. METHODOLOGY

This study adopted convergent mixed method design to facilitate collection of qualitative and quantitative data. This mixed method design is acclaimed in literature for being suitable for both descriptive and exploration studies that utilise survey methods of data collection (Khoo-Lattimore et al., 2017).

Purposive sampling was used to sampled 24 lecturers from the six selected technical universities in Ghana including six (6) heads of departments of fashion design who have taught Fashion design courses for not less than three years. Proportionate sampling was also used to select 306 final year fashion design Students from the 6 sampled technical universities.

For data collection, a combination of both quantitative and qualitative methods in form of questionnaires (open and closed ended) and structured interview sessions were used. This facilitated deeper understanding of the study being investigated. Therefore, the collected data was analysed using both quantitative and qualitative techniques. Integration of both quantitative and qualitative methods was embraced to enrich the findings and discussions of the study.

V. FINDINGS

A. Demographic Information of the Respondents

The demographic study found that female respondents made up the total of 80.6% while, male respondents made up 19.4% of the total.

Table 1: Sex of Respondents

Respondents	Frequency		Total
	M	F	
Lecturers	6 (35.3%)	11 (64.7%)	17 (100%)
Students	53 (18%)	238 (81.8%)	291 (100%)
HoDs	2 (33.3%)	4 (66.7%)	6 (100%)

This imply that fashion design and technology programme in the technical universities in Ghana is mostly pursued by female. The findings in the study were attributed to the influence of societal perceptions and cultural norms surrounding gender role. It has been observed that traditionally many societies relate fashion design with femininity, creativity, and aesthetics. Consequently, female students may feel more encouraged to pursue a career in fashion design due to societal expectations and the perception that it aligns with their inherent interests and skills. This study revelation concurs with the study of Michna (2020) who found in a study that history have it that art-work, decoration and handicraft have been related to femininity.

B. Processes Deployed in Construction of Traditional Costumes

The study established the processes deployed by lecturers and students on the construction of Ghanaian traditional costumes. Subsequently, the researcher requested lecturers to respond to items on the questionnaires. The findings summary of lecturers was presented in Table 2.

Table 2: Processes Deployed in Teaching Construction of CTCs

Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	Std. Dev.
	N	%	N	%	N	%	N	%		
Utilising ideation in teaching CTCs.	5	31.3	8	50.0	3	18.8	0	0	3.13	.719
Utilising survey in teaching CTCs	3	18.8	6	37.5	7	43.8	0	0	2.75	.775
Utilising fashion illustration in teaching CTCs	7	43.8	7	43.8	2	12.5	0	0	3.31	.704
Utilising design approval in teaching CTCs	6	37.5	8	50.0	2	12.5	0	0	3.25	.683
Utilising pattern-making in teaching CTCs	10	62.5	3	18.8	3	18.8	0	0	3.44	.814
Utilising sourcing in teaching CTCs	5	31.3	5	31.3	5	31.3	1	6.3	2.81	1.109
Utilising spreading & cutting in teaching CTCs	8	50.0	5	31.3	3	18.8	0	0	3.3	.793
Utilising assembly in teaching CTCs	9	56.3	5	31.3	2	12.5	0	0	3.44	.727
Utilising prototype in teaching CTCs	6	37.5	4	25.0	6	37.5	0	0	3.00	.894
Utilising fit & review in teaching CTCs	9	56.3	4	25.0	1	6.3	2	12.5	.25	1.065
Utilising finished garment in teaching CTCs	10	62.5	2	12.5	4	25.0	0	0	3.38	.885

Hence, half (50.0%) of the lecturers stated that ideation was utilised in teaching construction of GTCs while 18.8% N=3 disagreed and 31.3% N=5 strongly agreed that they employed ideation during construct of CTCs. The mean rating for this statement is 3.13, with a standard deviation of 0.719. This suggests that lecturers generally valued importance of ideation in the construction of GTCs. A total number of 37.5% N=6 lecturers agreed that survey process was used in teaching GTCs while 43.8 disagreed. The mean rating for this statement is 2.75, with a standard deviation of 0.775. This suggest that lecturers recognise the value of conducting surveys in the construction process. Seven (43.8%) N=7 lecturers strongly agreed and seven (43.8%) N=7 also agreed that fashion illustration process was utilised in teaching construction of traditional costumes. The mean rating for this statement is 3.31, with a standard deviation of 0.704. This suggests that lecturers emphasised on fashion illustration process in teaching construction of Ghanaian traditional costumes.

Additionally, eight lecturers representing (50.0%) N= 8 agreed that they employed design approval process in teaching construction of GTCs while (37.5%) N=6 strongly agreed to the same. The mean rating for this statement is 3.25, with a standard deviation of 0.683. The study indicated that more than half (62.5%) N=10 of the lecturers of FDT strongly agreed that pattern making process was used in teaching of construction of GTCs. This suggests that pattern making is considered as a crucial step in teaching GTCs construction however, lecturers (18.8%) N=3 disagreed to the same statement. The finding further found that lecturers (31.3%) N= 5 strongly agreed and another (31.3%) N=5 agreed that sourcing process was utilised in teaching Ghanaian traditional costumes construction while the same number (31.3%) N=5 disagreed that they do not consider sourcing process in teaching Ghanaian traditional costumes.

The study revealed that (50.0%) N=8 of the lecturers of FDT strongly agreed that spreading & cutting process was used in teaching, (31.3%) N=5 lecturers agreed to the statement that spreading & cutting process was utilised in teaching construction of GTCs. The mean rating for this

statement was 3.31, with a standard deviation of 0.793. This suggests that spreading & cutting are considered important steps in GTCs construction. Further, the study found that (56.3%) N=9 of the sampled lecturers of fashion design and technology strongly agreed that assembly process was employed in teaching garment construction while few lecturers disagreed to the same statement. The mean rating for this statement is 3.44, with a standard deviation of 0.727. This indicates that assembly is one of the significant aspect of costumes construction process.

Moreover, the study indicated that (37.5%) N=6 lecturers strongly agreed and another 4 (25.0%) agreed that they consider prototype in teaching clothing construction while 6 (37.5%) disagreed using prototype process in teaching construction of traditional costumes. The mean rating for this statement is 3.00, with a standard deviation of 0.894. This implied that lecturers recognised the importance of creating sample garment in the construction of GTCs teaching. In the aspect of fit and review, 56.3% N=9 of lecturers strongly agreed, 25.0% N=2 agreed that they employed the processes. The mean rating for this statement was 3.25, with a relatively high standard deviation of 1.065. This indicates some inconsistency in opinions relation to fit and review processes.

Finally, the finding shows that majority 62.5% N=10 of the sampled lecturers strongly agreed that finished garments were utilised while (25.0%) N=4 lecturers of FDT disagreed of utilising the finished garments during the teaching processes on construction of GTCs. The mean rating for this statement is 3.38, with a standard deviation of 0.885. This shows that lecturers placed emphasis on the production of finished garments in GTCs construction. The study findings suggest that lecturers of fashion design and technology in the TUs in Ghana employed all the processes use in apparel manufacturing in teaching CGTCs. This suggests lecturers do not engage in any other processes in teaching CTCs but rather transfers knowledge from contemporary processes use in apparel manufacturing in teaching CGTCs. Additionally, the lecturers are contributing to eco-friendly fashion of the universities environment and sustainability of the fashion industry as whole by utilising finished garments.

Table 3: Association Between Demographic Information and Processes in Teaching construction of GTCs

	Gender	Level of education	Years of experience
Gender	1	-.296	-.009
Level of education	-296	1	.161
Years of experience	-.009	.161	1
Ideation	-.232	.242	-.228
Survey	-.086	.024	-.254
Fashion illustration	-.231	.305	-.289
Design approval	-.293	-.027	-.370
Pattern making	.120	-.152	.239
Sourcing	.105	-.103	-.302
Spreading & cutting	-.021	-.098	.357

Assembly	-.252	.031	.164
Prototype	-.149	-.164	-.084
Fit & review	.313	-.292	.326
Utilising finished			
Garments	.188	-.236	.334

The findings in Table 3 shows a correlation matrix between demographic dependent variable; gender, year of experience and education level and the teaching processes deployed in teaching construction of Ghanaian traditional costumes. The correlation coefficient ranges from -1 to +1, where -1 represents a perfect negative correlation, 0 represents no correlation, and +1 represents a perfect positive correlation. Results show that the coefficient between gender and education level is -0.296 indicating a weak positive correlation between these variables, generally gender, level of education and years of experience and teaching processes show a weak correlation.

Findings in Table 4 show that majority of the students 51.9% N=151agreed that ideation process was utilised in learning traditional costumes. Additionally, 46.6%N=136 students agreed and 13.7% N=40 strongly agreed that survey process was employed in learning garment construction while significant number of students agreed 45.0% N=131 and 35.7% N=104 strongly agreed that illustration process was utilised in learning costumes construction.

Table 4: Students Processes Deployed in Learning Construction of TCs

Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	Std. Dev.
	N	%	N	%	N	% N	%			
Ideation is utilised In learning CTCs	58	10.8	151	51.9	66	22.7	10	3.4	2.84	.852
Survey is utilised In learning CTCs	40	13.7	136	46.7	94	32.3	16	5.5	2.65	.847
Illustration is Utilised in learning TCs	104	35.7	131	45.0	37	12.7	16	5.5	3.09	.890
Design Approval is utilised In learning CTCs	97	33.3	126	43.3	48	16.5	16	5.5	3.02	.919
Sourcing is utilised In learning CTCs	62	21.3	135	46.4	70	24.1	19	6.5	2.79	.910
Spreading & cutting is utilised in learning TCs	100	34.4	123	42.3	45	15.5	18	6.2	3.01	.950
Assembly is utilised In learning CTCs	83	28.5	131	45.0	46	15.8	25	8.6	2.89	.982
Prototype is utilised In learning CTCs	71	24.4	131	45.0	64	22.0	19	6.5	2.83	.941
Fit and Review is utilised In learning	109	37.5	104	35.7	48	16.5	25	8.6	2.99	1.020
Finished Garment is utilised in learning TCs	115	39.5	106	36.4	40	13.7	26	8.9	3.04	1.008

Assembly of garment process received high response of being utilised by the students 45.0% N=131 agreed and 28.5 N=83 students strongly agreed to the statement. Moreover, 45.0% N=131 students agreed while 24.4%N=71 strongly agreed that they employed sample garment process in learning costumes production. Fit & review was highly acknowledged by the students being use in learning construction of Ghanaian traditional costumes, strongly agreed 37.5% N=109 and agreed 35.7% N=104. The students also made used of finished garments in learning garment construction 39.5% N=109 strongly agreed while 35.4% N=106.

The descriptive statistics provided offer valuable insights into the processes deployed in learning construction of traditional costumes by fashion design and technology students in their learning process. Overall, the students show a positive attitude towards the all of the processes. Fashion illustration, design approval, and spreading & cutting processes received relatively high levels of response of being utilised. However, it is important to note that there were some variabilities in responses, indicating that individuals do not engage in some of the construction processes.

The descriptive statistics also reveal the standard deviation for each process, indicating the level of variability in students' responses. Higher standard deviations imply a wider range of opinions and diverse perspectives among the students. This suggests that while there is an overall positive response on processes deployed, there might be differing opinions and experiences among fashion design students in learning construction of Ghanaian traditional costumes. This variability could be influenced by factors such as individual learning styles. Understanding and addressing this diversity in processes deployed can help educators tailor their teaching approaches to meet the specific needs and preferences of the students, ensuring a more inclusive and effective learning environment for fashion design.

C. HoDs Views on Processes Deployed by Lecturers on Construction of GTCs

The head of the departments agreed that the lectures utilise all the garment production processes in the construction of clothing which is done based on the course outline prepared for various courses in the semesters. Drafting/modelling and hand cutting are some of the garment production processes deployed using standards of quality.

One of the HoDs stated that "*lecturers use garment construction processes to an extent because they do not have experience in Ghanaian traditional costumes. They are not very well conversant with traditional Costumes but in other costumes*".

This view reveals that the lectures utilise all the garment production processes in teaching construction of clothing in the HND programmes. Drafting/modelling, laying-out and hand cutting are some of the garment production processes deployed. However, the higher standard deviations imply a wider range of opinions and diverse perspectives among the students. This suggests that while there is an overall positive response on processes deployed, there might be contrary opinions and experiences among students of fashion design and technology. The revelation agrees with Alonso-Martín et al. (2021) who state in their study that diversity of individual students of their cognitive characteristic in today's education is one of the principal challenges in numerous institutions.

Alonso-Martín et al. (2021) further explained that the challenges can be managed through adoption of multiple teaching processes of combine practical and theoretical instruction with seminars and discussions, research and oral presentations, and group- work construction of traditional costumes appropriate to the real situation. This variability could be influenced by factors such as individual learning styles. Understanding and addressing this variety in processes deployed can help educators tailor their teaching approaches

to meet the specific needs and preferences of the students, ensuring a more inclusive and effective learning environment for fashion design.

D. Hypothesis Testing

H$_O$: There is no Significant Relationship between the Processes Deployed by Lecturers of Fashion Design and Construction of Ghanaian TCs.

Multiple regression analysis was used to examine the presence of a statistically significant relationship between the processes deployed by lecturers and the construction of Ghanaian Traditional Costumes. Mathematical modelling of the assumed relationships between the deployed processes and students' construction of GTC was formulated and tested to ascertain its goodness of fit as shown in Table 5.

Table 5: Model Summary

R	R^2	Adjusted R^2	Std. Error
.769[a]	.592	.497	.83347

a. Predictors: (Constant), Idea development, Survey, Illustration,

Approval, Pattern-making, Sourcing, Spreading & cutting, Assembly,

Prototype, Fit & alteration, Finished garment processes.

Results in Table 5 indicate that the correlation coefficient (R) was 0.769, suggesting a relatively strong positive relationship between the deployed processes and students' construction of Ghanaian TCs. The coefficient of determination (R Square) is 0.592, indicating that approximately 59.2% of the variance in the students' construction of GTC can be explained by the processes deployed by their lecturers in teaching fashion and design curriculum. These processes include idea development, survey, illustration, approval, patternmaking, sourcing, spreading and cutting, assembly, prototype, Fit and alteration, and handling of the finished garment. The Adjusted R Square is 0.497 with a 0.83347standard error, suggesting that the model provides a reasonable fit in explaining the relationship between the two groups of variables.

However, it was also important to examine whether the modelled relationship between the variables had any statistical significance. This was done through analysis of variance (ANOVA) whose results are displayed in Table 6.

Table 6: ANOVA

	Sum of Squares	F	Sig.
Regression	13.087	6.280	.007[b]
Residual	9.031		
Total	22.118		

Results from ANOVA as presented in Table 6 show that the mathematical association between the students' construction of GTC and the processes used by the lecturers is statistically significant at a P-value of 0.007. This was further supported by 13.087 regression sum of squares with 3 degrees of freedom, and an F-value of 6.280. This confirms the model's goodness of fit. As such, the researcher rejected the null hypothesis that there is no significant relationship between the processes deployed by lecturers of fashion design and technology and construction of Ghanaian traditional costumes.

Nevertheless, further analysis was required to establish the individual contributions of each of the lecture processes on the students' construction of GTC through multiple regression coefficients. The findings are contained in Table 7.

According to the regression coefficients presented Table 7, the teaching processes adopted by the sampled lecturers were categorised into three groups and each of the groups were established to have statistically significant relationship with the students' construction processes of GTC since they all produced less than 0.05 p values.

Table 7: Coefficients

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.393	.601		.654	.524
Idea development, Survey, design Approval processes	1.065	.372	1.065	2.865	.013
Prototype, Fit & alteration, Finished garment processes	.868	.266	.741	3.265	.006
Pattern-making, Sourcing, Spreading & Cutting, Assembly processes	-1.165	.499	-.984	-.337	.036

Whereas the first two groups were positively associated with the students' construction processes of GTC, the last group consisting of pattern-making, sourcing, spreading & cutting as well as assembly had negative relationship with the students' construction of GTC. Accordingly, the coefficient for Idea Development, survey, design approval processes is 1.065 (p <0.013), indicating that a lecturer's effort to increase a student's capability of ideal development, survey, designing, and getting an approval for a design is likely to increase the student's success at constructing a Ghanaian traditional costumes by1.065 units, assuming that other factors that might influence this process are kept constant. Similarly, the coefficient for Prototype, Fitting & alteration, handling of a finished Garment processes is 0.868 (p <0.006), suggesting that a one-unit increase in this variable is associated with a 0.868 increase in a student's success at constructing a Ghanaian traditional costumes. On the other hand, the coefficient for Pattern-Making, Sourcing, Spreading & cutting, and Assembly processes is -1.165 (p <0.036), indicating that a one-unit increase in this variable is associated with a 1.165 decrease in a student's success at constructing Ghanaian traditional costumes.

VI. CONCLUSION

The findings of the study revealed that lecturers and students of fashion design and technology in Ghana employed contemporary processes use in apparel manufacturing in teaching and learning of construction of traditional costumes in the HND fashion design and technology programme. The contemporary processes included idea development, survey, illustration, approval, pattern-making, sourcing, spreading and cutting, assembly,

prototype, Fit and alteration, and handling of the finished garment.

The findings also revealed that lecturers' transfers knowledge from contemporary processes use in apparel manufacturing in teaching construction of the GTCs, however the lecturers and students of FDT in Ghana are not experience with construction of some GTCs. Nevertheless, HND programme is contributing to the sustainable fashion policy (ecological).

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